

**MANAGEMENT OF CHILDHOOD DIARRHOEA IN RURAL GHANA:  
THE CASE OF PUTE IN THE DANGME-EAST DISTRICT**

BY

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**DEDICATION**

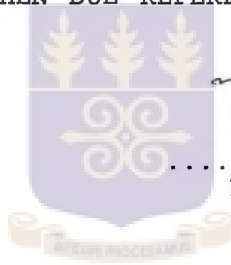
THIS STUDY IS DEDICATED TO MY PARENTS CORLEY AND KORKOR, AND MY  
BROTHERS AND SISTERS.



(i)

DECLARATION

I, MARTIN HUSHIE HEREBY DECLARE THAT, THIS THESIS CONTAINS NO MATERIAL WHICH HAS BEEN ACCEPTED FOR THE AWARD OF OTHER DEGREE IN ANY UNIVERSITY, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS THESIS CONTAINS NO MATERIAL PREVIOUSLY PUBLISHED OR WRITTEN BY ANOTHER PERSON, EXCEPT WHEN DUE REFERENCE HAS BEEN MADE IN THE TEXT.



A handwritten signature in black ink, appearing to read 'Martin Hushie', is written over a horizontal dotted line.

MARTIN HUSHIE  
31/10/94

A handwritten signature in black ink, appearing to read 'K.A. Senah', is written over a horizontal dotted line.

MR. K.A. SENAH  
(SUPERVISOR)  
31/10/94

(ii)

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### ABSTRACT

The main thrust of this study is to investigate how childhood diarrhoea is managed at Pute - a rural community in Ghana. The study aims at eliciting local perceptions of childhood diarrhoea, including cause(s), consequences, and appropriate treatment, so as to unearth some of the social and cultural factors that may influence health-seeking behaviour in diarrhoeal episodes.

To understand fully folk concepts of diarrhoea and its treatment, it was necessary to describe the social and institutional setting within which illness episodes are managed in order to lay the basis for interpreting findings from the study. To this end, the social structure of Pute was outlined. Pute is a small Dangme-speaking rural community, located some 118 kilometers from central Accra. It is predominantly a fishing community in which descent and kinship groupings form the basis of social, economic, religious and political organisations. Contact with Western society has set in motion a process of change which is gradually promoting a breakdown of traditional cosmology.

In order to obtain in-depth information on folk nosologies of childhood diarrhoea and its treatment, three major methodological approaches were used. These are interviewing, focus group discussions and observation.

The conceptual framework that was used for organising field data on ethnomedical models of diarrhoeal illness is a cultural construction that establishes a web of relationship among social factors, illness experience, help-seeking and outcome.

The study has shown that folk classificatory systems for diarrhoea based mainly on physical notions of etiology determined to a very large extent therapeutic choices and hence help-seeking patterns. In particular, it has been shown that, the interpretations of specific diarrhoeal illness episodes, and specific health-seeking actions of mothers were not merely shaped by signs and symptoms, and that a wide range of factors enter into the establishment of illness identification and health-care decision-making. These include classification of a diarrhoeal ailment, perceived seriousness, availability of regimens and efficacy of treatment, all of which were found to be deeply rooted in ethnomedical models of diarrhoeal illness and its treatment. As a consequence, it has been found that, the widespread use of pharmaceuticals, especially antibiotics in the treatment of childhood diarrhoea should be considered a product of the local socio-cultural system in which illness episodes occur.

To this end, it is being suggested that, programme planners for the control of diarrhoeal diseases need to take cognisance of popular health culture and home care behaviour in rural settings such as Pute, if the promotion of ORT (including ORS) as the most effective modern approach to the treatment of most childhood diarrhoeas is to become effective.

This thesis is in five main parts with sub-divisions under each chapter.

Chapter one, which sets out the introduction outlines the problem, objectives, the conceptual framework, the methodological approach to the study, the usefulness of the study as well as its broad limitations.

Chapter two, is devoted to a review of literature related to diarrhoeal illness management in different cultural contexts of the world.

Chapter three takes a look at the social organisation of the people under study and their general world-view.

Chapter four presents the main findings and interpretation of analysed field data.

Chapter five is a summary of main findings, policy implications of the study as well as suggested areas for further research.

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## CHAPTER 1

### INTRODUCTION

#### 1.0 Statement of the Problem

The prime concern of this study is to investigate the social and cultural contexts in which childhood diarrhoea is managed in rural Ghana. Pute, a rural community in the Dangme East District of the Greater Accra Region of Ghana has been chosen as a case-study. This study is devoted to understanding folk concepts of childhood diarrhoea, including local interpretations of cause(s), course and treatment, and how these influence health-seeking behaviour in diarrhoeal episodes.

Diarrhoeal diseases pose a major worldwide health problem, and are frequently associated with poverty, malnutrition and infection, killing between 5 and 7 million people each year. It is also estimated that about one billion episodes of diarrhoea occur each year in the 3 regions of Africa, Asia and Latin America, resulting in approximately 5 million deaths of children less than 5 years of age (Snyder and Merson 1982, WHO 1990). Diarrhoea is also known to complicate several other diseases; the severity of measles, malnutrition and malaria is heightened by associated attacks of diarrhoea. (Scrimshaw et al. 1966; Martorell et al. 1975; Rowland et al. 1977; Mata 1978; Koster et al. 1981). Many poverty-related factors are seen to be important in the prevalence of these conditions. Inadequate and overcrowded housing increases the transmission rates of many diseases. Insanitation, lack of

drainage facilities and inadequate supply of potable water results in a contaminated environment, creating ideal breeding sites for insect vectors. Furthermore, various factors including inadequate nutrition and illiteracy contribute to low levels of domestic hygiene and hence the prevalence of diarrhoeal diseases.

In Ghana, diarrhoeal diseases have been one of the serious public health problems. They are second only to malaria among children under five years seen at outpatient clinics. They account for 6.7 percent of total attendances. It is also estimated that 10 percent of diarrhoeal diseases are fatal and that 70 percent of these fatalities are due to acute dehydration. In addition, 10 percent of deaths in hospitalised children under five years are attributable to diarrhoea alone or in association with measles, malaria and malnutrition (MOH 1992). Britwum et al. (1986) reported a mean incidence of diarrhoeal diseases of 1.9 episodes per child per year in a rural Ghanaian community, with the highest incidence occurring in children between the ages of 7 and 12 months.

According to the Ghana Demographic Health Survey (GDHS 1988), the two week diarrhoeal incidence rate in children under five years was 26 percent. In 1992 this figure was put at 30.2 percent (MOH 1992). Afari et al. (1988) also showed an annual diarrhoeal incidence rate of 4.5 episodes per child per year. This amounts to approximately 10 million episodes of diarrhoea per year in children under five.

The reduction of morbidity and mortality associated with childhood diseases in developed countries was achieved through comprehensive approaches. This entailed major improvements in living conditions through the provision of facilities such as pipe-borne water, safe sewerage disposal, higher standards of housing, health-care, home hygiene, improved nutrition and universal education for all segments of society. The Alma Ata Declaration of 1978 which proposed a "Health for All by the Year 2000" through Primary Health Care (PHC) in developing countries was conceived in a similar vein. Yet such holistic approaches have often been considered unrealistic as a long-term prospect in most developing countries in view of the economic recession and shrinking health budgets that confront them. Consequently international health experts, aid agencies and governments are focusing on Selective Primary Health Care in which a few high risk groups are targeted with a few carefully selected, cost-effective interventions, though the verticality of current programmes has been the target of harsh criticisms (Gish 1982, Unger and Killingsworth 1986). To implement this new strategy, the emphasis has been on the promotion of immunisation and Oral Rehydration Therapy (ORT) as simple projects in the attempt to improve child health.

International attention to the promotion of ORT for childhood diarrhoea began with the establishment of the World Health Organisation (WHO) Programme for the Control of Diarrhoeal Diseases (CDD) in 1978, as part of global commitment to Primary Health Care

(PHC). The objectives of the programme are to reduce diarrhoeal mortality in infants and children worldwide by one-half, and to reduce morbidity and malnutrition associated with diarrhoeal illness.

The Government of Ghana has since 1983 implemented a CDD programme as part of a nation-wide PHC programme. The programme emphasises five main strategies for the prevention and control of diarrhoea. These are

1. effective case management;
2. encouragement of breastfeeding, weaning practices and nutrition;
3. proper environmental sanitation;
4. provision of good drinking water and,
5. immunisation of children against measles.

The focus of this programme is the promotion of ORT which has now become the mainstay of the treatment for life-threatening diarrhoeal diseases both epidemic cholera and childhood diarrhoeas. ORT is the use of appropriate fluids including Oral Rehydration Salts (ORS) as the most effective treatment for patients who are suffering from dehydration due to diarrhoea.

Under the multilateral sponsorship of the United States Agency for International Development (USAID), the United Nations Children's Fund (UNICEF), the MOH of Ghana and a local private drug

manufacturing firm (DANAFCO), the production and marketing of ORS packets was formally launched in April 1988 to promote home management of childhood diarrhoea through oral rehydration. Hitherto, ORS packets were being donated by UNICEF to the MOH for free distribution through its service outlets. ORS packets approved by WHO and UNICEF contain:

- 3.5g sodium chloride,
- 1.5g potassium chloride,
- 2.9g trisodium citrate, and
- 20g anhydrous glucose.

Promotional strategies in Ghana include public education, commercial advertising and sales and use of mass-media. Currently the consumer price per packet is about ₵120 (US\$0.13).

The focus of this programme has been home treatment of acute diarrhoea with oral solutions of packaged rehydration salts (ORS) or household sugar and salt solution (SSS) to replace body fluids and prevent life-threatening dehydration.

The introduction of CDD programme activities and other diarrhoea-related intervention programmes in many developing countries since the early 1980s has led to considerable increase in access to ORS and use of ORT at the global level (WHO/CDD 1990). ORS is being produced in about half of the developing countries. Surveys conducted in a number of countries have indicated that on the

average, the hospital admission rate for diarrhoea dropped by 61 percent after the introduction of ORT and the average case fatality rate was reduced by 71 percent (Cleason and Merson 1990).

Since the introduction of the CDD programme in Ghana, two impact assessments of it have taken place in 1989 and 1992 respectively. The 1992 survey revealed among others that awareness of ORS among mothers had increased from 56 percent in 1989 to 80 percent in 1992. Access to ORS had also increased only 16 percent of mothers had to travel more than 5 kilometres to obtain ORS as compared to 25 percent in 1989. Also treatment practices had improved as 31 percent of mothers gave ORT in 1992 as compared to 19 percent in 1989 (MOH 1989, 1992).

Despite the progress made, appropriate case management of childhood diarrhoea tends to be the exception rather than the rule and as a result, CDD programmes have not been able to achieve fully their set goals and objectives. It is the view of the present study that programme planners for diarrhoeal diseases have not adequately considered the implications of indigenous health beliefs and practices surrounding diarrhoeal illness in rural communities for their programme work. During the past decade however, it has become increasingly recognised that the ultimate control of diarrhoeal diseases depends on a comprehensive understanding of local beliefs and practices that relate positively or negatively to its transmission (Elmendorf and Isely 1983, Nations 1982, de Zoysa

1984). Noting the importance of the mother in childhood diarrhoeal episodes WHO observed: "There is an urgent need to understand her present attitudes, perceptions and practices regarding diarrhoea as well as those of other community workers" (WHO 1982). In most cases, the tendency has been for research funds to be allocated to more conventional areas of disease control such as epidemiology, biomedical research and health economics, while cultural factors are to a very large extent neglected.

Successful community-based programmes for the control of diarrhoeal diseases depend on mothers or other caretakers knowing how to manage diarrhoea with food and fluids and recognising when children need treatment by a health worker. In the quest for therapy, families may resort to various approaches both modern and traditional health regimens. The choice of approach however depends on the ethnoclassification of diarrhoea, what is seen as its cause and the availability of health care (Paredes 1992).

To improve health, public health programmes often concentrate on strategies for convincing people to comply with professional recommendations. In the case of diarrhoea, the emphasis has been on the promotion of ORT - the discovery of which is regarded as "potentially the most important medical advance in this century" (WHO 1991).

Although pragmatic by biomedical standards, these recommendations may seem "irrational" in the community because they are at odds with local beliefs and practices. Health professionals who understand local perceptions of diarrhoeal illness are better able to communicate with the people they serve. They can understand how puzzling biomedical explanations might sound in the community and they can explain recommendations for prevention and treatment in a manner that makes them acceptable within the context of local beliefs and practices.

Moreover, certain characteristics of diarrhoea management (ie ORT and dietary practices) make cultural knowledge particularly relevant. These include:-

1. the fact that the management of diarrhoea is home-based and controlled by the child's mother or other caretakers as opposed to services located outside the household;
2. the fact that it is focused on a specific category of maladies for which local terminology and explanatory models exhibit extreme diversity; and,
3. the fact that existing traditional therapies for digestive disorders generally and diarrhoea in particular are everywhere well developed and firmly well rooted in ethnomedical systems. Thus diarrhoea treatment lends itself to contextual analysis.

Although various surveys provide a dramatic confirmation that diarrhoeal disease is a major health problem in Ghana (Britwum et al. 1986; Afari et al. 1988; GDHS 1988), they necessarily focus to a large extent on broad socio-demographic data and general morbidity and mortality patterns without delving into the complex complementary area of local beliefs and practices associated with childhood diarrhoea. There are a few studies touching on this area of enquiry (Adjei 1988, Abu 1988). Yet these are scattered and largely unpublished.

The main task of this study is to understand folk concepts of diarrhoea and its treatment. Attempts have been made to raise culturally relevant issues that might be missed by macro surveys but might have important implications for community-based health programmes for the control of diarrhoeal diseases.

Mothers' ethnomedical models of childhood diarrhoeal illness and concepts of appropriate treatment have been examined in terms of their most receptive and resistant points to modern approaches to the prevention and treatment of diarrhoea.

The analysis made in this study is based on the view that, the socio-cultural environment (including political, economic and psychological aspects) is only one among a multiplicity of factors influencing illness behaviour and for that matter health-seeking behaviour. Other factors are biological and physical. Cultural

beliefs and attitudes have been found to be very important in shaping response to diseases (Maina-Ahlberg 1984). Fosu (1984) observed that, ethnomedical concepts of disease causation affected therapeutic choices in Ghana.

Although diarrhoea is not found among children alone, this study focuses on infant and childhood diarrhoea for two important reasons. Firstly, it is widely recognised that acute diarrhoeal diseases are a leading cause of morbidity and mortality in children under five years of age especially in developing countries. Published studies in Africa, Asia and Latin America have shown that children under one year of age may have on the average 5 episodes of diarrhoea a year while children between 1 and 2 years old may even have more episodes than their counterparts aged between 3 and 4 years. (Snyder and Merson 1982, Parker 1984, WHO 1988). This fact has been documented in Ghana by Afari et al. (1988); Britwum et al. (1986) and the GDHS (1988). Secondly, most of the diarrhoeal diseases which kill children can be averted through the appropriate use of ORT. The relevance of ORT in diarrhoeal diseases is best expressed in the summary of an international conference on ORT:

"The experience reported at this conference unequivocally confirms that, oral rehydration therapy can reduce mortality, sometimes drastically in communities, clinics and hospitals; promote child growth and sound nutrition; lessen the morbidity burden; reduce hospitalisation attendance, duration of stay and cost; and generate auxilliary benefits such as minimising the indiscriminate use of ineffective or harmful drugs (Chen 1983)".

### 1.1 Objectives of the Study

In pursuing the research problem, the study focuses on the following issues:-

1. to highlight some of the traditional health beliefs and practices associated with childhood diarrhoea at Pute;
2. to show the extent to which these beliefs and practices influence the choice of both modern and traditional health care regimens for the treatment of diarrhoea;
3. to make appropriate recommendations based on the findings of the study;

Specifically the following questions are framed to guide the study:-

1. What is the folk classification of childhood diarrhoeal disease with respect to types and causes at Pute?
2. What features of a diarrhoeal ailment do mothers consider important in the process of diagnosis?
3. What indigenous beliefs exist about food and fluid intake during diarrhoea?
4. What are the perceived consequences of childhood diarrhoea?
5. What are the perceptions of dehydration due to diarrhoea?
6. To what extent are local concepts of childhood diarrhoea related to specific health care regimens that are used in diarrhoeal episodes and hence patterns of help-seeking?
7. What are the factors underlying the decision to use or not to use specific health care regimens in the quest for therapy?
8. Do mothers at Pute know of ORS? What do they think it is used for? Have they ever used it? What are the reasons for non-use if they know or have heard of it before?

The following hypotheses are framed to guide the discussions in later chapters:-

- (1) The choice of modern scientific approaches to the treatment of childhood diarrhoea depends on folk nosologies, etiologies and consequences as well as treatment for various diarrhoeal illness categories.
- (2) The use or non-use of ORT (including ORS) is a function of the educational level of mothers or other caretakers of the child. Educated mothers are more likely to use ORT as a remedy for the prevention and treatment of diarrhoea than uneducated mothers.

An attempt will be made to test these hypotheses by analysing the beliefs and practices of the people of Pute regarding diarrhoeal illness and its treatment.

A study of this nature requires a setting that will permit an in-depth examination of behaviours during illness episodes. In this respect, Pute<sup>1</sup>, a Dangme rural community in the Greater Accra Region of Ghana was chosen for the case-study. An important characteristic feature of Pute that makes it suitable for an investigation of this nature is that it has a high incidence of diarrhoeal illness and is therefore in great need of diarrhoeal control efforts. Elsewhere in this study, other reasons have been outlined to show why this particular community was chosen.

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<sup>1</sup> Chapter Three gives a detailed description of this rural community

## 1.2 Conceptual Framework

A study such as this and which is aimed at investigating the socio-cultural context of diarrhoeal illness and treatment requires a cultural construction that establishes a web of relationship among social factors, illness experience, help seeking and outcome. To this effect, Weiss' (1988) proposed conceptual framework has been adapted for use. This framework is based on concepts developed by medical anthropologists in the contextual studies of diarrhoeal illness. Weiss places these concepts under four major headings as follows: patterns of distress; explanatory models; patterns of help-seeking and specific treatments.

Patterns of distress refer to the range of symptoms that the local people complain about and the ways they experience the effects of the illness. Traditional people may base their distress patterns on any one or more of the following features of the diarrhoeal illness:

1. quality of the diarrhoeal stool;
2. other signs and symptoms;
3. perceived seriousness;
4. perceived vulnerability to complications or other kinds of distress;
5. level of anxiety;
6. disturbed interpersonal relationships;
7. spiritual obligations, concerns and supports;
8. local ideas about illness that refer to diarrhoea as a primary or incidental feature.

In contrast, clinicians considering the signs and symptoms will diagnose a microscopic pathogen or describe tissue pathology or pathophysiology.

Explanatory models characterise the meaning people attribute to illness as they try to explain it. This concept specifies perceived causes of diarrhoeal illness - particularly physical, social, supernatural, humoral and other explanations - with reference to the underlying system of beliefs in different cultural settings. Different explanatory models specify the following causes for diarrhoeal illness in many cultures:

1. foods that are fatty, not cooked adequately, heavy, etc;
2. imbalance of heat and cold that may be associated with foods, exposure to drafts or seasonal changes;
3. normal or poor quality breast milk;
4. physical factors, such as a fall or poor caretaking;
5. supernatural causes including possession of sorcery or evil eye;
6. pollution from exposure to or inauspicious contact with ritually impure persons or things;
7. moral misbehaviour, including deeds of the sick person or a sick child's parents, especially promiscuous sex and sexual intercourse or pregnancy whilst breastfeeding;
8. natural consequence of milestones especially teething, crawling and walking;
9. infection which may be associated with hygiene and sanitation (but which may be difficult to distinguish from ideas about pollution).

In every culture, especially traditional societies, people seek help for distress from various sources. Help providers are associated with modern or traditional medical systems, religious healers or community leaders or other local institutions. Preferences for medical help-seeking may vary according to features of the illness; socio-demographic characteristics of the individual family; the reputation, availability, and prior experiences with various sources of medical help or other factors.

Specific treatments refer to the diverse group of medical help providers in the community, knowledgeable relatives and others in the social network who may recommend an equally diverse array of treatments. They fall under the following broad categories:

1. adjusting diet and fluid intake or withholding foods or fluids;
2. changing breastfeeding routines;
3. cleansing the gastrointestinal tract with enemas, purgatives and emetics;
4. local herbal remedies;
5. ritual and devotional practices to promote spiritual healing;
6. other locally sanctioned interventions (eg. abdominal massage, manipulation of the soft palate and skin over fontanel, cutting gums for teething diarrhoea etc);
7. cosmopolitan medicines, including antimotility agents, adsorbents, and antibiotics;
8. ORT (including ORS).

As figures 1 and 2 (see overleaf) show, each of these sets of variables which together constitute the 'cultural construction of illness', represents a facet of the complex relationship between a disease and the cultural context in which it occurs.

These variable sets proposed by Weiss (1988) to characterise diarrhoeal illness-related beliefs and practices patterns of distress, explanatory models, help seeking and treatment practices provide an appropriate framework for organising field data on ethnomedical models of diarrhoeal illness in the community under study, and for generating hypotheses that relate perceptions and the experience of illness to relevant public health outcomes.

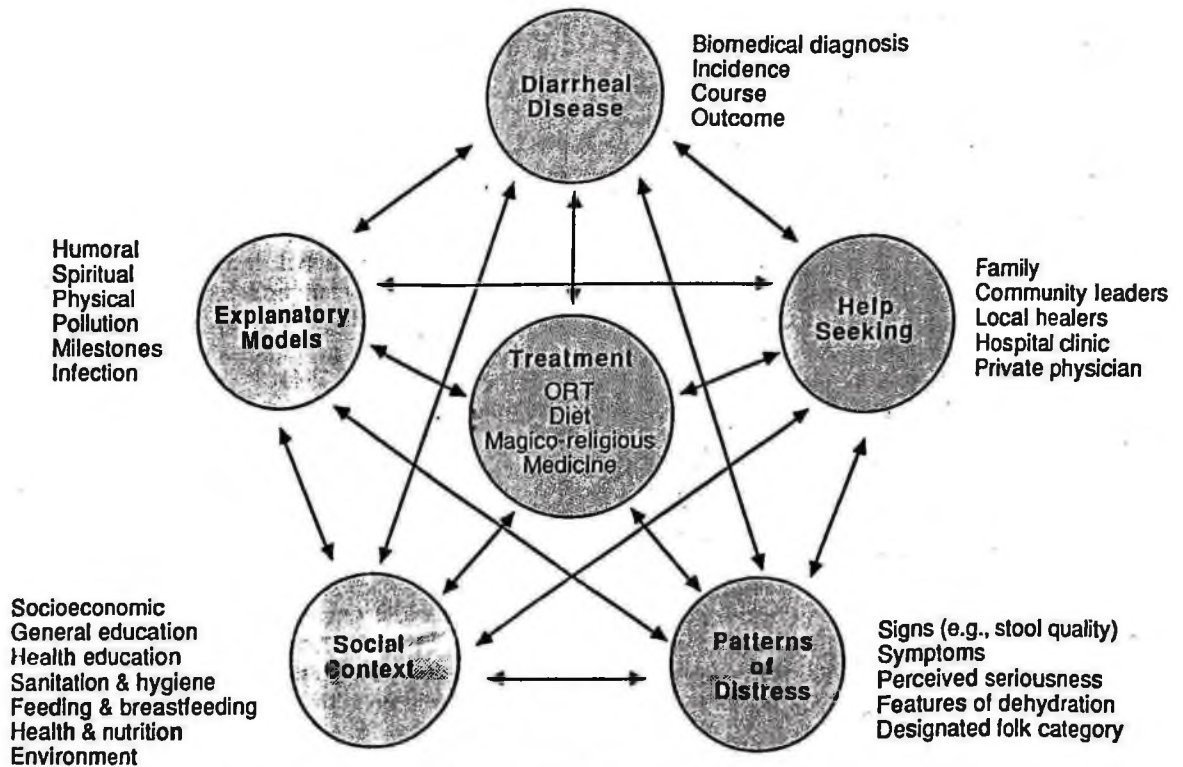


Fig. 1. Cultural construction of diarrheal illness: interrelationship of social factors, illness experience, help seeking and outcome.

Source : Weiss M.G., Cultural Models of Diarrhoeal

Illness : Conceptual Framework and Review.

Soc. Sci, Med., Vol. 27, pp.6, 1988.

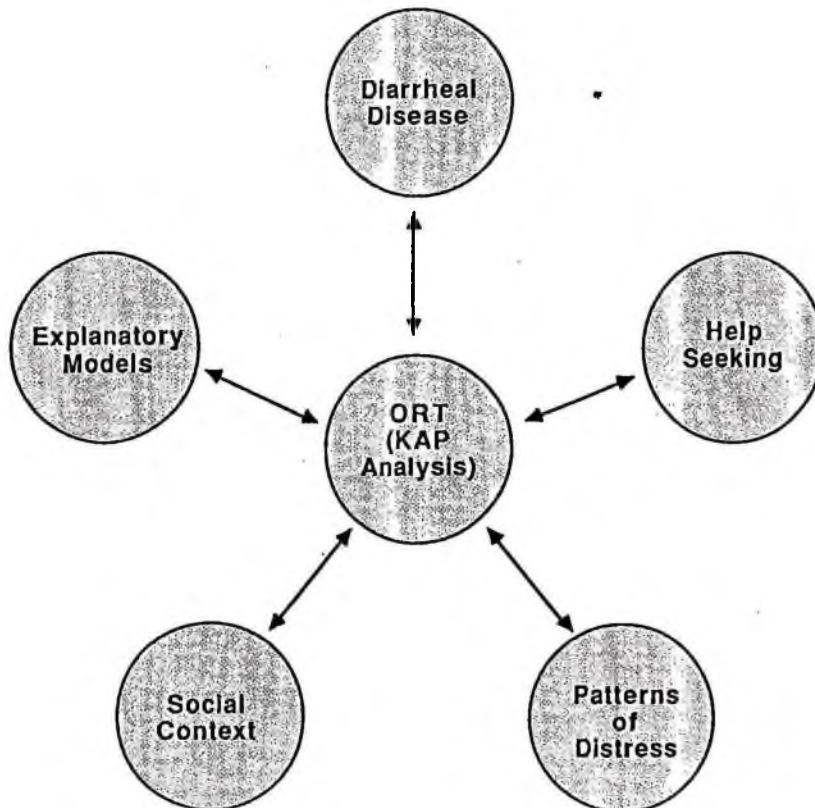


Fig. 2. Cultural context of ORT.

Source: Weiss M.G., Cultural Models of Diarrhoeal Illness : Conceptual Framework and Review, Soc. Sci, Med., Vol. 27, No. 1 pp. 7, 1988.

### 1.3 Key Concepts

It is appropriate that in a study of this nature the various concepts used are defined in order to do away with any ambiguity in the mind of the reader. Specifying the meanings of the concepts will also facilitate the reading and understanding of the study. These concepts are therefore defined below.

#### 1. DIARRHOEA

A brief survey of diarrhoeal diseases literature depicts varying levels of heterogeneity in the use of the term diarrhoea. (Black et al. 1982). For the purposes of this study however, WHO's recommended definition will be used. Diarrhoea is defined clinically as the excretion of three or more liquid or semi liquid stools during a 24 hour period. (WHO 1988). Two main forms of diarrhoea are recognised by WHO: acute and persistent. Acute diarrhoea refers to episodes that last less than one week. Persistent diarrhoea on the other hand is an episode which starts acutely but which lasts at least 14 days (Dialogue on diarrhoea, No. 48 1992).

#### 2. TRADITIONAL MEDICINE -

This term is used here to describe health care that does not fall within the allopathic 'modern' and scientific system. Under this system, there is no conceptual separation between natural and supernatural entities, although it has as a key feature, the use of magico-religious acts and concepts. As Twumasi has noted in traditional medicine "tradition is important not in the sense of empirical experience but through its validation of the power of the unseen world" (Twumasi 1975

p.10). Traditional health care regimens used in the prevention and treatment of diarrhoea include local remedies such as herbs, enemas, purgatives, visiting faith healers, spiritualists (diviners or fetish priests) and traditional herbalists.

### 3. MODERN SCIENTIFIC OR ALLOPATHIC APPROACHES TO THE PREVENTION AND TREATMENT OF DIARRHOEA -

These include the use of home medication with pharmaceuticals, seeking advice and prescribed treatment from a pharmacist/chemical seller, health worker in government or private practice and the use of ORT (including ORS). Practitioners of these approaches have as an important underpinning a naturalistic world view of the causes of diseases and ill-health in general. As a result the establishment of causalities in supernatural terms is assumed to have no place in modern therapeutic choices.

## 1.4 METHODOLOGY

### 1.4.0 FIELD SETTING.

To investigate the central thesis that the choice of modern approaches to the treatment of childhood diarrhoea is a function of folk concepts of cause(s), consequences and treatment of various forms of diarrhoea, it became necessary to move into a rural area. The Dangme East District readily came to mind as the investigator was familiar with this area and besides, such familiarity has been found to enhance the quality of in-depth studies (Janzen 1978; Stone and Camp 1984; Bleek 1987). In deciding on the particular

community to be studied however clinical records at the Ada Foah<sup>2</sup> Health Post were reviewed, and Pute was found to be one of the communities in the district with a high incidence of diarrhoea, which therefore made it a suitable setting for the study. Apart from these considerations, it was also felt that the chosen community should have identifiable rural features to make it easily discernible from an urban community. In this respect, lack of pipe-borne water supply, electricity, good accessible roads, and its smallness (it has a population of less than 5000) were considered typical rural features.

Furthermore, this micro-approach was adopted for two other important reasons; time and financial constraints as well as to allow for a deeper study of beliefs and practices surrounding childhood diarrhoeal illness.

#### 1.4.1 Data Collection Techniques

The data upon which this study is based were gathered mainly from mothers with children under age five residing in Pute.

Aware of the limitations of using standard survey methods to elicit valid information on health beliefs among a rural community, three major complementary methods were used in this study.

The primary method of data collection was interviewing using a schedule which was designed following a review of literature related to the management of childhood diarrhoea in various

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<sup>2</sup> Ada Foah is the administrative capital of the Dangme East District.

cultural contexts of the world. The schedule consisted of both close-ended and open-ended questions. The open-ended questions made it possible to elicit free and detailed responses as well as recording of information spontaneously. Topics covered in the interview schedule include socio-demographic characteristics of respondents, beliefs, perceptions and attitudes to diarrhoea with particular reference to types, their causes and treatment options; case management of diarrhoea which also included questions related to prevalence of diarrhoea, food and fluid practices and knowledge and use of ORS/SSS. Taking into consideration the problems of recall usually encountered in household morbidity surveys, questions regarding case management were framed around a point prevalent measure (the proportion of children under age five whose mothers report that they have had diarrhoea in the 24 hours preceding the interview) and a period prevalent measure (the proportion with diarrhoea in the two weeks preceding the interview). Where the diarrhoea occurred in the remote past, the technique used to facilitate recall was to centre questioning around the "last diarrhoeal episode". Thus responses were linked to a previous experience of diarrhoea usually recent in time rather than an abstract event.

A major shortcoming of data from the interview schedule is that they tend to reflect reported behaviour in the sense that there may be variations in what people say they do and what they actually do (Bentley 1987). In order to minimise the distortion between 'reported' behaviour and 'actual' behaviour, this first approach of

interviewing was combined with observation and informal questioning of mothers. To this end, actual diarrhoeal episodes were followed through to recovery. Where possible, visits were made daily or every other day until the diarrhoea subsided. Conducting interviews among families in which the child was ill with diarrhoea made it possible to observe and to sympathetically comprehend interactions among mother, child and other caretakers and thereby focusing the behaviours of interest first hand. In all, the observation technique which has been found useful in the study of small-scale largely illiterate communities, provided the necessary social and cultural background for interpreting data derived from the interview schedules.

As a further validity check on self-reported information, three focus group discussions of mothers randomly selected from three different age groups 15-24, 25-34 and 35 and above were conducted. Age was used as the main criterion for making the groups homogeneous. This ensured that mothers felt at ease and spoke. All participants had been previously interviewed. The investigator served as the main facilitator whilst two other members of the research team served as recorders. The questions for the focus group discussions were treated as an outline of discussion which only provided a general direction. Hence, they were not rigidly followed. To initiate a discussion on the issues of interest, the group was led to talk about general topics to build up mutual trust. It was only when this had been achieved and the discussion was running smoothly and all members were actively participating that issues related to the management of childhood diarrhoea were

raised. It was this part of the discussion that was recorded on a voice-activated portable tape-recorder. Sessions which were conducted in Dangme<sup>3</sup> lasted between 60-80 minutes and they were held in a classroom at the village's primary school. Each group consisted of eight members. At the end of the group sessions, the recordings were listened to by the main facilitator and reports were written on the salient points.

Furthermore, the investigator held informal interviews with some knowledgeable people like the local chief, fetish priest/priestess, herbalists, the local Assemblyman and a Chemical Seller in the village. They were all relied on to describe and to report on the culture of the people at Pute.

Besides, secondary data on the anthropological studies of diarrhoeal illness (mainly from journals) in different cultural contexts were utilised where necessary.

#### 1.4.2 Sampling

In order to obtain relatively unbiased results at minimum cost, the following procedure was used in selecting mothers with children under age five for questioning. First it was important to assess the population universe of mothers in the community having children under age five. In the absence of current population data on the village, a house to house head count of these mothers was carried out together with the number of children under age five that lived

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<sup>3</sup> Dangme is the local language of the people of Ada.

in each house. The head count which was done in May 1993 revealed that there were approximately 291 mothers who had a total number of 383 children under age five and lived in 151 houses. There were however about 9 houses without children under age five which have therefore been excluded from the sampling universe. On the average there were about two mothers with 1.3 children in each house. In order to obtain a sample size representative of Pute community as a whole, the family was used as the sampling unit. It is defined here as a mother plus any children she had borne who are living with her in the same household. A significant proportion of households contained multiple nuclear families. Questionnaires were administered to one family in each household. The mode of interaction in this community made it unnecessary for our purpose to interview more than one family per household since the interviews were not private other family members who were around indirectly participated. In all 143 mothers from all houses having children under five were interviewed. This represents about 50 percent of mothers with children under age five residing in Pute and is therefore expected to provide a good representative sample. In selecting mothers, priority was given to those whose children were currently experiencing diarrhoea or had had the most recent episode. It was felt that household behaviour for an on-going diarrhoea will probably be reported more accurately than for past or future episodes.

Furthermore, in order to obtain a representative number of diarrhoeal episodes to be followed, it was decided that half of all new episodes recorded during household interviews in a particular

day will be randomly selected for study. Out of the 47 on-going diarrhoeal episodes that were recorded over the period of the study, 23 were monitored.

Given the time constraints facing the investigator, three female interviewers were recruited to help in collecting information from mothers. They were all sixth formers and Dangme-speaking. They were trained in the conduct of focus group discussions, interviewing and qualitative research techniques using role playing exercises for one week. The goal of this training was to enable interviewers to become familiar with the aims of the study and the purpose and meaning of each question. Since the interview schedule was in English, appropriate translations of the questions into Dangme were carried out to ensure that questions were asked uniformly by all. All the interviewers stayed at Pute throughout the survey. This enabled them to interview women engaged in fish-related activities and traders who left home very early and returned home very late in the evening.

#### 1.4.3 Pre-testing

The interview schedules and the guide questions for the focus group discussions were pre-tested at Ocanseykope and Totimekope - all rural communities in the Dangme East District. Pre-testing the interview schedules provided the investigator with the means for detecting and solving unforeseen problems not previously anticipated. These included rephrasing, re-wording and changing the sequence of questions. It also showed the need for new questions and the elimination of some old ones.

#### 1.4.4 Procedure for Fieldwork

The investigator's first visit to Pute to begin the study was in May 1993 in which a census of mothers having children under age five was conducted. During this first visit, the chief and his elders caused a "gong gong" to be beaten at a fee of ₵800. This was to "announce the arrival in their midst of a young man from Legon-Accra and three ladies from Ada-Foah to study the health problems of our children. They will be visiting your houses to ask you questions so we entreat you to give them your maximum co-operation". The actual survey on the management of childhood diarrhoea could not take place immediately after the first survey due to interruptions by funeral celebrations. Hence it was conducted in the latter part of June 1993. The findings are reported in Chapter four.

#### 1.4.5 Data Processing and Analysis

In presenting the data collected, statistical analysis of the study is limited to percentage frequency distributions, cross-tabulations and significant correlations between some important variables which have been used for illustrative purposes in an effort to communicate the results of the study in a simple non-technical manner. All close-ended questions were pre-coded whilst answers to open-ended questions were listed, placed into meaningful categories and assigned codes after the survey for subsequent analysis. The analysis of data was carried out by a computer expert at the Health Social Sciences Research Unit of the Institute of Statistical, Social and Economic Research University of Ghana - Legon. The software used for the analysis is the Statistical Analysis System (SAS).

#### 1.4.6 Field Problems Encountered

Some of the major problems encountered in the study were:-

1. the feeling of some mothers that the investigation was irrelevant to their pressing health needs. Hence their reluctance to provide complete answers. Whenever such a problem arose, the purpose of the study was re-echoed in a polite and convincing manner which made most mothers to co-operate;
2. the absence of some mothers, which led to postponement of interviews to be carried out at an appointed time - usually in the early hours of the morning or late in the evening;
3. the problem of different meanings between interviewers and respondents: granted that the majority of mothers were illiterates, it was quite difficult to translate exactly their thoughts or views into English without slight changes, whilst recording responses. This problem was minimised by listening attentively and repeating what had been written down to them as a cross-check on information given;
4. and finally the difficulty of conducting interviews privately. Most of the time, relatives or neighbours often refused to leave the scene of the interviews. Hence only a few were not conducted under public scrutiny. A lot of patience and tact on the part of interviewers became a sine qua non for the interview process to go on.

#### 1.5 Implications of the Study

The understanding of household management of childhood diarrhoea has one important applied purpose - it would help to obtain

information about the most receptive and resistant points to intervention programmes for diarrhoeal diseases. This will enable health planners to design appropriate programmes to communicate needed educational information either to reinforce adaptive behaviours or modify maladaptive practices in the management of childhood diarrhoea. In the long run this will help them to promote improved and acceptable health care for rural people.

It is also hoped that the study would inspire more rigorous micro-studies of diarrhoea-related behaviour as well as those of other diseases that demand cultural knowledge of specific populations in other ethno-geographic regions of Ghana.

Finally this study will strengthen empirically the theory of health-seeking behaviour in Ghana.

#### 1.6 Study Limitations

The following limitations of the study are notable.

First, due to the small number of diarrhoeal episodes that were followed (23) it is not known whether the management of childhood diarrhoea as a whole was captured in full.

Furthermore, there is the important issue of the extent to which the findings can be generalised. This limitation arises mainly from the decision to confine the study to only one rural community although there exists broad geographical, ecological, demographic, cultural and linguistic variability in Ghana. However, the central questions which this study addresses are not peculiar to the

specific case chosen but bears on people of other ethno-geographic areas in Ghana as well as other communities in the district if not in the whole country.

### 1.7 Outline of Thesis

This thesis comprises five main chapters with sub-divisions under each chapter.

Chapter one (1), which is the introduction sets forth the problem, objectives, conceptual framework, the methodological approach to the study, the practical contributions that the study can offer as well as its broad limitations.

Chapter two(2) deals with a review of literature on the management of childhood diarrhoeal illness in different cultural environments.

Chapter three (3) is devoted to a description of the research site with particular reference to the social organisation of the people, their way of life and general world-view.

Chapter four (4) is concerned with a presentation of findings and the analysis of the data collected.

Chapter five (5) is a summary of findings, conclusions and implications of the study for public health programmes for the control of diarrhoeal diseases as well as suggested areas for further research.

Copies of interview schedules used in the study, a list of references consulted, as well as other related information are found in the appendix.

## CHAPTER TWO

### REVIEW OF LITERATURE

#### 2.0 Introduction

In this chapter, researches on childhood diarrhoeal diseases and other related issues in different cultural settings will be reviewed. The studies that are focused on are mainly anthropological and epidemiological in nature. Apart from providing a general background to the study as a whole, the review will help to establish more firmly the rationale of the study, and lay the basis for understanding discussions in subsequent chapters.

The development of interest in anthropological approaches to the study of diarrhoeal illness has been traced to three main factors: PHC development, methodological contribution and theoretical issues (Coreil and Mull 1988).

Over the years, efforts to implement PHC programmes in many developing countries have led to an increased awareness of the importance of cultural information about the constituent population served by specific programmes. (Foster 1984). There is greater recognition that many problems encountered in the promotion of community-based PHC programmes emanate from lack of information on local health beliefs and practices, insensitivity to cultural factors as well as other issues that require detailed knowledge about cultural dispositions and local ecological limitations.

With regard to methodological contributions, anthropological perspectives have been seen to have moved beyond the usual practice

of merely providing a 'background view' of the cultural context to an in-depth cultural analysis and interpretation of specific illness nosologies and care practices that are likely to influence the adoption of new health behaviours.

Finally, one of the most important theoretical issues that has been found to be associated with the development of interest in anthropological diarrhoeal research has been the fact that for the first time in history, ORT and dietary management as therapeutic health practices (rather than preventive), based primarily in the home were being promoted on a massive scale worldwide by international health organisations. Granted that the home treatment of diarrhoea raises a lot of issues which anthropology is particularly suited to address, it is not surprising that, since 1980 when ORT has been the dominant focus of international health programmes, many researchers have within the past decade investigated maternal beliefs, attitudes and behaviour related to diarrhoeal diseases (mainly childhood diarrhoea and cholera, ORT, dietary management, breastfeeding and other pertinent issues in developing countries). These studies have constituted part of public health efforts to improve home management of childhood diarrhoea.

Bentley (1988) conducted an in-depth anthropological study of childhood diarrhoea in three (3) rural communities in a North Indian state of Haryana to show variations in the household management of childhood diarrhoea. Using ethnographic techniques, structured interviews and participant observation, the study

revealed that mothers in the three study villages had a clearly defined indigenous classification system for diarrhoea. Diarrhoea was referred to as 'dust' and could be categorised into between two (2) and five (5) types that were related to either a physical or spiritual characteristics. The commonly listed types were 'Khooni-dust' ('bloody diarrhoea'), 'pani dust' ('watery diarrhoea'), 'phate-phate' ('bits and pieces'), 'hare dust' ('green diarrhoea') and 'pila dust' ('yellow diarrhoea').

Mothers attributed the causes of diarrhoea to hot weather (66 percent), bad food (33 percent), overeating (30 percent), teething (24 percent), cold weather (23 percent), 'hot' food (16 percent), hot breastmilk (15 percent), evil eye (12 percent) and dirty water or germs (4 percent).

A great majority of mothers in Bentley's study who believed diarrhoea could be treated preferred 'doctors' treatment (86 percent). Some of the mothers (3 percent) felt that home treatment alone was sufficient; less than 5 percent said both 'doctor' and home treatment should be done and less than 1 percent believed exorcism should be sought as a treatment choice. In the fifty (50) diarrhoeal episodes that were followed, medical treatments were used in 62 percent of cases and the most striking finding was the widespread use of antibiotics and in many cases the use of multiple antibiotics during a single episode. In the sample of episodes followed, there was no relationship between the presence of blood and whether or not an antibiotic was given.

One important aspect of Bentley's (1988) study was to determine the extent to which mothers were withholding food and fluids as is widely reported in professional literature. Although the survey data depicted traces of this 'common view' the more commonly observed pattern was a shift in diet towards foods mothers considered "helpful" away from foods they considered "harmful". On the whole however, normal dietary patterns were maintained whilst mothers continued to breastfeed normally and did not decrease fluids during diarrhoea.

In addition, acceptance and sustained use of ORT was found to be inversely related to an understanding of the function of ORT. Eighty-one percent of mothers who had previously used ORT but do not intend to use it again believed it did not "stop the diarrhoea". Mothers tended to attribute anti-diarrhoeal qualities to ORT and did not understand what it was meant to do - replace body fluids lost from stool output.

Some of Bentley's findings of practical relevance for diarrhoea intervention were that ORT should be promoted as a therapy for the replacement of lost fluids. Also messages that are meant to change behaviours should be based on the target group's perceptions.

Green's study (1985) of beliefs and practices associated with childhood diarrhoea in Swaziland relied primarily on traditional healers and survey respondents as informants. His study revealed an ethnoclassification of diarrhoea into 3 main types 'umsheko', 'kuhabula' and 'umphezulu'. Although their signs and symptoms

tended to overlap somewhat, they were viewed as separate syndromes with different causes, treatments and potentials for prevention. 'Umsheko' is believed to be natural, of a brief duration, non-dehydrating and caused by diet, teething and mild fevers. Diarrhoea initially regarded as 'umsheko' can later be regarded as 'kuhabula' or 'umphezulu' if it persists and if symptoms such as sunken fontanel appear.

Among others, it was discovered that enemas were used in the treatment of two types of more serious diarrhoea ('kuhabula', 'umphezulu') thereby contributing to dehydration. A kind of fumigation was also used to treat 'kuhabula'. Herbal teas could be used for any illness associated with diarrhoea. Those used for simple 'umsheko' are believed to have stool-solidifying characteristics.

It was observed that most children with diarrhoea were taken to the clinic only after home treatments and those of indigenous health practitioners had proven futile, by which time a child may be dehydrated. In discussing the implications of the study for ORT programmes in the context of Swazi culture, Green identified two important groups which should be made primary 'targets' for health promotion: traditional healers and mothers. Whilst the former are seen to be the opinion leaders in all matters of health including diarrhoeal diseases, the latter are decision-makers regarding therapy for childhood diarrhoea.

In an evaluative study of a diarrhoeal disease prevention and

control programme in Honduras, Kendall and his collaborators (1984) demonstrated the extent to which beliefs and practices surrounding diarrhoeal illness partially shaped the promotion of ORT. Interviews with key informants concerning diarrhoeal etiology and treatment revealed a number of folk illnesses associated with diarrhoeal symptoms believed to be causes of diarrhoea. These were 'empacho', 'ojo' (evil eye), 'caiada de moltera' (fallen fontanel) and 'lombrices' (worms). Episodes of diarrhoea were believed to be caused by these folk illnesses especially when the diarrhoea is severe and refractive. 'Empacho' was believed to be a painful condition of the intestinal tract characterised by explosive evacuations and flatulence. It was believed to be caused by eating the wrong kinds of food, or a combination of foods improperly balanced along notions of hot and cold foods; eating at improper times or missing a meal or eating foods that were improperly cooked or raw. To treat 'empacho' the body needs to be massaged by a masseur or masseuse and a purgative administered to clean the gut. Evil eye or 'ojo' which produces fever was felt to be the result of malicious penetrant rays. It is treated by bundling as for any fever and spraying of the skin with a number of liquids. Purgatives were not used and the belief was that evil eye does not contaminate the gut. 'Fallen fontanels' were believed to be caused by improper maternal handling of an infant. It was also held that the tissue beneath the fontanel were incompletely developed and that they could fall. Treatment entailed pushing up on the roof of the mouth and tapping on the heels of the inverted child and/or sucking on the fontanel.

'Lombrices' (worms) were considered a normal symbiote of the gut but caused illness when disturbed. It needs treatment by a purgative otherwise they could cause "worm fever" which was believed to be a fatal illness. Worm related diarrhoea was generally believed to be benign and therefore needed no treatment except when it became persistent. Based on their findings, Kendall et al. recommended that the use of ORT may not be resisted in cases of diarrhoea attributed to 'ojo' or 'caiada'. But for 'empacho' which required the administration of a purgative, it was felt that mothers would resist the use of ORT for the treatment of this disease. A natural consequence of their findings would have been the promotion of ORT as a purgative, or at least as a specific treatment for 'empacho'. This promotional strategy for ORT was not approved for two reasons. Firstly, it was rejected by the Honduran cosmopolitan medical community and, secondly, only few mothers reported 'empacho' as a cause of diarrhoea.

Mull and Mull (1988) studied diarrhoea-related traditional health beliefs and practices among women in rural Sind-Pakistan. A total of 57 women with children under age 5 were interviewed to obtain information on the prevalence and perceived seriousness of diarrhoea, its causes, the ways in which it was treated; including ORT as well as the range of indigenous health practitioners who were consulted for diarrhoea and for diseases in general. They found that mothers' perceptions of the causes of child diarrhoea were closely linked to a concept of 'heat'. As used by these mothers, 'heat' did not normally refer to measurable temperatures but to a hot quality believed to be inherent in certain foods or

bodily states. To this end, mothers in Mull and Mull's study tended to consider substances perceived as 'cooling' the intestines as effective anti-diarrhoeal remedies. Such cooling agents included yoghurt, lime juice mixed with water, 'rice-water' and various herbal infusions. Of particular relevance to ORT acceptance was the fact that 72 percent of the fifty-seven (57) women interviewed stated that they had used a form of 'sugar water' and that it was useful because of its 'cooling' effects on the body. Although the salt content of this solution could not be established, a few mothers (9 percent) held that salt worsens or causes diarrhoea. Nevertheless, the evidence from the study suggested that mothers in this area of Pakistan will not reject ORT outrightly simply because of its sugar content. Another clinically significant finding was the perception of certain diarrhoeas as folk illnesses requiring traditional remedies rather than biomedical therapy. Two such illnesses were 'sutt' (fallen fontanel) and 'nazar' (evil eye). The import of this finding was that, if serious symptoms are attributed to a folk disease, health could be compromised while traditional treatments are sought. Mull and Mull also discovered as an aspect of folk etiology and therapy that certain diarrhoeas were considered 'normal' - a transition in the process of growing up and hence was not considered an illness. The belief was that such diarrhoea stops by itself by avoidance of the root cause. Such diarrhoea include those associated with 'teething'; those viewed as caused by a breastfeeding mother having eaten foods that were too hot or having become overheated in the sun; or having become pregnant. Besides, the study revealed that, even among mothers who had ever used ORS, a vast majority did not

know how the solution should be prepared and administered. Whilst several women described a preparation method that would have yielded a solution much too dilute or much too concentrated to be effective, others thought that it should be given in doses of 1 or 2 teaspoonfuls, 2 or 3 times daily - confusing its administration with the manner in which over-the-counter syrups were administered. In a concluding note, Mull and Mull attributed the lack of enthusiasm for ORT and the subsequent usage pattern observed to inadequate understanding of the concept of ORT.

Malik et al. (1992) used survey methods and in-depth interviews of 595 households in rural and urban Punjab-Pakistan, to study mothers' emotional response to children's illness with particular emphasis on diarrhoea. The main thrust of the study was to assess the extent to which diarrhoea was particularly distressing to mothers; the relationship between seriousness and children's symptoms; and mothers' thoughts about causes, consequences and treatment of various forms of diarrhoea in children.

Results of the household survey showed that mothers used various local names for diarrhoea; 'dast', 'julab' and 'paichish'. Cultural categories of diarrhoea were established by colour and consistency; whether blood was present in the stool; and whether defaecation was explosive. Mothers also associated certain causes and varying degrees of severity with different types of diarrhoea. It was also found that diarrhoea must be regarded not only as a discrete disease entity but as a symptom belonging to several popular illness categories. An analysis of the relationship

between local cultural models of diarrhoeal illnesses to maternal emotional responses revealed that the latter was in part shaped by the illness categories to which mothers assigned a child's episode. In addition, maternal fears that symptoms of diarrhoea may be life-threatening were found to be associated with death of children, with treatment choices and help-seeking as a whole. Besides, a significantly high proportion of mothers who fear diarrhoea to be life-threatening to their children rather than mothers with other concerns choose to use Nimkol - the Pakistani ORS. The importance of recognising the complexity of interpretative and emotional processes which shape the care of children and the home treatment of childhood diseases is also emphasised.

Adetunji (1989) highlighted the behavioural response of parents to five major killer diseases in his study of a Yoruba community in Nigeria. Data were collected on parent's perceptions of cause, best treatment and the decision-making process about the killer diseases which were diarrhoea, measles, tetanus, pertussis and fever.

With regard to diarrhoea, teething was found to be the major cause. This was reported by about 44 percent of the total sample size of 27 respondents. Diarrhoea occurring prior to teething was considered necessary because it did away with all inhibitions in the way of emerging teeth. The type of impediments that needed to be flushed out included diseases 'hiding' inside the child's abdomen - measles being one of these. Food-related causes were the second major group reported (about 30 percent). They include

inappropriate food for the child, overfeeding, eating too hot food, using dirty feeding bottles or utensils for children and a sudden change from one infant formula to another. The major treatments recommended were medicinal herbal infusions (29 percent), ORT (24 percent) and locally purchased antibiotics (12 percent). Generally, a prevalent belief was that loose motions must be allowed to continue for sometime before any treatment was sought. Foods that were cold in temperature were to be given during diarrhoea whilst beans was to be withdrawn from the child's diet. One important finding that the study thought could have both positive and negative health implications was the use of medicinal teas. The view was that, although, these herbal remedies could be a useful rehydrating fluid, they could become a threat to health in the hands of caretakers of the child with little or no schooling when herbal infusions are prepared and administered under unhygienic conditions. The paper concludes that although some of the practices might have negative health implications they could usefully be adopted to the goal of self-reliance in medical care within the PHC context.

Coreil and Genece (1988) used ethnographic and survey methods in Haiti to study the extent to which various variables influenced the use of ORT, including beliefs and practices concerning diarrhoeal illness, socioeconomic status and exposure to health training programmes among rural and urban mothers. They discovered that mothers' beliefs about how ORT works (about whether it stops or replaces fluids) determined their treatment choices (home-made solutions versus packaged ORS), as well as the time-lag before

treatment was started. Prior help seeking at medical clinics was associated with use of ORT, but family use of traditional remedies (prior to treatment) was not. Their findings indicate that literacy and beliefs about ORT are important determinants of use in Haiti and should be addressed in health education programmes.

Chowdhury et al. (1988) in an epidemiological evaluation of the usage and safety of home-made oral rehydration salts also investigated peoples' perceptions, beliefs and customs about diarrhoea, its treatment and the extent to which these affected the use of Lobon-gur solution (LGS) - the Bangladeshi ORS. The study which was conducted in 3 phases identified 4 main types of diarrhoea with specific causes and other peculiar characteristics. 'Dug haga' was believed to occur when a child suck 'polluted' breastmilk. 'Ajirno' diarrhoea was perceived to be caused by indigestion and food poisoning. Whilst the cause of 'Amasha' diarrhoea was unknown, it was believed to have a mucousy stool characteristic. The fourth type which was described as 'severe diarrhoea' or 'cholera' was felt to be very dangerous and that it could result in dehydration and subsequent death. Among others, the evaluation depicted that over a half of all the diarrhoeal episodes recorded in the study had received some form of treatment. In ranking modes of treatment used, LGS was third in importance after other allopathic medicines, and 'Boneji' - a household herbal remedy. Moreover, a high usage rate of LGS was observed among mothers for 'severe diarrhoea' which was thought to be the most life-threatening and thereby demonstrating the usefulness of using a typology of diarrhoea based on peoples' perception.

In Ghana some of the studies related to the management of childhood diarrhoea have been conducted by Afari et al. (1988), Ghana Statistical Service (Ghana) - GDHS (1988), Adjei (1988) and Abu (1988).

Afari et al. (1988) in their survey of childhood morbidity and treatment in two rural communities (Gomoa Fetteh and Gomoa Onyadze/Otsew Jukwa) paid attention to determining the under five annual incidence rate, mother's definition of diarrhoea, and treatment choices. In all, a total of 235 and 132 mothers were interviewed at Gomoa Fetteh and Gomoa Onyadze/Otsew Jukwa respectively. Among others, the study revealed that majority of mothers (96.6 percent) at Gomoa Fetteh and 95.5 percent at Gomoa Onyadze/Otsew Jukwa defined diarrhoea in a child as the passing of 5-8 loose stools in a 24-hour period. By this definition, it was the view of the study that, mothers did not recognise diarrhoea early enough to start home treatment. About 40 percent of mothers at Gomoa Fetteh will treat diarrhoea with drugs like paracetamol and antibiotics (tetracycline and ampicillin), 28.9 percent will give sugar salt solution (SSS), 10.2 percent will administer enema and 80.1 percent will take their children to the clinic. In Gomoa Onyadze/Otsew Jukwa, 29.5 percent of mothers will choose the clinic as a first treatment choice, 28 percent will buy drugs, whilst 21.2 percent and 7.6 percent will give enema and SSS respectively.

Although this study mentions that a mother's concept of diarrhoeal disease and its treatment are shaped by cultural factors, these are not considered important in any effort aimed at educating mothers

on the appropriate management of childhood diarrhoea.

In the GDHS (1988), carried out by the Statistical Service of Ghana, an attempt was made to assess the prevalence of diarrhoea in the country as a whole and the various treatments that were used in these episodes. The study made use of a point and a period prevalent measure of diarrhoea in the last 24 hours and the past two weeks respectively, as well as various sociodemographic indicators. It was discovered among others that there was a curvilinear relationship of the prevalence of diarrhoea to age of the child. Children under six months of age were least likely to have had diarrhoea. The rate was found to increase up to age 12-17 months and then falls. It was also found that the prevalence of diarrhoea varied little according to the sex of the child or region except in the Western Region of Ghana where diarrhoeal prevalence was lower than elsewhere. There was also no substantial differences between children living in urban areas and those living in rural areas. Diarrhoea prevalence was also found to be approximately the same for children of mothers with no education, primary education and middle school education but was lower with children whose mothers had higher education. Concerning treatment it was reported that 40 percent of children with diarrhoea in the last two weeks were taken to a medical facility. Moreover, children living in urban areas were more likely to consult a medical facility than rural children. In addition approximately one-third of children with diarrhoea in the last two weeks were treated with ORT - 34 percent were given ORS while 6 percent were given SSS. Apart from reporting a widespread use of traditional

medicine in the treatment of diarrhoea its' use was found to be more prevalent in rural than urban areas. Also 12 percent of children in the last two weeks received no treatment. With respect to knowledge about ORT while only two-fifths of women with no education said they had heard of the ORS packets, more than three-fifths of those with primary education and four-fifths of women with higher education knew about packets.

Another important contribution to the understanding of the management of childhood diarrhoea has been made by Adjei (1988). He investigated factors affecting the transmission of diarrhoea in a cross-sectional survey of Accra and Ada districts. The study sought to understand the extent to which household demographic, social and economic characteristics, health services utilisation by households, maternal knowledge, attitudes and practices (KAP) related to diarrhoeal episodes contributed to its prevalence. Five social factors that were considered important for the transmission of diarrhoea were; age of the mother, parity, ethnicity, religion and educational level of husband. With regard to maternal age, a high prevalence rate was observed in children of mothers aged 15-29 years compared with mothers above 50 years.. Mothers with higher parity of 3 or 4 children had less diarrhoea in their children compared to those with 1 or 2 children. A higher prevalence rate was obtained among children of parents of the Northern and Upper regions living in the South. Also children of Moslems and Catholics tended to have higher rates compared with those of other religions. Higher paternal education was found to be negatively associated with the transmission of diarrhoea. The KAP aspects of

the study highlight some maternal perceptions of childhood diarrhoea that are of relevance to the present study. It was shown among others that diarrhoea was conceptualised in terms of frequency of passage of stools and also in variations in its frequency. Lack of knowledge on the causes of diarrhoea was also observed to be significantly associated with diarrhoea transmission in children. Those who do not know what causes diarrhoea or said it was due to teething had a high prevalence than those who said it was due to germs/flies or some kind of fever. Knowledge on how to prevent or cure as well as what to do in case of diarrhoea was also seen not to be associated with diarrhoea transmission. Following from these observations, Adjei identified the following groups of people as being at the greatest risk; Children of young mothers (15-29 years); children of mothers whose husbands have had little or no education and multiparous mothers, and that these should be made the targets of health educational programmes.

From the review of these three studies in Ghana (ie Afari et al. 1988, GDHS 1988 Adjei 1988), it is perceptible that their studies have been mainly epidemiologic in character - attempting to assess the incidence and distribution of disease and/or the various factors controlling its transmission. In such studies, the tendency is to rely heavily on the techniques of analytical epidemiology using statistical methods to demonstrate associations between variables and ensure the reliability of their findings whilst neglecting ethnomedical conceptions about diarrhoeal illness. Anthropologists however argue that, for their findings to be valid, an ethnomedical perspective is essential (Kleinman 1978).

Nations (1986) cautions against reliance on decontextualised statistical tools: failure to consider the ethnomedical perspective she argues, transforms this "epidemiological" rigor into 'quantitative rigormortis'.

One of the few studies which deal exclusively with indigenous concepts of diarrhoeal diseases and its treatment in Ghana has been Abu's (1988). This was an intervention study preceding the introduction of CDD programme in Ghana. In a cross-sectional survey of various ethno-geographic regions, Abu highlighted popular perceptions of diarrhoea, its causes, its effects on the body, associated symptoms and diseases, care of the diarrhoea patient and treatment, as well as the extent to which signs of dehydration were recognised by caretakers. The study which featured five major language groups in Ghana identified different names for diarrhoea but with the same meaning as the term diarrhoea is used in a layman's English. Some of these different names included 'ayamtuo' (Akan), 'musutsomo' (Ga). Varying types of diarrhoea like 'sunken eyes diarrhoea', 'dysentery' 'diarrhoea with measles' and 'diarrhoea with malaria' were also identified. The dominant causes of diarrhoea were perceived to be first, contaminated food or water, second, food unsuited for a person's age or constitution, teething, fever, measles and the habit of not washing hands before meals. The literates in urban settings placed more emphasis on contaminated food, poor hygiene and teething than did the non-literates. It was also discovered that four main approaches were used in the treatment of diarrhoea. These are local medicines, self-medication with pharmaceutical products, hospital treatment

and ORS.

Much as Abu's study contributed to the clarification of local concepts surrounding childhood diarrhoea, some degree of caution needs to be exercised in any attempt to apply her findings at the macro level. This is mainly due to the fact that her cross-sectional survey data could have been confounded by several important demographic socio-economic and social-structural/ethno-geographic differences which may have affected the behavioural outcomes reported.

In addition, most of the studies in Ghana have tended to follow the most common mode of rapid social data collection in applied health research - the survey method. This method utilises extensive samples with rather thin information from individuals. In contrast, the approach that has been used in this study is a micro one, emphasising local knowledge. Hence the decision to confine the study to only one community. Granted that there are different ethnic groups in Ghana, the need to investigate thoroughly ethnomedical models of diarrhoeal illness with particular reference to specific ethno-geographical areas cannot be overemphasised. To this end a combination of methods have been used to accumulate evidence on the management of diarrhoea from various research approaches.

## 2.1 Summary

The main concern in this chapter has been to review literature investigating diarrhoeal illness and related beliefs and practices

in different socio-cultural contexts of the world.

It has been shown that most of the studies - especially the anthropological ones have generated culturally sensitive findings of practical significance for health professionals and programme planners in the promotion of ORT as the most effective way to prevent dehydration due to diarrhoea.

Furthermore, these studies have demonstrated the usefulness of relating health, illness, healing and the cultural context that defines them as important determinants of health-seeking preferences in diarrhoeal episodes.

In the next chapter, the social organisation of the people of Pute will be outlined to provide a basis for understanding the context in which diarrhoeal illness is managed.

## CHAPTER THREE

### THE SOCIAL STRUCTURE OF PUTE

#### 3.0 Introduction

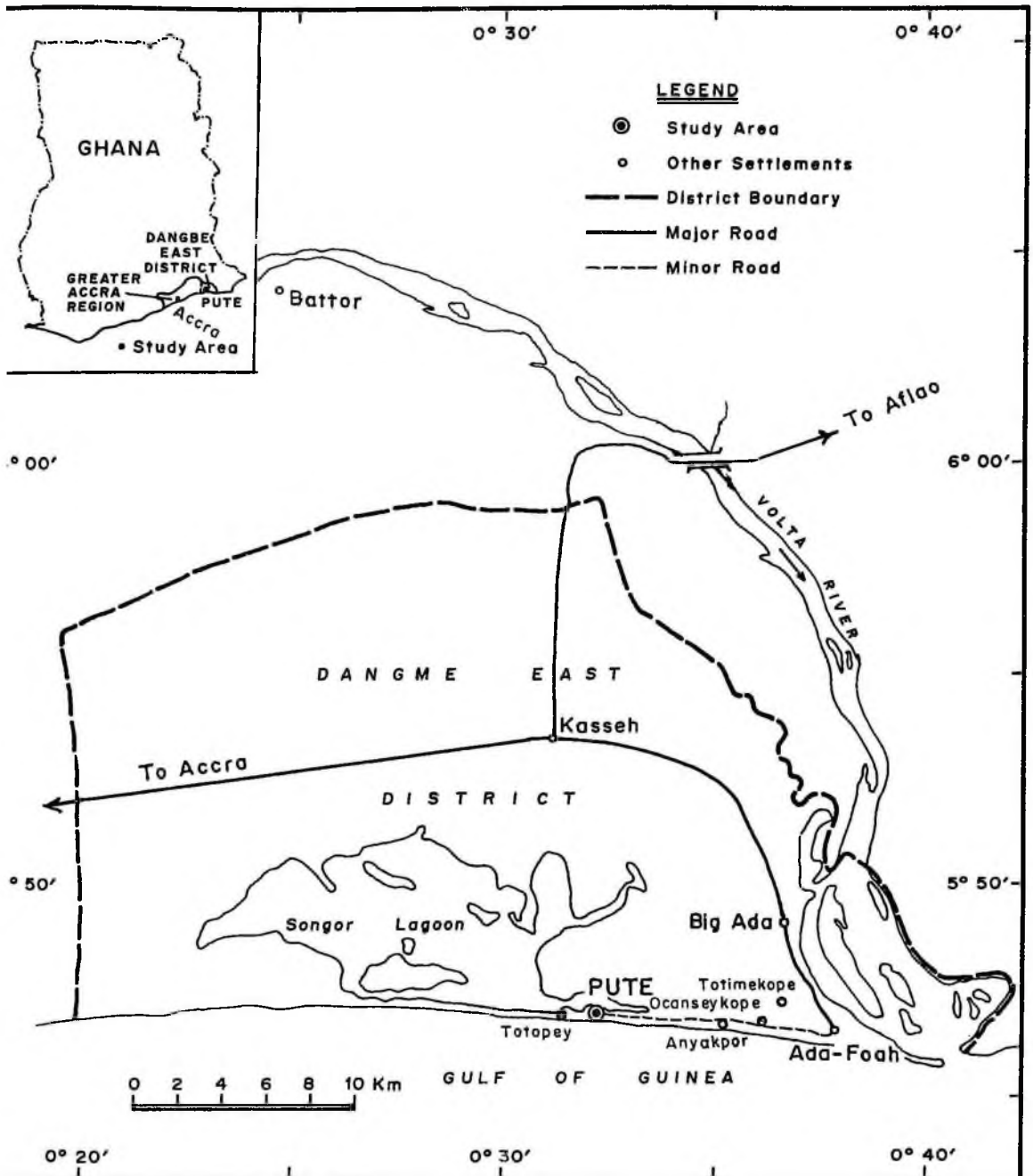
It is important to give a descriptive profile of Pute society in general in order to provide a context from which to view some of the social characteristics of the respondents and a cultural milieu within which the management of childhood diarrhoea as a conceptual and a cognitive phenomenon would be appreciated in this study.

#### 3.1 Geographical Location

Pute lies on longitude 0°32'E and latitude 5°47'N. It is among a number of fishing villages situated on the sand spit between the Songhor Lagoon and the Gulf of Guinea along the south-east coast of Ghana. (see map overleaf). It is linked by a 10 kilometer third class-road from Ada-Foah, the capital of the Dangme-East District. It is about 118 kilometers from the centre of Accra.

Pute experiences mean annual temperatures of 27.2°C and humidity of 82.2 percent. Rainfall figures show that this part receives much lower rainfall than most parts of Ghana, the mean annual rainfall being between 74 and 89 centimetres. There are two rainy seasons: April to June is the major season in which half the rain of the year is received; the minor season - a period of less rain covers the months of September and November. In between the rainy seasons, conditions of extreme drought prevail. The scantiness of rainfall in this region gives special importance to the existing surface and underground water supplies. The type of vegetation which occurs at Pute is short grass with small clumps of bush and

Fig.2 MAP OF THE DANGME EAST DISTRICT SHOWING THE LOCATION OF THE STUDY AREA — PUTE



a few trees. The soil is poor and is of the coastal sandy type.

### 3.2 Historical Links

The origins of Pute are shrouded in myth as it has no recorded history. Oral tradition however has it that the village was founded by a member of the Tekperbiawe clan<sup>4</sup> - a clan belonging to the stock of Dangmes who settled in the Ada area after having migrated together with other groups from elsewhere<sup>5</sup>. It is held that not long after settling in the Ada area, a group of fishermen led by a member of the Tekperbiawe clan (whose name is not known) embarked on a fishing expedition to Pute during a major fishing season. The usual practice was for such migrant fishermen to return home after the peak fishing season. The crew of fishermen who visited Pute however realised that they continued to experience bumper catches even when the main fishing season was supposed to have ended so they decided to create a permanent settlement here to enable them

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<sup>4</sup>For a detailed discussion on clans at Pute see section on "Kinship and Family Life"

<sup>5</sup>According to Quaye (1972), the origins of the 'Ga' and their eastern neighbours 'Adangme', (comprising Ada, Kpone, Prampram, Ningo, Osudoku, Shai, Yilo and Manya Krobo) are shrouded in myth and mystery and all sorts of hypothesis have been advanced. The most widespread of this hypothesis first popularised by Reindorf (1895) and accepted by Ward and Field (1940) maintains that the Ga originated from Benin. In addition to this hypothesis, Reindorf recorded two traditional accounts of origin. One claimed that the Ga originated from the sea, and the other that they emigrated together with the Adangme, from Tetetutu or Sameh in the East between two large rivers, and that after crossing the River Volta, they dispersed over the country. Azu (1926) accepted the Sameh origin of the Ga and the Adangme. He described Sameh as an island situated on the South-West of the River Ogun adjoining 'Ladah' in 'Dahome'. He claimed that the Ga and the Adangme left Sameh because they were greatly oppressed by the mighty King "Akpo" of 'Dahome'.

continue with their work. The village was therefore named 'Pute' meaning 'fishing ground'. Thus Pute is of Dangme origin with the basic socio-cultural characteristics of the people of the state of Ada, now referred to as the Ada Traditional Area with its seat of paramountcy at Big-Ada in the Dangme East District of Ghana. The capital of the District is however Ada-Foah. The local language spoken here is Dangme.

### 3.3 Population Structure

According to the 1984 national census report, the total population of Pute is 1779. (Refer to Table 3.1). About 16.6 percent of the population are below five years of age. The 1984 population census indicates that females outnumber males. The difference is clearer among those above 15 years. In this group, 54.4 percent are females whilst 45.6 percent are males. The population tends to be dominated by females due to high migration among young male adults. Table 3.1 gives a clear picture of Pute's population as at 1984.

Table 3.1  
Population Distribution By Ages and Sexes

Age Groups	Male	Female	Total
All Ages	871	908	1779
Below 1 year	25	12	37
1 - 4	143	116	259
5 - 9	154	150	304
10 - 14	89	81	170
15 - 24	172	181	353
25 - 44	126	175	301
45 - 64	92	119	211
65 and over	70	74	114

Source: 1984 Population Census of Ghana, Vol.II Census Office, Accra (unpublished Report)

As Table 3.1 shows, Pute has a youthful population. Persons from the ages below 1 to 24 years form a total of 1123 or 63.1 percent of the total population. The preponderance of young persons in Pute is perhaps due to the value placed on high fertility rates as a yardstick for measuring social status as well as the rise in teenage pregnancies and subsequent births among the youth within the last decade.

### 3.4 Economic Activities

The traditional economic system of Pute has been fishing. The 1984 population census shows this clearly. Table 3.2 shows the economic structure of Pute.

Table 3.2Distribution of Economically Active Population

Type of Employment	Male	Female	Total
Fishing	336	9	345
Homemaker	6	13	19
Unemployed	5	6	11
Others	74	70	144

Source: 1984 Population Census of Ghana Vol.II, Census Office, Accra. (Unpublished)

As Table 3.2 shows, the most important economic activity in Pute is fishing - it employs 66.5 percent of the economically active population. Some of the people are described as homemakers and others as unemployed, yet virtually every adult person in Pute engages in some economic activity. There are two main sources of fish at Pute: the sea and the Songhor Lagoon. Sea fishing is a year round activity with the period from July to November being the peak season. In the Songhor Lagoon, fishing continues throughout the year and becomes very intensive for a period after the rainy season when the sand bars separating the lagoon from the sea is breached either artificially or naturally. Fishing is usually done with the aid of large hand-nets used from canoes. Curing and marketing of fish are done by women.

The sea is greatly revered by the people of Pute who depend directly on it for their livelihood and for wealth in particular. As a result it is a taboo to go fishing on Tuesday which day is set aside for offering sacrifices to the sea gods, mending fishing gear and undertaking communal self-help projects.

The sandy nature of the soils at Pute does not allow for any meaningful agricultural activity to be engaged in. The thick layers of beach sand along the coast of Pute are only useful for the cultivation of coconuts. Around a considerable part of the Songhor Lagoon are thick layers of clay which are for the most part infertile. A few vegetables however do well at Pute.

Another important source of income for the people of Pute is salt-mining though this is not reported specifically by the 1984 population census. It is usually carried out during the dry season when portions of the lagoon dry out leaving salt crystals on the beds. A common sight at Pute is therefore heaps of salt stored under woven coconut branches to be sold during the rainy season when their prices begin to soar up.

Although the village does not have a market place, petty trading is engaged in mostly by women in front of their houses, in their houses or along the major road passing through to a nearby village (Totopey) from Ada-Foah. The wares on sale are mostly food items which are normally purchased from markets at Ada-Foah and Kasseh (about 30 kilometres away). They include cassava/cassava dough, bread, groundnuts, beans, rice, garden eggs and gari.

### **3.5 Kinship and Family Life**

The key to the understanding of the structural principles forming the basis of social life at Pute is through the patrilineal descent system, which is based on clan and lineage organisation. The people of Pute are basically Dangme people who trace descent

lineally through the male line. With the exception of a few cases each person becomes absorbed into his patriline through specific infancy and naming rituals. Thereafter, he enjoys full living and home rights and more importantly, the right to be buried according to custom. The fact that one is a member of his paternal kin group defines one's rights and obligations within it. The duties and responsibilities within one's paternal kin group entails co-operating with the head of the group in the performance of customary rituals.

In Pute, while membership ties with one's paternal kin group are defined in juridical customary terms, the relationship to one's maternal kin is more of a free though conventional nature. Although a person recognises the relatives with whom he is connected through his mother, he does not belong to them like a member of a corporate group. In other words, groupings based on matrilineal descent does not exist among the Ada.

In Pute, actual patterns of social groupings are built around the concept of 'We' which has three meanings in Dangme viz 'home' 'house' (habitation) or "people of the house", conceived as a social unit (ie clan or lineage).

Members of a typical clan at Pute comprise all people who are united by a belief in a common descent through the male line back from three to six or even more generations. This group excludes children of unmarried daughters and descendants of slaves.

The whole of Ada-land is divided into seven main clans which are the Dangmebiawe, Tekperbiawe, Lomobiawe, Adibiawe, Kujragmebiawe, Kabiawe and Ohoewe. The clans have each been named after a putative apical ancestor believed to have founded it, distinguishing it from other groups. The clans are dispersed throughout the Ada area in such a way that every clan is represented in each community. This arises due to inter-marriages and migration. Consequently, as in other Ada communities, every Pute person belongs through the male line to one of these clans.

Every village in Ada is under the governance of a founding clan among the seven already mentioned. In Pute society therefore it is the Tekperbiawe clan which rules the village. The chief and all his elders are members of this clan.

In Ada-land as a whole, each of the seven clans has a male head who is usually resident at Big-Ada. Such a person is supposed to be the most senior kinsman of the oldest living generation within the whole clan, regardless whether his father was a first-born or not. He is commonly called 'Wetsoyi' (elder of the house) or with particular reference to his house. The 'Wetsoyi' represents the clan at the Paramount Chief's court at Big-Ada. He also serves as arbiter in intra and inter clan disputes.

Other important leaders of a clan are the 'Asafoatsenwa' (senior captain) and 'Asafoatsewayo' (junior captain) who are mainly military functionaries.

At the village level in all communities of the Ada area, the ruling clan has a local 'Wetsoyi' as well as the two 'Asafoatsemei'. The 'Asafoatsemei' served as military leaders in the past when inter-ethnic wars were common. Now they feature as ceremonial guards of the chief during festivals and village functions. Leaders of the royal clan at the local level are ultimately subjects of the 'Wetsoyi' at Big-Ada. Clan groups other than the ruling clan in a particular village are not considered important in any affair regarding chiefship in the community. They have much to do in common with their parent clans at Big-Ada.

Each of the seven clans in Ada society has an ancestral home at Big-Ada where clan meetings are held. All clan groups have shrines which they have inherited from the original ancestors at the ancestral house. A priest officiates at the rituals, but ultimately, the 'Wetsoyi' is the custodian of the clan shrines.

The fact that there are only seven clans at Ada implies that they are very large groups which may constitute an effective milieu for interpersonal relations or corporate activities, only to a limited extent. This notwithstanding, clan members who are closely related demonstrate feelings of brotherliness towards each other than would have been the case if they were not related. Thus in Ada/Pute society, clan organisation and patriliney as a whole operate at a macro-societal level much beyond individual and domestic realms.

The system of clanship that prevails in Ada society resembles patterns documented among the Ashanti (a matrilineal Akan society

in Ghana) by Fortes and Evans-Pritchard (1940), and corroborated by Nukunya (1992). Indeed, Wilks (1956) has highlighted Ada political and social structures which are believed to be of Akan ethnic origin.

In Ada society, however, it is more within the context of the patrilineage that social interaction among kinsfolk is most vividly exemplified. The Pute lineage is therefore made up of all descendants of both sexes by a known genealogy of a single known ancestor in the unbroken male line. It is a corporate group headed by a leader 'wenokotama' (elder of the house) or with reference to the known ancestor whose name is used to designate a particular lineage as a distinct group from others. The overall administration of the group is vested in the 'wenokotama'. In Pute therefore, lineages exist as family groups subsumed under various clans.

In discharging his ritual and social duties, as well as administration of ancestral property, the lineage head must be upright and ensure that justice prevails. Forces that make him comply are fear of supernatural sanctions on the part of ancestors as well as the group of senior members within the lineage which he has to consult in all matters.

The lineage head leads in organising corporate obligations of which funerals rank first. His other duties include child-naming and the performance of marriage rites. On the death of a lineage head the next most senior male automatically becomes his successor.

In a patrilineal society like Pute, marriage is most invariably patrilocal and virilocal. With patrilocal residence, the couple lives in the husband's father's compound. In virilocal marriage, except for the case of kinship marriage, a bride leaves her own kin group and goes to live with her husband and some of his close paternal relatives. This does not however constitute a total break with her own group - she is still supposed to participate in all major lineage rites and ceremonies. The lineage is not an exogamous unit. Marriage within the group are rather preferred and seriously encouraged. This was particularly so in former times.

The basic domestic group or household at Pute comprises a monogamous or polygynous household with the owner (head of the household) his wife (wives) and his married children, including at times also some of his unmarried brothers and sisters, one or two of his married sons, with their wives and children. The number of rooms and their sizes for a particular household may vary according to the status and wealth of the head and the size of the domestic group. However a typical homestead at Pute has a spacious sandy compound in the centre and a line of rooms all around. Often only one entrance leads to the compound and thus to the bedrooms. There is an average of about six rooms in each compound in addition to a fire-place and a store-room. The material commonly used for building is marine clay which is obtained from portions of the Songhor Lagoon. These mud houses may however be plastered with cement. If someone decides to build his own house by his father's compound he usually builds very close to it provided there is sufficient space. At times it is difficult to tell whether it

represents really a new house or only an extension of the same compound. The reasons for creating such close settlements are due first to scarcity of land as Pute is unfavourably located on a sand bar, and secondly due to strong ties of kinship within family groups.

Unlike the Ga, the Ada/Dangme as a rule keep no separate compounds for their wives. Each wife is likely to have her own room not far from her husband's sleeping room, sharing it with her young children.

Although it has been pointed out that the Ada reckon descent in the male line and that they group accordingly in agnatic kin groups, the use of the term 'wekuli' usually meaning 'relatives' is not restricted only to the patriline but also members of the maternal kin group.

At Pute it is not uncommon to have the terms 'tse' (father) and 'nye' (mother) being applied in classificatory terms, yet the parent-child relationship is naturally the most deeply felt and expressed within the nuclear family i.e. between child and its legitimate procreators. Granted that they trace descent through the male line the importance of the father with regard to his children becomes obvious. Though within the whole structure of the kin group, he may not exercise absolute control over his own children, he is directly responsible for all the financial burdens associated with upbringing and education as well as customary performances during their lifetime such as birth and puberty rites,

funerals and marriage negotiations. The role of the father with regard to his children appears most prominently in marriage negotiations. Apart from the fact that he exerts a lot of influence in the choice of a partner, it is he who juridically "gives her daughter in marriage". In recent times however, this entrenched role of the father in marriage negotiations is waning, giving way to marriages based on romantic love, where people marry purely on the basis of having "fallen in love".

All the personally acquired property of the father is inherited by his sons.

Children, especially males are a great source of pride to parents. It is perceived as a great affliction if a woman is infertile. A husband can marry an additional wife if his wife is barren or cannot bring forth sons. Children are weaned very early (between 1 and 2 years) especially since prolific child bearing seems to be the accepted norm. After weaning children are introduced to carbohydrate foods usually prepared from cassava and maize.

In Pute, although the training of children is the explicit concern of father and mother, kinship networks make every adult a socialiser. Thus a child could be corrected or disciplined by any adult when he misbehaved. Such socialisation is done to re-emphasise kin solidarity.

Interpersonal relationships among members of different lineages or among people of different generations are understood along kinship

lines. Thus, for instance, the term "Nyemi" is not used for one's full or classificatory brothers but can also be used for members of the same lineage, the same locality or even anyone who roughly belongs to the same generation.

Apart from his real parents, a young person owes due respect to his elders regardless of the social group to which he may be affiliated.

With Western education of the young and modern trends towards individualism, respect for the aged is diminishing not only within the kinship group but also in the larger Pute society.

In a traditional society like Pute, there exists regularised procedures by which social control is enforced and thereby ensuring that members conform to accepted ways of behaviour. Though modern society employs the police, lawyers, courts etc. in regularising behaviour, traditional modes of social control looms large in Pute society. It derives mainly from custom. Quarcoo's (1965) description of 'custom' as a means by which compliance with accepted norms was achieved among the Shai (Dangme) of Ghana is mirrored in Pute society. He defined it holistically as including "belief, religion, ceremony, art, tradition, rewards, praise, flattery, persuasion, gossip, satire, laughter, commands, ostracism". Thus in Pute society, law exists, except that it is not codified.

The socio-cultural life of the Ada/Pute people, their traditional

values and institutions cannot be divorced from the corresponding cultural heritage of their Dangme brother ethnic groups such as the Krobo with whom they share the same language. Perhaps due to their different ethnic composition and historical contacts, certain variations in their economies, social rules and rituals are discernible. Yet it is not impossible to discover a common cultural pattern. This is best exemplified in their rites and philosophy of life in general, ideas associated with birth, circumcision, puberty, marriage and death. The constituent elements of a typical Dangme initiation ritual such as adornment with special beads and with dots of clay, enstooling and confinement, and personal purification makes the Ada/Pute people no different from other Dangme groups.

Writing on the kinship networks of the Krobo (Dangme) which is also applicable in Pute, Hugo has forcefully stated:

"There are in fact no other social bonds strong enough to counterbalance their fundamental significance. There exists neither age groups nor associations based on class, rank, profession or traditional ritual which could claim as great an importance" (Hugo 1963:125).

It is thus observed from the foregoing discussion that kinship and affinity ties constitute important elements of Pute social life.

### 3.6 Political System

Political authority in Pute is held by the Tekperbiawe clan which provides Chiefs, because as has already been observed, the founder of the village came from this clan.

In their study of traditional African political systems, Fortes and Evans-Pritchard (1940) classifies them according to centralised and non-centralised ones. Though no Ghanaian societies are used to illustrate the centralised political systems, political relations in Pute as well as in other Dangme communities exhibit features which coincide with most of the criteria outlined by the authors. Thus the political system in Pute may be described as a centralised one on the basis of the fact that, there is a chief who exercises jurisdiction over a number of villages.

The chief of Pute is usually supported by a council of elders who are usually chosen from the local royal clan (i.e. Tekperbiawe), as well as important aides such as the 'Wetsoyi'<sup>6</sup> and two military functionaries - the Asafoatsenwa and the Asafoatsewayo.

Although there exists various levels of political authority in Pute society, the chief of Pute ultimately owes allegiance to the Paramount Chief of the Ada Traditional Area. The Tekperbiawe clan is linked with all other clans through ties of marriage and distant ties of common descent. Polity in Pute is therefore fused with the kinship system.

### 3.7 Religion

Religion permeates all life, all exigencies and all conditions in Pute. At Pute, traditional religion is an organised system of beliefs and practices associated with the supernatural. It

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<sup>6</sup>Here it refers to the local head of the Tekperbiawe

embraces various aspects of man's relation with the supernatural including witchcraft as well as practices associated with the dead. These beliefs and practices serve as yardsticks for determining what is good or bad and right or wrong and thereby reinforcing cherished social norms.

An examination of the notions of Pute cosmic scheme reveals that they have a belief in a hierarchical arrangement of "Gods" as in other societies in Ghana. They acknowledge the existence of the High God-'Mawu' (which is also the Ewe name) at the apex. The supreme High God is the creator of the universe and all that is in it. He gives life, the spirit of man and his body. The earth provides sustenance for the life given by the High God. Mawu, however is remote and he operates through intermediaries in the form of lesser gods which may be non-human spirits, human ancestral spirits or deities.

The lesser gods are usually associated with nature objects such as the sea, groves, ponds, rocks and the land. At Pute such small gods have sanctuaries which may belong to, or be of ritual significance for a whole 'house', an individual, households or the village as a whole. The choice of the sacred symbols and other objects that belong to the inventory of the sanctuaries vary according to their type and origin. Though the lesser gods may be multi-purpose in their functions, some tend to specialise. In this regard, three main categories of small gods may be found in Pute.

Firstly, there are what may be described as 'home-gods', which are

found in about two-thirds of all houses. Though they may serve other purposes, they are generally believed to bless and protect members of the household or family. Most of these gods have been inherited from ancestors. The head of the household who is in most cases the guardian, often knows little about its origin. The guardian simply goes ahead and performs requisite rites and observes prohibitions as his forefathers did and expect the gods to meet their needs.

Along the main road passing through Pute is located 'Nana Libi' a sacred grove, which seems to be losing its ritual significance as it is no longer offered sacrifices on a regular basis. A third nature god by name 'Aprodo' is the god of fishing. It is usually invoked for abundant fish each time a major fishing expedition is to be embarked upon.

At Pute, traditional religion as a whole finds its expression in various ways. At the individual level, it is depicted by the wearing of charms and amulets around the waist, neck, wrist, ankle or knee. They constitute protective devices against evil forces (including witchcraft) and the diabolic activities of enemies. As Assimeng has observed, the central focus of religious activity in traditional Ghanaian society seems to be warding off of "honhon fi" from the affairs of men. Consequently, "the greater part of the set of belief in magic, sorcery and witchcraft which are the daily baggage in traditional Ghanaian religion are directed towards this" (Assimeng, 1974:21).

In Pute therefore, belief in ancestors and evil spirits is very strong. It is held that, after death, the soul of man lives on in the land of spirits where other departed souls can be found. The dead continue to influence human life from their world, rewarding good behaviour and punishing evil. These ancestors are invoked when libation is poured; and when purification rites are being performed in times of calamities such as disease, drought and famine.

At the community level, religion finds full expression at the annual Asafotufiami festival which is celebrated annually by the people of the Ada Traditional Area at Big-Ada. This festival and other customary observances serve as a unifying force for men with common beliefs. Elaborate preparations are made before the festival is celebrated, and virtually everybody - both young and old is engaged in the planning process. Though certain ritual ceremonies may precede the festival, actual celebrations begin on the first Friday of August. During the period of celebration, all Ada both home and abroad arrive together with their friends and other visitors to take part in this important festival. The festival as a whole provides the opportunity for the citizens of Ada to contribute their quota to the development of the area. It is also a time for settling intra-lineage/family disputes, expressing condolences to bereaved families, making funeral arrangements for deaths which occurred prior to the festival and the fulfilment of all financial obligations due from all kinsfolk.

Although the origins of the Asafotufiami festival has not been

documented the traditions have it that the people of Ada settled in their present area after having engaged in a series of feuds with various ethnic groups - notably the Ewe and the Akan over issues related to land ownership. Having consolidated their position in the present area the Ada rallied round and emptied their guns of powder and bullets. In remembrance of this memorable event, the Asafotufiami - literally meaning 'firing of musketry' became established as an annual festival with the aim of fostering peace, unity and love among one another (Ammah 1982).

The festival as a whole is preceded by the performance of various rites to purify ancestral stools. This is done by priests of all the seven clans of Ada. This ceremony which takes place from Tuesday to Wednesday of the first week in August, entails the slaughtering of sheep and fowls, pouring of libation, drumming, chanting of Klama<sup>7</sup> songs dancing which culminates in the washing of ancestral stools in the sea. Most celebrants of the festival begin to arrive on Thursday evening.

The actual festival begins on Friday - which is the first durbar day of the chiefs and people. At the durbar grounds at Big-Ada, all the seven clans of Ada state assemble under separate canopies with their respective Asfoatsemei (captains of the clan). After some ritual observances, the various clan groups move in battle

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<sup>7</sup>A traditional song, sung by all the Dangme people of Ghana. The instruments used to back the music are two small drums, an iron gongon and bamboo or palm branch clappers. For a detailed description of Klama see Quarcoo (1965) Processes of social control among the Shai (Dangme) Institute of African Studies, University of Ghana, Legon.

formation to specific locations outside the town called "Nano" (battlefield) amid firing of musketry by the priests, Asafoatsemei and the youth. These locations are believed to be grounds on which the Ada fought some of their last wars with other ethnic groups particularly the Ewe. In the evening the various clan groups move towards the bank of the Volta where the fetish priests, clan heads, sub-chiefs and the Paramount chief as well wash their hands and feet in the river to signify the washing away of their sorrows, troubles and misfortune in the past year whilst expecting prosperity, goodwill, peace and tranquility from the ancestors in the coming year. The washing of hands and feet is usually preceded by the pouring of libation by priests of the various clans.

On Saturday people dress in their best clothes and march through the town in clan groups - each group carrying its Asafoatse in a palanquin. With drumming and dancing, firing of musketry and merrymaking, they move towards the durbar grounds. Here the Asafoatse of various clans, as well as chiefs and their elders swear oaths of allegiance to the Paramount Chief who in turn exchanges warm greetings with his people.

At the durbar, a distinguished personality usually a representative of the government is invited to chair the function. Projects already started, those planned for the fiscal year as well as the respective financial contributions to be made by citizens resident in the Ada area and those living outside the district are announced. Besides, fund raising ceremonies are also held for specific projects to seek resources from benevolent individuals,

firms and organisations. When these ceremonies are over, the Paramount Chief together with invited guests leave first, followed by all other people.

On Sunday people attend church to give thanks to God for the past year and to pray for success and prosperity in the coming year.

People start leaving for their various destinations on Monday whilst others remain behind to continue with the celebrations. They go on picnics at the beach, cruise on the Volta river, play soccer and other games.

### 3.8 Medicine

Pute has thrived on a well intergrated medical system since time immemorial. Their traditional world view provide causal explanations for diseases and for that matter, various methods of cure. As Assimeng has aptly stated,

"The outlook and values of the social system would define the categories of illness, their aetiology and the preventive and curative insititutions or mechanisms within the framework of the cultural pattern" (Assimeng, 1974:7).

In Pute, some somatic notions of illness and their immediate causes have always loomed large so that people have been aware of natural precautions and experience has taught them the therapeutic qualities of leaves, roots, seeds and other local herbs as well as how to apply them. As a result every adult in Pute knows of some herbal remedy for the relief of common ailments and each family has its own reputed herbal prescriptions. Such knowledge is usually

passed on from one generation to the other. In spite of this, certain individuals, are reputed to have specialised knowledge in the treatment of specific ailments including skin diseases, sores, stomach, and gastro-intestinal disorders.

There are eight traditional healers at Pute. They may be divided into two major groups: fetish priests who are usually diviners/priests of certain gods or deities and herbalists who use herbal medicine to treat various diseases. Included in the second category are traditional birth attendants. Although the practices of both groups may overlap, the more observable trend is for each practitioner to specialise.

As Twumasi (1975) has observed, traditional healers, use magico-religious symbols which has great meaning and significance for their patients. In Pute society, the symbols include particular types of tools and mystical incantations using language of Ewe or Akan ethnic origin.

Sometimes, therapy is conceived as the application of therapeutic magic or as ritual purification of the patients and pacification of offended spirits. This is evident in times of epidemics or outbreak of diseases affecting either a particular age-group, suburb or even members of a particular kin group. Thus in Pute society sickness is ultimately ascribed to mystical agents and for that matter their causes must therefore be diagnosed by diviners who apply basic remedies such as expiation, supplication and the performance of cleansing rituals.

### 3.9 Social Change

Early contact with Europeans and their way of life, the establishment of schools and churches, and the introduction of various economic opportunities have brought about far-reaching alterations and modifications in the whole structure and social relations of Pute traditional society. One important element of contact with western society which has produced changes in the traditional social system is formal education. Elementary school education was introduced into Pute several years ago and currently school education is up to Junior Secondary School<sup>a</sup> level. Although the literacy rate is very low (as Table 3.3 indicates) classroom education has had a considerable impact on the social life of the people.

Table 3.3

#### School Attendance by Ages and Sexes

Sex	Male				Female				Both Sexes
	6-14	15-24	25 & over	Total	6-14	15-24	25 & over	Total	
Age Group in Years									
Never	132	67	201	400	158	132	337	627	1027
Past	21	59	87	167	10	42	31	83	250
Present	51	46	-	97	25	7		32	129
Total	204	172	288	664	193	181	368	742	1406

Source: 1984 Population Census of Ghana  
(Unpublished Report) Census Office, Accra.

<sup>a</sup> This forms one level in a new educational system which has been introduced in Ghana since 1987 aimed at making the structure and content of education more relevant to the needs of the individual, the society and the country as a whole.

Out of a total of 1406 people who were above 6 years in 1984, 1027 (73.1 percent) had never attended school, 250 (17 percent) had attended school in the past, and 129 (9.2 percent) were still attending school (see Table 3.3). It is also observable that school attendance is higher among males than females. 627(61.1 percent) out of 1027 who had never attended school were females. This finding is perhaps due to the value placed on the perpetuation of one's descent line in most rural areas of Ghana such that many girls are given in marriage early to bear children. Consequently, many boys are encouraged to go to school while girls are often discouraged.

Though the impact has been slow, the introduction of formal education into Pute is gradually resulting in an erosion of the traditional status quo and thereby alienating the youth from their traditional environment and culture. In this regard, Assimeng (1969) has observed that:

"Education has not only challenged people's traditional ways of seeing the world, but has increasingly enlarged the area of human aspirations. New criteria are constantly employed to challenge the earlier notions of what constituted 'proper social order" (Assimeng, 1969:11).

The extent to which formal education has influenced the way mothers at Pute perceive diarrhoea and treat it will be examined in relation to field data in chapter four.

The introduction of western religion has also brought about significant changes in the traditional social set-up of Pute

society as a whole. There are two broad categories of people - traditionalists who do not belong to any religious denomination and christians who are members of specific sects. A few, however, commute between the two. Among the christians, there are the orthodox groups which are historic churches and the so-called 'Pentecostal' or 'Spiritual' churches which have emerged as a result of shortcomings in old established churches. These new denominations are mostly syncretic in nature. Although the 'Pentecostal' or 'Spiritual' churches have found themselves at home in the use of indigenous music, musical instruments and language in its worship, they tend to abhor anything traditional. The orthodox christians on the other hand seem to accommodate traditionalist views.

Another major source of modernisation at Pute is the exposure of the people to allopathic medical systems within the PHC framework. The introduction of scientific medicine as it was in Pute, to impinge on ethnomedical concepts of disease causation and treatment generates new orientations and behavioural patterns that are often considered a threat to, and largely unsuited to existing traditional models of diseases and help-seeking. This incompatibility arises because the two medical systems operate on paradigms that are philosophically distinct.

An examination of the cosmopolitan health provision profile in Pute reveals that it has no health unit. Yet the social life of the people has been greatly influenced by modern health services

located at Anyakpor<sup>9</sup>, Ada-Foah and Battor all of which are accessible by road transport. In addition, Pute is covered by a fortnight PHC outreach programme on immunisation and ante- and post-natal care by Public Health Nurses from the Health Centre at Ada-Foah. The extension of this facility to village populations in the area brings health services to their door-steps. Besides there is a chemical seller licensed to sell over-the-counter drugs. He however deals in regulated drugs/pharmaceuticals such as antibiotics and antidiarrhoeals, and prescribes a whole range of drugs for various ailments.

The village lacks many amenities - the provision of modern water and electricity supplies is absent. The main source of water supply is from sunk wells whose walls are made of metal barrels and cement. The water from these wells is highly salinated and/or discoloured and hence unsuitable for drinking purposes. Other sources are muddy waters held in waterholes. These waters shared by both man and animals are good breeding grounds for mosquitoes and thus a source of malarial and parasitic infections. The general sanitary condition in the village is very poor. Garbage is disposed off around patches of bush found at various locations. Also there are no public places of convenience and only few people have this facility in their homes. Hence the majority of people use the beaches. Given the environmental conditions that confront the villages, there is a high endemicity of environmental,

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<sup>9</sup> The health facilities in these locations (Anyakpor, Ada-Foah and Battor) represent the three levels of referral (A.B.C.) within the PHC system.

parasitic and infectious diseases. Consequently, morbidity and mortality rates are high especially among children.

Perhaps of all the changes that came in the wagon of British colonialism, the money-using economy has been the most far-reaching. Pute in particular, might have been introduced to a monetised economy through its early contact with Danish traders along the south-east coast of Ghana - where most of the fishing villages especially Ada-Foah<sup>10</sup> grew to handle a flourishing Volta trade.

The introduction of money by the Europeans brought a dramatic change in the commercial and economic lives of people. It encouraged inter-ethnic/regional trade and it saw the migration of people along the South-east coast to the forest zones, the mines and other employment centres. Moreover the introduction of European nets also encouraged fishermen along the coast to move from their localities to richer fishing waters along the coast of West Africa. Thus the new economic system made it possible for individuals to earn their living elsewhere quite independently of their lineages and kingroups. The outcome of this was the weakening of the kingroup's hold on the individual with all its consequences and implications.

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<sup>10</sup> Ada-Foah was the port and trading centre of Big-Ada, the chief town of the native state of Ada. As a port, it naturally became the commercial centre and also the seat of the British Administration and therefore it gained prominence over Big-Ada (Anim 1959).

### 3.10 Summary

This chapter has been devoted to an exposition on the social system of Pute in general, and the cosmology of its people.

The ethnographic information that was gathered has shown that, the entire social structure is underpinned by kinship nuances and usages that transcend political, economic, and religious relations. Kinship networks are characterised by intense interpersonal interaction which promotes effective communication among kith and kin. In these relationships, the centre of authority evolves around the head of family who exerts control over all others. There is little room for deviant behaviour as sanctions are strictly enforced. Rules of social conduct are enshrined in custom.

Pute has limited provision of social amenities. There is no pipe-borne water supply, electricity nor a health facility. The environment is highly unclean due to general insanitation. Consequently morbidity and mortality are high, especially among children.

In chapter four (4) the main findings of the study are presented to show how Pute mothers perceive childhood diarrhoea and treat it. The trends in diarrhoeal illness management will also reinforce some of the social and cultural notions of the people already discussed in this chapter.

## CHAPTER FOUR

### MANAGEMENT OF CHILDHOOD DIARRHOEA

#### 4.0 Introduction

This chapter deals with how mothers at Pute manage diarrhoea in their children. The analysis focuses on maternal perceptions, beliefs and attitudes towards diarrhoea, its causes, and treatment. The report is based on findings from household interviews, focus group discussions and monitoring of actual diarrhoeal episodes among mothers with children under age five. In the sample, there were 143 respondents.

#### 4.1 Socio-demographic Characteristics of the Respondents

##### 4.1.0 Maternal Education

The mean years of school attendance of mothers was 1.4 years. Information sought on levels of educational attainment revealed that 76.9 percent of mothers had never been to school and none had university education. Only 14 percent and 6.3 percent had primary and Junior Secondary School (JSS)/Middle School Leaving Certificate (MSLC) education, respectively. Furthermore 1.4 percent had post JSS education whilst 1.4 had benefited from adult/informal education. Table 4.1 shows the educational background of mothers.

Table 4.1Level of Maternal Education

<u>Maternal Education</u>	<u>Percentage</u>
No Formal	76.9
Primary	14.0
JSS/MSLC	6.3
Post JSS	1.4
Adult/Informal	1.4
Total	<u>100.0</u>

4.1.1 Religious Background

The majority of mothers in the study were found to be of Pentecostal/Spiritual background (65.0 percent); followed by Traditionalists (22.2 percent); and Orthodox (12.8 percent). The analysis of data on religious background of mothers is shown in Table 4.2.

Table 4.2Religious Affiliation of Mothers

<u>Religion</u>	<u>Percentage</u>
Pentecostal/Spiritual	65.0
Traditional	22.2
Orthodox	12.8
Total	<u>100.0</u>

4.1.2 Occupational Background

It was found that more than half (56.2 percent) of the mothers were engaged in fishing and fish processing, 28.4 percent were traders; 3.1 percent were farmers, 1.4 percent were clerical workers; 1.4 percent were in vocational occupations whilst 10.5 percent were unemployed. The occupational distribution of mothers is shown in table 4.3.

Table 4.3Occupational Distribution of Mothers

<u>Occupation</u>	<u>Percentage</u>
Fishing/Fish processing	56.2
Trading	28.4
Unemployed	10.5
Farming	3.1
Vocational	1.4
Clerical	<u>1.4</u>
Total	<u>100.0</u>

4.1.3 Maternal Age

The analysis of maternal data revealed that the three most important age-groups that mothers belonged to are 20 - 24 years (28.7 percent); 25 - 29 years (22.4 percent) and 30 - 34 years (20.3 percent). The mean age of mothers was 28.8 years. The age distribution of mothers is shown in table 4.4.

Table 4.4Age Distribution of Mothers

<u>Age Group (Years)</u>	<u>Percentage</u>
Below 20	8.4
20 - 24	28.7
25 - 29	22.4
30 - 34	20.1
35 - 39	9.2
40 - 44	3.5
45 and above	<u>7.7</u>
Total	<u>100.0</u>

4.1.4 Parity

The parity of women under study ranged from 1 to 12 with a mean of 1.5. The analysis of maternal parity data is shown in table 4.5.

Table 4.5Parity of Mothers

<u>Parity</u>	<u>Percentage</u>
1	30
2	33
3	34
4	22
5	7
6	11
7	2
9	2
10	1
12	1
Total	143

In presenting the analysed data, attempts were made wherever possible to relate some clinical aspects of diarrhoea and its management to those of folk concepts and practices, in spite of the general problems<sup>11</sup> of making such a comparison.

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<sup>11</sup> Fabrega highlights the problems as follows: "very often, studies examining the syndromes of illnesses that appear to be unique to pre-literate groups implicitly or unknowingly assume the concepts and in some instances, the universality of the premises of Western scientific medicine. They begin in other words with the perceived picture of the nature of illnesses and diseases. Then having defined categories of diseases according to Western scientific principles of classification, the concern is to unmask or unravel the cultural factors or contributions from the 'true' or essential disease process that is felt to underlie the particular illness episode that is under investigation. Implicit in them is the view that disease types (categorised in terms of western scientific categories), are universal or transcultural entities which are somehow being obscured by culturally specific categories, symbols and behavioural prescriptions. Stated more succinctly, the orientation of these studies appear to inadvertently confound the Western medical perspective with the native one. The search is for a scientifically defined disease type; what is found and analysed is a culturally defined folk illness. The attempt is then made to determine whether the two are actually equivalent. This attempt to equate a disease defined by the Western medical system with a culturally defined folk illness involves a misuse and a misinterpretation of both the relevance and significance of the cultural perspective" (Fabrega 1971: 387).

This is to enable us to assess to some extent the reliability of the data collected.

#### 4.2 ILLNESS TAXONOMY

Before eliciting a detailed information on folk concepts of diarrhoea and its treatment, a useful technique for introducing the topic was to ask mothers to mention the important childhood diseases in the community known to them. This was thought necessary so as to establish where diarrhoea fits in the larger cognitive classification of illnesses in the community.

It was discovered that diarrhoea is only one among a multiplicity of illnesses believed to affect children in Pute. Within their ethnomedical framework, diarrhoea is considered the second most important childhood disease after fever - being mentioned by 54 (37.8 percent) of mothers. Table 4.6 shows the important childhood diseases at Pute in ranking order as mentioned by mothers. The English equivalents of the disease names shown in Dangme are given in brackets.

Table 4.6Childhood Diseases at Pute<sup>12</sup>

	<u>Frequency<sup>13</sup></u>	<u>Percentage<sup>14</sup></u>
Asram (Fever)	116	81.1
Mikliplemi/Plēmi/Gbami (Diarrhoea)	54	37.8
Hlōmi/Soso (Cough/Catarrh)	40	28.0
Gbidimi (Measles)	26	18.2
Nmo (Skin Diseases/Rashes)	20	14.0
Yimpa (Sores in the Head)	17	11.9
Gbekebiani (Convulsions)	13	9.1
Miklikom (Stomach ache)	7	4.9
Yinokom (Headache)	5	3.5
Kolola (Cholera)	5	3.5
<b>Total</b>	<b>303.0</b>	<b>212.0</b>

This morbidity pattern at Pute coincides with findings from various anthropological and epidemiological studies at both the national and some district levels in Ghana (Abu 1988; Adjei 1988; MOH 1992). Indeed as obtained elsewhere in the developing world, the core health problems of the vast majority of people living in rural areas of Ghana such as Pute, have been identified to be infectious and parasitic diseases and malnutrition (Easmon 1968; Twumasi 1975; IDS Health Group 1978).

<sup>12</sup> It is worth emphasising that no attempts were made to determine what these diseases represented by western biomedical diagnostic procedures. The labels for the diseases are those mentioned by the local people.

<sup>13</sup> The sum of this column is greater than N=143 (100 percent) due to multiple answers that were given by majority of respondents.

<sup>14</sup> Same as 13

### 4.3 Ethn classification of Diarrhoea

In spite of the difficulties<sup>15</sup> of establishing folk classification systems for diarrhoeal illness, their usefulness as a basis for understanding home care behaviour in diarrhoeal episodes have been demonstrated by many studies (Kendall et al. 1984; Green 1985; Bentley 1988; Mull and Mull 1988; Malik et al. 1992). Attempts were therefore made in this study to arrive at some broad categories of diarrhoeal illness as a heuristic tool permitting the presentation of data on popular health care, treatment and health-care seeking for diarrhoea in Pute.

As a first step for identifying an indigenous classification system for diarrhoea, mothers were asked if their children sometimes experience "abnormal" or "watery" stools and if so to give the Dangme word for this phenomenon. Based on this, the generic terms commonly used to describe childrens' diarrhoea were "Mikliplemi" "Plemi" or "Gbami" all of which convey notions of a 'stomach that is pouring out'. In his study of Accra and Ada districts of Ghana, Adjei (1988) also noted similar concepts for diarrhoea in children.

The interviews revealed that Pute mothers had a clearly defined

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<sup>15</sup> As Bentley et al. (1988) have observed: "Delineating a folk taxonomy for diarrhoea (or any illness) is a difficult process. There is often a disagreement among respondents, or an overlap among diarrhoea categories that is confusing to the outsider. A defined folk taxonomy may not even exist for a given cultural group. There instead may be some commonly shared beliefs about diarrhoea that are embedded in an array of variable elements" (Bentley et al. 1988:112).

ethn classificatory system for diarrhoea. Within this

Table 4.7

Folk Taxonomy of Diarrhoeal Illness

Diarrhoea Type	Causes	Symptoms (All types have frequent watery stools)
cholera or very watery diarrhoea	Filthy environmental conditions, Drinking of 'dirty' (contaminated) water	White or yellow stools, weakness/dullness, chills, loss of water through stools, sunken eyes, weight loss and vomiting.
teething	Emerging teeth	White or yellow stools, Diarrhoea present, rise in temperature, continuous crying, weakness/dullness and loss of appetite
Sore Diarrhoea (Dysentery or bloody diarrhoea)	'Dirt' in a child's stomach, sore in the stomach, over-eating, inappropriate foods for the child.	Yellow, white or green, stools with blood always present, weakness/dullness, rise in temperature, persistent crying, smelling stools, mucus/threads present.
Food-related diarrhoea	Overeating, food unsuited to a child's stomach, change of food, weaning.	White, yellow or green rough with lumps of undigested food, incessant crying, weight loss, 'shiny'

system they recognised between 1 and 4 categories of diarrhoea which were largely related to physical factors. These are 'Cholera' (very watery diarrhoea); 'Teething diarrhoea', 'Sore diarrhoea' (Dysentery or Blood diarrhoea) and 'Food-related diarrhoea'. Table 4.7 depicts clearly the classificatory system for diarrhoea in Pute.

'cholera' is the first major group of diarrhoeal illness reported by others. Regarded as the most serious, it is conceived as being characterised by very wet and loose stools, weight loss, general malaise, vomiting, fever and loss of appetite. Other peculiar features noted by

mothers were that the child becomes 'dry' due to water losses through stool output and sunken eyes. 'Cholera' is believed to be caused by insanitary environmental conditions and drinking of 'dirty' water. Cholera was mentioned by about 56.0 percent of mothers.

The second major category of diarrhoea recognised in Pute is 'Teething Diarrhoea' being reported by about 41.0 percent of the mothers. There exists a strong belief that every child must fall ill with diarrhoea on reaching the developmental stage of teething. The emerging milk teeth, it is held, causes a disturbance in the child's stomach making it experience watery stools. Thus the diarrhoea is attributed solely to the 'new teeth'. According to the mothers, 'teething diarrhoea' appears yellowish, whitish or greenish with mucus and 'threads' present. The child experiences chills and cries day and night. It usually feels weak and cannot eat.

During one of the interviews, a 37 year old woman with two children under age five expatiated on how teething causes diarrhoea as follows:

"When a child's 'first teeth' (canines) appear, it is a sure sign that it can eat semi-solid foods and when the molars and premolars begin to show up, then it means that the child can chew solid food, In order to prepare a child's stomach for 'heavy foods', the body must clear itself of all liquid foods currently in the stomach. Hence a child's stomach pours out as soon as its first teeth are seen."

'Sore Diarrhoea' is another important category of diarrhoea that was mentioned by mothers. Due to the usual presence of blood it

is believed to be caused basically by sores in the child's stomach which bleeds whenever the child has to pass stools. These sores are created through over-eating and the consumption of foods that a child is not accustomed to. It is usually known to be accompanied by fever, and constant crying. The stools which stink abnormally appear greasy signifying the presence of mucus. Sore diarrhoea was mentioned by about 37.0 percent of the mothers.

'Food-related' Diarrhoea is the last major form of diarrhoea reported by mothers. This type of diarrhoea exhibits most of the symptoms usually observed for 'sore diarrhoea' except that it has other distinguishing stool characteristics. These include the presence of lumps of undigested food and the total absence of blood. Food-related diarrhoea was reported by about 25.0 percent of the total sample.

From the four diarrhoea categories identified, it is noticeable that the adjunct symptoms and perceived causes associated with each type tend to cross-cut each other making the distinctions between them somewhat blurred. Yet evidence from the ethnographic data collected revealed that all the four forms are considered separate categories belonging to one broad illness group - diarrhoea.

Although the details vary from one context to the other, all the diarrhoea types noted in Pute are also mentioned in the anthropological studies of diarrhoeal illness in various

societies. 'Cholera' as a folk category of diarrhoea is mentioned by Chowdhury et al. (1988), and Green (1986) in his Bangladeshi study.

The tendency to provide causal explanations for diarrhoea by associating it with childhood milestones especially teething and others such as crawling, walking or talking is also commonplace in diarrhoeal illness literature. Apart from studies already noted in the review of literature such as Green (1985), Bentley (1988), Adetunji (1989), Lozoff et al. (1978) in South India, Escobar et al. (1983) in Lima, Peru also identified some of these 'critical stages' of a child as being causal agents for diarrhoea.

Although there has not been any scientific proof that teething causes diarrhoea, the high incidence of diarrhoea at the time of teething is attributed to the fact that teething coincides with the weaning period - a time when foods other than breastmilk are gradually introduced into a child's diet. Infants are at the greatest risk of diarrhoea during weaning because they are exposed to food-borne germs for the first time whilst losing the protection of breastmilk which has anti-infective properties (Dialogue on Diarrhoea No.56, 1994 : 2).

'Sore Diarrhoea' has also been noted in many studies including those by Green (1986), Bentley (1988), and Malik et al. (1992).

'Food-related Diarrhoea' is also widely recognised in many

places. Most authors mention that certain foods - either the wrong mix or type or incorrectly prepared may cause diarrhoea (Real et al. 1982, Bentley 1988). 'Heavy' foods, inadequately cooked foods or missing meals may cause "empacho" - a form of diarrhoea identified by Kendall et al. (1984) among the Hondurans. Adetunji (1989) in his study of a Nigerian community identified inappropriate foods for a child either because of age or because of individual allergy, overfeeding, eating too hot foods, using dirty feeding bottles or utensils for children and an abrupt switch-over from one infant formula to another as causing diarrhoea.

It is observed here that most of the dietary causes of diarrhoea mentioned by Adetunji are also mentioned by Pute mothers.

Although many researchers do not often cite infection or germs per se as causing diarrhoea, uncovered food exposed to flies has long been considered a source of diarrhoea independent of recent health education about environmental sanitation and hygiene in several parts of Africa (e.g. De Zoysa et al. 1984 in Zimbabwe, Green 1985 in Swaziland).

In her study of diarrhoeal illness in Ghana, Abu (1988) documented six forms of diarrhoea in the various ethnogeographic regions covered. These were 'sunken eyes diarrhoea', 'dysentery', 'diarrhoea with measles', 'diarrhoea with malaria', fontanel diarrhoea' and 'cholera'. Apart from "cholera" and dysentery ('sore diarrhoea') which coincides with findings in the present

study, other forms such as 'diarrhoea with measles', 'diarrhoea with malaria', 'sunken eyes diarrhoea', and 'fontanel diarrhoea' were not recognised as specific categories of diarrhoeal illness in Pute. At best, they were considered symptoms of some types of diarrhoea that were identified. Whilst some mothers mentioned 'fever' and 'sunken eyes' as features of some diarrhoea types, they tended to consider diarrhoea accompanying measles more an issue of measles than diarrhoea itself. Furthermore, a 'sunken fontanel' is considered a discrete condition of the fontanel not associated with diarrhoea.

The diarrhoea categories uncovered in Pute differ in many respects from those of Abu for perhaps two important reasons. First, whilst this study was confined to only one community, that of Abu covered various research sites among specific cultural groups in Ghana. Furthermore, whilst Abu's study seemed to have used 'symptoms' as the basis of classification, the present study used "cause(s)" in the delineation of the various forms of diarrhoea that were discovered.

It is well recognised that people often distinguish between illness categories primarily in 'descriptive' or 'etiological' terms. Descriptive categories are those defined primarily in terms of a constellation of symptoms. Etiological categories, on the other hand are defined largely in terms of cause. Indigenous illness categories tend to combine elements of both, serving as a flexible cultural idiom for evaluating and responding to illness (Good and Good 1980, 1981, 1982; Farmer 1988). Yet Heggenhougen

and Draper (1990) have opined that:

"the most important aspect of an ailment in most medical systems is not so much the underlying pathology (if it exists at all) but the underlying cause."

Hence the use of 'cause' as the basis of classification in this study. Though the cultural categories of diarrhoeal illness unearthed in Pute as well as others reviewed are by no means exhaustive, they demonstrate that different classification systems exist for diarrhoea in different cultural settings.

One main purpose for outlining a classification system for diarrhoea in Pute was to uncover mothers' notions of cause in diarrhoeal episodes, as concepts of causality have been shown to influence illness behaviour and for that matter therapeutic choices (Fosu 1977).

Present day anthropologists investigating concepts of causality in different societies have often recognised essentially three broad categories of etiological perceptions natural, supernatural and natural-supernatural representations of cause (Twumasi 1972; Nukunya and Twumasi 1976; Fosu 1977; Foster 1978; Senah 1981, 1993).

Where an ailment is attributed to natural forces, it is explained as emanating from physical conditions such as cold, heat wind etc, and more importantly as an upset in the balance of the basic constituent parts of the body.

Supernatural etiological explanations on the other hand attribute disease causation to the active purposeful intervention of some force, which may be human or non-human (ghost or spirit). Supernatural causality tends to have little room for accident or change.

With the third category of natural-supernatural, an ailment undergoes a diagnostic process in which its cause is initially attributed to natural forces and at a later stage to supernatural forces.

The question then is: How do Pute notions of cause fit into the three-tier classificatory systems of natural, supernatural and natural-supernatural etiologies outlined above? The first two categories of natural and supernatural causalities are highlighted here whilst the third category, (natural-supernatural) are reserved for discussions under treatments of diarrhoea.

Based on the etiological explanations that were given for the four forms of diarrhoea identified, it was observed that diarrhoea as a whole is perceived in highly naturalistic terms in Pute. This is inferred from the tendency for mothers to mention factors such as 'foods unsuited to a child's stomach', 'overeating', 'teething', 'filthy environment', 'drinking dirty water' and 'sores in a child's stomach' as causal agents for diarrhoea. Perceiving diarrhoea in such somatic terms means that it is essentially thought of as resulting from lack of balance or

harmony in a patient's life, in what he or she eats or experiences within the physical environment.

#### 4.4 Perceptions and Treatment of Diarrhoea

In order to gain some insight into treatment-seeking behaviour in diarrhoeal episodes, Pute mothers were asked to give account of recent cases of diarrhoea in their children based on a series of questions. These were related mainly to the prevalence of diarrhoea, recognition of diarrhoea, feeding during diarrhoea, the specific health care regimens that were used or were being used, as well as the various factors influencing the choice of such regimens in the quest for therapy. The findings presented here are based on analyses of data from household and group interviews and following of actual diarrhoeal episodes.

##### 4.4.0 Prevalence of Diarrhoea

The place of diarrhoea among other childhood diseases as perceived by mothers has been shown elsewhere in this study. This aside, it was felt important to attempt an assessment of the gravity of diarrhoeal disease in terms of its prevalence in the community as a whole. Apart from providing a general background from which to understand the home-care behaviour of mothers during episodes of diarrhoea, it helped in identifying specific diarrhoeal episodes that were followed as a complementary methodological approach to the study.

The prevalence<sup>16</sup> of diarrhoea was determined by asking mothers about the number of children under age five in their families who had diarrhoea in the last 24 hours. If the response was negative, they were asked about the number of these children with diarrhoea in the last two weeks. Otherwise the analyses in this section are based on episodes in the past. Of the 143 families that were interviewed, the prevalence of diarrhoea was determined for a total of 383 children (0 - 5 years). For this population 47 cases (12.3 percent) were reported in the last 24 hours whilst 83 cases (21.7 percent) were reported for the last two weeks. The prevalence rates found in this study fall a little below the national rates of 14 percent (in the last 24 hours) and 26 percent (for the last two weeks) reported by the GDHS (1988) which used a similar mode of estimation. This decline is perhaps due to the intensification of health education programmes and PHC efforts as a whole in many rural areas of Ghana within the last decade.

#### 4.4.1 Recognition of Diarrhoea

Correct and timely diagnoses of diarrhoea by mothers or caretakers of the child is an important aspect of proper case

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<sup>16</sup>In this study no attempt was made to estimate diarrhoeal incidence (ie. the number of new cases of the disease in a specified period of time) as information was not gathered on all cases with respect to when the episode started and its duration. The questions in the interview schedule were used to calculate a point prevalence measure - the percentage of children under age five whose mothers report that they had diarrhoea in the last 24 hours preceding the interviews and a period prevalent measure - the percentage with diarrhoea in the two weeks preceding the interview.

management usually emphasised in educational messages for the control of diarrhoeal diseases. Early recognition of diarrhoea is crucial for the initiation of home treatment with increased intake of foods and fluids, and for making referrals when necessary.

Mothers were therefore asked to report on the number of stools they observed as well as other signs and symptoms which made them diagnose diarrhoea in their children. These questions were mainly meant to probe the extent to which mothers' definition of diarrhoea coincided with clinical definitions which are usually based on a cut-off number of stools (3 or more semi-liquid stools over a 24 hour period); and to identify some other features of the illness that mothers consider important in their diagnostic models of diarrhoea.

Most mothers (62.9 percent) define diarrhoea in their children as the excretion of 4 or more watery stools in a day as compared to only (25.9 percent) who recognised a recent episode of diarrhoea in their children by the biomedical definition of 3 or more loose stools in a day. Table 4.8 below shows mothers' definition of diarrhoea based on number of stools observed.

Thus using the clinical definition as the basis of recognising diarrhoea, it is observed that the majority of mothers do not notice diarrhoea in their children early enough to

Table 4.8

Mother's definition of diarrhoea by number  
of stools observed

<u>Number of stools</u>	<u>Frequency</u>	<u>Percentage</u>
Four or more	90	62.9
Three	37	25.9
Two	8	5.5
Can't remember	8	5.6
	143	100.0

begin treatment at home. In their studies in Ghana, Britwum et al. (1986), Adjei (1988) and Abu (1988) have also documented a high propensity for mothers to define diarrhoea in their children over and above clinical definitions.

When questioned about the threshold of other symptoms mothers observed in a recent diarrhoeal episode apart from those related to recognition by frequency of stools, the three most important symptoms that were mentioned are incessant crying (35 percent), weakness (35 percent) and rise in temperature (21 percent). Table 4.9 below shows the range of symptoms mothers observed in association with a recent diarrhoeal episode.

Two of the symptoms "incessant crying" and "weakness" as reported may be linked up with two typical signs of dehydration<sup>17</sup> which are restlessness and unconsciousness. Fever is also known to accompany most diarrhoeas (Dialogue on Diarrhoea, No.50, 1992:4).

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<sup>17</sup> Mothers perceptions of dehydration have been dealt with on page 110.

Table 4.9

Signs and Symptoms associated with Diarrhoea

<u>Sign/Symptom</u>	<u>Frequency<sup>18</sup></u>	<u>Percentage<sup>19</sup></u>
Incessant crying	50	35.0
Weakness	50	35.0
Rise in temperature	31	21.7
Stomach pains	13	7.7
Loss of appetite	11	9.1
Sunken eyes	7	5.9
Can't remember	12	8.4
Total	<u>174</u>	<u>122.8</u>

Another important clinical sign of dehydration reported by mothers but with low salience is 'sunken eyes'. Other symptoms mentioned are 'stomach pains' (which may refer to diarrhoea in general as a gastro-intestinal disorder) and 'loss of appetite' (anorexia) which is often cited as an important factor inhibiting food intake during diarrhoea. On the whole, it may be said that whilst most mothers recognise various signs and symptoms including those of dehydration in diarrhoeal episodes these do not seem to prompt them to initiate home treatment with increased intake of fluids and foods as will be shown later in this chapter.

#### 4.4.2 Feeding During Diarrhoea

One important aspect of home management of diarrhoea is feeding. Many studies conducted under specific clinical settings have

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<sup>18</sup> The sum of this column is greater than N=143 (100 percent) because of multiple answers that were given by some respondents.

<sup>19</sup> Same as 18.

shown that, children who are continually fed in diarrhoeal episodes absorb quite a substantial amount of nutrients and experience less weight loss than those who eat less (eg. Molla et al. 1983; Black et al. 1983). Hence concepts of appropriate feeding are always emphasised as key aspects of sound case management.

Information sought in the interview schedule on feeding practices (including breastfeeding) were meant to probe into general notions about whether a child is more or less hungry during diarrhoea; the extent to which certain practices were continued or stopped; their general perceptions of which foods may be considered "useful" or "harmful" during diarrhoea; and whether the intake of some foods were increased or decreased and the reasons for such actions.

From the analysis, 45.5 percent of mothers reported that a child is more hungry whilst 45.5 percent as well reported that appetite is unchanged. 5.6 percent of them mentioned that it 'depends on the type of diarrhoea', and 1.4 reported they 'dont know'. Table 4.10 below shows the response of mothers when asked if a child is more or less hungry during diarrhoea.

The considerable number of mothers reporting that a child is less hungry during diarrhoea may be attributed to the tendency for most children to refuse to eat (due to lack of appetite) during bouts of diarrhoea. The issue of anorexia is highlighted in discussions on food intake practices during diarrhoea which

follows soon.

Table 4.10

Mothers' perception of a child being more  
(or less) hungry during diarrhoea

<u>Perception</u>	<u>Frequency</u>	<u>Percentage</u>
More hungry	65	45.5
Less hungry	65	45.5
Appetite is unchanged	8	5.6
Depends on type of diarrhoea	3	2.0
Don't know	2	1.4
<b>Total</b>	<b>143</b>	<b>100.0</b>

As regards the various quantities of food that were given during the last illness episode, out of 90 mothers who reported giving some kind of food before the diarrhoea started, it is significant that 63.3 percent of them gave less whilst 21.1 percent reported discontinuing entirely. Table 4.11 below shows various quantities of food mothers reported giving during a recent diarrhoeal episode.

Table 4.11

Food intake during diarrhoea

<u>Quantities given</u>	<u>Frequency</u>	<u>Percentage</u>
Less	57	63.3
Stopped	19	21.1
More	8	8.9
Same	6	6.7
<b>Total</b>	<b>90</b>	<b>100.0</b>

For mothers who gave less food, the most frequently cited reasons were that "the child refuses to eat" or "it seemed to lack appetite". This finding tends to corroborate those of Hoyle et

al. (1980) and Sakar et al. (1982) who found anorexia (lack of appetite) as an important factor in reduced nutrient intake during diarrhoea.

For those who stopped giving foods, the main reasons given were that "the food might have caused the diarrhoea" or that "it might worsen it".

One of the key issues in this study was to probe the extent to which foods were withdrawn during diarrhoea as often reported in professional diarrhoea literature (WHO/UNICEF 1983, 1985). Evidence from the episodes that were monitored revealed that, mothers did not withdraw foods entirely. In instances where mothers thought that 'solid' or 'heavy' foods might have caused the diarrhoea or its continued intake might worsen the diarrhoea, what mothers did in practice was to replace such 'solid foods' with 'lighter foods'.

This conclusion is supported by evidence from monitoring of episodes and analysis of interview data. When asked which foods were 'useful' or 'harmful' during diarrhoea, the answer varied depending on whether the food was perceived as having 'light' or 'heavy' characteristics. In most cases, mothers tended to consider foods that were 'light' to be useful during diarrhoea whilst heavy foods were generally considered 'harmful'. The 'useful' foods most commonly listed and hence considered 'light' included corn dough porridge, tea, roasted corn porridge, light soup, and 'rice water'. Foods that were considered 'heavy' and

hence unsuitable for children with diarrhoea included boiled rice, 'banku' 'kokonte' 'garri' and cassava.

Mothers tended to consider foods sold by food vendors in general as 'outside foods' (foods not prepared at home) hence unsuitable for children with diarrhoea. Boiled rice with stew or oil was considered particularly 'harmful' as it was believed to cause most diarrhoeas or could heighten episodes.

Another important issue related to maternal feeding is continued breastfeeding. In this sample, out of ninety-four (94) mothers who were breastfeeding their children before the diarrhoea started only two reported stopping. The reason they gave was that the child refused to suckle. These results are in line with other studies that report unchanged breastfeeding patterns during diarrhoea (Kendall et al. 1983; Bentley 1988; Esrey et al. 1988; Coreil and Genece 1988; Escobar et al. 1988). During focus group discussions and monitoring of episodes, it was reported and observed that mothers actually continued to breastfeed normally.

#### 4.4.3 Fluid intake during diarrhoea

Mothers' perceptions of fluid intake during diarrhoea are equally favourable. When asked if a child is more (or less) thirsty during diarrhoea, 83.2 percent of the mothers reported that a child is more thirsty; 6.3 percent less thirsty; 6.3 percent reported that a child drinks normally; 1.4 percent reported that it depends on the type of diarrhoea whilst 2.8 percent reported that they 'dont know'. These results are shown in Table 4.12

below.

Table 4.12

Mothers' concept of whether child is more  
(or less) thirsty during diarrhoea

<u>Perception</u>	<u>Frequency</u>	<u>Percentage</u>
More thirsty	119	83.2
Less thirsty	9	6.3
Drinks normally	9	6.3
Don't know	4	2.8
Depends on type of diarrhoea	2	1.4
Total	<u>143</u>	<u>100.0</u>

In spite of the predominant belief that a child is more thirsty during diarrhoea, evidence from case management data as well as household observations during diarrhoea revealed that mothers actually gave less fluids.

Out of 87 mothers who reported giving some kind of fluids before the episode started, 70.1 percent of mothers reported giving less, 6.9 percent reported giving more, 11.5 percent reported stopping whilst 11.5 percent continued to give the same quantities as before. Table 4.13 shows mothers responses when asked if they gave more (or less) fluids during a recent diarrhoeal episode.

Table 4.13

Fluid intake during diarrhoea

<u>Actual quantities given</u>	<u>Frequency</u>	<u>Percentage</u>
Less	61	70.1
Stopped	10	11.5
Same	10	11.5
More	6	6.9
Total	87	100.0

For mothers who reported 'stopping', they felt that the fluid was the cause of the diarrhoea. For the vast majority of mothers who gave less, the main reason given was that "the child refuses to take more". Thus the issue of anorexia is also seen to be an important factor inhibiting increased fluid intake during diarrhoea.

Another salient issue that was investigated was the type of fluids that were given during diarrhoea. Programme strategies for the control of diarrhoeal diseases encourage the use of 'home available fluids' (HAF) as a means or by which mild to moderate dehydration could be rectified.

HAFs are usually emphasised in programme campaigns because they may be culturally acceptable as appropriate drinks to be used during bouts of diarrhoea. In Ghana, the recommended HAFs promoted by the CDD programme include SSS, porridge, 'kenkey water', 'rice water' and 'coconut water'.

In the questionnaire, mothers were asked to mention the types of

fluids they gave during the diarrhoeal episode. Out of 87 mothers who reported giving some kind of fluid during the diarrhoeal episode, 55.3 percent reported giving corn dough porridge, 21.8 percent reported lemon/orange juice, 17.2 reported milo/tea whilst 5.7 percent gave roasted corn porridge. The types of fluids mothers reported giving are shown in table 4.14.

Table 4.14

Fluids given during a recent diarrhoeal episode

<u>Types of fluids that were given</u>	<u>Frequency</u>	<u>Percentage</u>
Porridge	48	55.3
Lemon/Orange juice	19	21.8
Milo/Tea	15	17.2
Roasted corn porridge	5	5.7
Total	87	100.0

It is significant that no mother reported using either ORS or SSS as a HAF which may be due perhaps to the tendency for mothers to conceive of them as 'medicines' for diarrhoea rather than fluids for rehydration. Furthermore, no mother reported using 'coconut water' as HAF although it has been noted elsewhere in this study that coconuts abound in Pute. Also no mother reported giving 'kenkey water' although kenkey constitutes one of the staple foods in Pute.

#### 4.4.4 Perceived Consequences of Diarrhoea

When asked which type of diarrhoea if any is the most 'serious', 74.8 percent of mothers reported 'cholera', most of them adding further that it could kill, 18.2 percent reported 'sore

diarrhoea' and 7 percent reported 'don't know'. The high number of mothers reporting the most 'serious' type of diarrhoea as 'cholera' can probably be explained by the endemicity of cholera in Pute and the rather high death tolls that are recorded during such epidemics.

The extent to which the people of Pute dreaded cholera was expressed by a 45 year old woman - Buenorki Tettehyumu as follows:

"I hate to hear the name of that disease called 'kolola' - it is a killer disease. It took the lives of two of my children as well as those of others the last time it hit this village. May it never occur again, never again! We pray the gods."

When asked what could happen to a child with diarrhoea, 72 percent (103 mothers) reported that a child becomes weak and may eventually die; 22.7 percent reported that a 'child loses water' and 5.3 percent reported that a child 'loses appetite'. The reporting of water loss as a consequence of diarrhoea may perhaps be attributed to health education messages learned about rehydration during diarrhoea.

The tendency for most mothers to report that diarrhoea could be life-threatening does not mean that mothers become alarmed with the occurrence of each and every episode. In Pute, mothers show concern when some symptoms of severity occur. These include vomiting, rise in temperature, measles, the presence of blood, a sudden increase in the frequency of stool and extreme weakness.

#### 4.4.5 Perceptions of Dehydration

Most deaths from diarrhoea are caused by dehydration (the loss of water and electrolytes (salts) from the body through stool output). The loss of water and electrolytes reduces the production of urine and tears, the mouth and tongue become dry and the skin loses its elasticity. When dehydration is severe, water and salt losses must be restored by the use of an intravenous infusion. In most cases of diarrhoea however, dehydration is not severe and lost fluids and salts can be replaced by the intake of appropriate fluids such as the most popularised ORS. (Dialogue on Diarrhoea No. 52, 1993: 1)

Levine and Edelman (1979) have advanced structural and functional reasons why infants and young children are at greater risk to dehydration and electrolyte loss than adults in diarrhoeal episodes. According to them, a high proportion of a child's body weight is accounted for by water and that this proportion increases with malnutrition. While it may take an average adult who has stopped consuming fluids 2-3 days to become dehydrated, it takes an infant only 24 hours.

In order to obtain information on perceptions of dehydration, mothers were asked to identify seven typical signs of acute dehydration. The elicited symptom list showed that every mother was able to recognise at least one sign of dehydration.

The majority of mothers (70.7 percent) recognising fast breathing as the commonest sign of dehydration tended to

associate it with 'weakness' of a child due to diarrhoea. Typical signs of dehydration which appeared to carry less cultural significance were sunken fontanel (10.5 percent), dry mouth (31.5 percent), and inability to drink (43.4 percent). Table 4.15 below shows the analysis of the elicited symptom list.

Table 4.15

Perceptions of Dehydration

<u>Sign of dehydration</u>	<u>Frequency<sup>20</sup></u>	<u>Percentage<sup>21</sup></u>
Fast breathing	101	70.7
Sunken eyes	78	54.6
Little or no urine	66	46.2
Loss of skin elasticity	63	44.1
Inability to drink	45	31.5
Dry mouth and lips	45	34.4
Sunken fontanel	15	10.5
Total	413	292.0

The low salience of sunken fontanel as a sign of dehydration is due to the fact that most mothers tended to consider it a common condition found in all infants, not associated with dehydration during diarrhoea.

#### 4.5 Patterns of Help-Seeking and Treatment in Diarrhoeal Episodes

As has already been noted, a key issue of this study was to investigate the extent to which the identified etiological categories of diarrhoeal illness determined specific treatments that were used and a pattern of help-seeking in diarrhoeal episodes. The analysis of different treatment options also

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<sup>20</sup>The sum of this column is more than N = 143 due to multiple responses that were given by mothers.

<sup>21</sup> Same as 20.

helped in throwing some light on why and how decisions were made to use one rather than another option and their implications for illness behaviour in diarrhoeal episodes.

The case reports are used here to analyse the treatment-seeking behaviour of mothers using a two-stage process<sup>22</sup> of help-seeking.

Mothers were asked to report on the first thing they did when their children had diarrhoea. Where self-medication was the first action taken, they were asked further to specify the types in terms of modern or traditional regimens and then to name and /or describe the specific remedies that were used. The interview process then went ahead to probe for the various factors underpinning the specific actions that were taken. Depending on whether or not the child got healed after the first treatment choice, this range of questions were repeated to elicit information on a second course of action in the quest for therapy.

The analysis of data revealed that self-medication either with biomedical or traditional herbal remedies is the most frequent initial reaction to diarrhoea as this was reported by (76.9 percent) of mothers. 11.9 percent of the mothers reported doing

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<sup>22</sup>As Etkin has aptly observed "Healing should be understood as a process, comprised of stages to which are ascribed different meanings and for which the outcomes expected at each stage of prevention and therapy may vary from one medical system to another" (Etkin 1988: 299).

nothing, 9.1 percent consulted a modern health facility, whilst 2.1 percent reported consulting a traditional herbalist. Table 4.16 below shows what mothers reported doing first when their children last had diarrhoea.

Table 4.16

FIRST LINE OF ACTION

<u>Treatment Choice</u>	<u>Frequency</u>	<u>Percentage</u>
Self-medication (Drugs/Herbs/ORS/SSS)	110	76.9
Nothing	17	11.9
Clinic/Hospital	13	9.1
Herbalist	3	2.1
<b>Total</b>	<b>143</b>	<b>100.0</b>

A breakdown of the specific traditional remedies mothers used as first treatment choices by self-medication, showed that only twenty-two (22) (14.7 percent) of mothers reported using some form of traditional remedy. Out of this number, 59.1 percent used enemas - which is seen to be the most common traditional remedy for diarrhoea, 27.3 percent of the mothers reported using herbal preparations whilst 13.6 percent used purgatives. The traditional remedies that mothers used as a first line of treatment are shown in Table 4.17 below.

An analysis of the range of biomedical treatments (including ORS/SSS) that were used as a first response to a recent bout of diarrhoea revealed that, out of eighty-nine (89) mothers who reported using some form of biomedical regimen only 9.0 percent

Table 4.17

Type of self-medication by traditional treatments

<u>Remedy</u>	<u>Frequency</u>	<u>Percentage</u>
Enema	13	59.1
Herbs	6	27.3
Purgative	3	13.6
<b>Total</b>	<b>22</b>	<b>100.0</b>

reported using ORS/SSS whilst 68.5 percent used antimicrobials (antibiotics). Other important treatments used are analgesics/antimalarials (14.7 percent), Adsorbents (2.2 percent), Antimotility agents (1.1 percent), whilst 4.5 percent used other remedies such as Teething Powder, Milk of Magnesia, T.C.P., and Gripewater. A clear indication in Pute with respect to self-medication in diarrhoeal episodes is the widespread use of pharmaceuticals. Table 4.18 shows the broad categories of pharmaceuticals that mothers reported using.

Table 4.18

Type of self-medication by biomedical treatments

<u>Remedy</u>	<u>Frequency</u>	<u>Percentage</u>
Antimicrobials (Antibiotics)	61	68.5
Analgesics/Antimalarials	13	14.7
ORS/SSS	8	9.0
Others	4	4.5
Adsorbents	2	2.2
Antimotility agents	1	1.1
<b>Total</b>	<b>89</b>	<b>100.0</b>

The specific types of pharmaceuticals that were noted during interviews and household observations are also shown in Table 4.19

Table 4.19Specific Pharmaceuticals used in the Treatment of Diarrhoea

<u>Antimicrobials</u>	<u>Analgesics</u>	<u>Antimalarials</u>
Chloramphenicol	Paracetamol	Chloroquine
Septtrin ('Moyee')	Daga	Malarex
Metronidazole	Aspirin	Maladrin
Ampicillin	Panadol	
Thiazamide ('M & B')		
<u>Adsorbents</u>	<u>Antimotility Agents</u>	<u>Other Drugs</u>
Kaolin	Immodium	Gripewater
		T.C.P.
		Teething Powder
		Milk of Magnesia

It is also worth emphasising that mothers used both paediatric and adult forms of these pharmaceuticals in the treatment of childhood diarrhoea. This was noted mainly during monitoring of episodes.

When questioned on the efficacy of the specific treatments used in terms of whether the child got healed or not during a first line of action, 78.4 percent of the mothers (who reported diarrhoea in their children in a recent past) responded in the affirmative. Only 21.6 percent of the mothers reported the persistence of the illness after this first line of action.

On failure of first treatment choices, mothers were questioned about a second round of action in the attempt to cure diarrhoea in their children.

During a second attempt at seeking a cure for diarrhoea most

mothers (51.9 percent) sought help from the clinic or hospital. Self-medication either by biomedical treatments or traditional herbal remedies is the second most important mode of treatment reported by 44.4 percent of mothers, whilst 3.7 percent reported seeing a herbalist. Table 4.20 depicts the various treatment options that mothers used in the effort to treat diarrhoea when remedies used in a first instance failed.

Table 4.20

Second line of action

<u>Treatment choice</u>	<u>Frequency</u>	<u>Percentage</u>
Hospital/clinic	14	51.9
Self-medication	12	44.4
Herbalist	1	3.7
<b>Total</b>	<b>27</b>	<b>100.0</b>

With respect to specific traditional remedies that were used, it was observed that the use of enemas continued to predominate having been mentioned by 66.7 percent of the mothers whilst 33.3 percent of them used herbal preparations.

An analysis of the specific biomedical treatments that mothers used revealed that 66.7 percent of them used antibiotics; 22.2 percent used (anti-malarials/analgesics) whilst 11.1 percent used other drugs some of which are shown in Table 4.19 (column 3, under "other drugs"). Table 4.21 shows the biomedical treatments that were used during a second round of treatment.

Table 4.21  
Self-medication by biomedical treatment

<u>Remedy</u>	<u>Frequency</u>	<u>Percentage</u>
Antimicrobials	6	66.7
Analgesics/Antimalarials	2	22.2
Others	1	11.1
Total	<u>09</u>	<u>100.0</u>

As has been shown by the analysis of treatment patterns in diarrhoeal episodes, biomedical and indigenous therapies are used concurrently, but the predominance of biomedicine in the treatment of diarrhoeal diseases shows the 'faith' people have developed in it. This notwithstanding, the easy recourse to traditional modes of treatment shows their popularity in Pute.

#### 4.6 The Quest for Therapy in Diarrhoeal Episodes.

It is important to recognise that the meanings associated with specific diarrhoeal illness episodes and treatment-seeking behaviour of mothers is not merely influenced by symptoms. A wide range of factors enter into the actual construction of illness categories and health care decision-making<sup>23</sup>. These include-age of the child, perceived etiology, factors influencing persistence or flare-up, efficacy of treatment, socio-demographic characteristics, reputation of care provider, etc.

These intervening variables notwithstanding, the analysis of case management data so far combined with group discussions and observations during diarrhoea depicts a trend of help-seeking for

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<sup>23</sup> The range of factors mothers reported as determining various treatment choices are highlighted under "Decision-making in the Quest for Therapy".

diarrhoea in Pute that needs to be specified. Mothers will not directly seek professional medical care immediately a child became ill with diarrhoea. They would first self-medicate with pharmaceuticals - especially antibiotics. They might not visit a health facility at all if self-initiated treatment with pharmaceuticals led to an improvement or 'stopped the diarrhoea' after a day or two. If after three days there was no improvement or if there was deterioration in terms of stools becoming more frequent, more watery or if symptoms such as fever or weakness are observed, then help may be sought from a modern health facility.

The range of health resources that mothers reported using should not be seen as mutually exclusive categories. As several authors have observed in medically pluralistic societies, health seekers have access to a spectrum of treatment options that may be used exclusively, successively or simultaneously (Foster 1976, Senah 1981, Stonier 1986). This view is supported by evidence from household observations during diarrhoea. Mothers tended to use various health care resources indiscriminately, depending on perceived symptoms, etiologies and treatment outcomes.

Thus with the onset of a diarrhoeal ailment, a mother may "do nothing" or self-medicate with patent drugs. It may well be that after administering the drugs the child may get well. Where it does not, the child may be given enema or purged using concoctions to 'kill' sores or clear "all dirt" in the stomach. In case self-medication by modern or traditional remedies should

fail, a mother can try other modes of self-treatment recommended by friends and relatives. It is only when such self-initiated treatment efforts have failed and the diarrhoea seems to have worsened that the mother may decide to seek help from a health facility or sometimes a traditional healer. It is worth emphasising that whilst these treatment resources may be resorted to one after the other, mothers can do all of these in unison. Hence, when it comes to the search for cure in diarrhoeal episodes as may be the case of other diseases of common occurrence, the tendency is for mothers to commute between different medical systems, testing the efficacy of various healing techniques.

Three help-seeking actions of mothers during diarrhoea may be highlighted for they could have important health implications. These are self-medication in general, the 'irrational' use of pharmaceuticals and the use of enemas for diarrhoea.

That people self-medicate as an initial response to illness is often cited in the literature for many places: Nigeria (Maclean 1965), India (Beals 1976), Lower Zaire (Janzen 1978). Mexico (Young 1981). Furthermore, some scholars maintain that self-medication and self-care in general could be a means by which higher health standards could be attained at low cost, as it entails demonopolising doctors and other medical personnel of their control over health care. It is held that this 'demonopolisation' will facilitate realisation of health for all by the year 2000 as advocated by the Alma Ata Declaration of

1978. (van der Geest 1987). Yet other authors have noted many dangers associated with self-medication. For example Logan (1988) has noted misdiagnosis, overdoses, inappropriate medicines, over-reliance on over-the-counter drugs, out-of-date and dangerous medications as important consequences for those who self-medicate. As has already been noted in Pute, the tendency is for most mothers to use prescription drugs (especially antibiotics) and other over-the-counter drugs "irrationally" for diarrhoea.

Over the last decade however, much evidence has been published on the lack of effectiveness of antidiarrhoeals and especially antibiotics and their use have repeatedly been discouraged. The reasons are many and have to do with the natural history of the disease (i.e. its self-limiting character) on the one hand and lack of effectiveness of the commonly used substances and their combinations on the other hand. For example WHO (1980, 1983, 1989, 1991, 1993) has observed many drawbacks associated with the inappropriate use of antidiarrhoeals and the overuse of antibiotics for diarrhoea. Among others, it is held that the irrational use of drugs diverts attention from the proper case management of diarrhoea, and that most drugs used for acute diarrhoea have no proven value for the condition. What is more, many drugs used for diarrhoea are known to have serious side-effects such as central nerve depression, gastro-intestinal toxicity and an increase in the severity or duration of the diarrhoeal episode. Inappropriate use of anti-microbials is also known to contribute to the development of resistance in

microorganisms (WHO 1991 : 11).

It is also well documented that 60 -70 percent of cases of infantile and childhood diarrhoeas are due to viruses and that unless the diarrhoea is due to bacteria or protozoa, the use of antibiotics is worthless (Dialogue on Diarrhoea 1992, No. 42:1).

#### 4.7 The Context of Diarrhoeal Illness Management

The cultural categories of diarrhoeal illness identified in Pute and the treatment-seeking behaviour of mothers as discussed must be understood as products and integral parts of the socio-cultural system in which they occur. Fosu (1978) has aptly noted that where the cause of an ailment is important in the process of diagnosis, then it must also be important in matters associated with the search for therapy. Hence, when an ailment is attributed to natural forces then they must be remedied by forces of the same nature and where it is attributable to supernatural factors, the remedies to be used (in most cases) are to come from the same source. Evidence from local attributions of causes of diarrhoea and the analyses of treatment practices all point to the highly naturalistic causal models held by these people. This is clearly shown by the high tendency for mothers to use relatively straight-forward non-ritualised physical remedies in the treatment of infantile and childhood diarrhoea.

It has therefore been found in this study that people in a typical rural community such as Pute hold highly naturalistic notions about diarrhoeal illness even if this cannot be

generalised for all illnesses.

Earlier ethnographers (eg. Fortune 1932; Evans-Pritchard 1937; Harley 1941) who studied the indigenous medical belief systems of the so-called non-western societies have often arrived at the conclusion that, in such societies people see all diseases as supernaturally caused and which must be remedied through magico-religious acts. Evans-Pritchard, for example, observed that "the Azande attribute sickness whatever its nature to witchcraft and sorcery" (Evans-Pritchard 1937 : 479).

In recent times, however, specialists in the field of medical anthropology in their attempt to study the full range of medical beliefs and practices in traditional societies have increasingly recognised that somatically caused illnesses, requiring only physical treatment is a category of illness identified by most peoples. These studies have often investigated the existing pharmacopoeias of various societies and have documented the predominance of the use of physical therapies for some categories of illnesses - especially those that are minor, common, and short-term as is the case of diarrhoea (eg. Maclean 1971; Ahern 1975; Ngubane 1977; Janzen 1978; Senah 1981, 1993).

The frequent use of physical remedies and the high propensity to use biomedical pharmaceuticals in diarrhoeal episodes might make one to believe that Pute mothers have adopted a western biomedical philosophy of health and disease in which the causes of diarrhoea and perhaps other diseases of common occurrence are

attributed solely to natural forces. This view may appear tenable for the fact that no mother reported a supernatural force as being a cause of any of the four forms of diarrhoea that were found. Furthermore when asked the type of treatment they used initially in a recent diarrhoeal episode, in no case did mothers indicate that they initially consulted a fetish priest or diviner. These tendencies might therefore make one to think that diarrhoea is perceived in strictly naturalistic terms by these mothers. This in fact is not the case. Evidence from the ethnographic data collected on Pute medical belief system shows that they hold multi-causal models of diarrhoeal illness and that supernatural etiologies of diarrhoeal illness are also recognised only that these are largely condition-specific. The identification of supernatural representations of cause in diarrhoeal episodes usually entails a transition from natural attributions of cause to those of supernatural causes. Thus a diarrhoeal illness must undergo a process of cultural rediagnosis for supernatural etiologies to be established. The conditions and/or specific factors that may induce a search for supernatural etiologies for a diarrhoeal illness originally perceived to be naturally caused include: the persistence of a diarrhoeal ailment despite several modes of treatment, the observance of symptoms such as high fever, loss of consciousness, extreme weakness and all other symptoms considered typical of a 'normal' diarrhoeal episode. In establishing supernatural causalities in diarrhoeal episodes, Pute people may also take into account the number of people who are affected at the same time, the age-group which is hardest hit, or even the lineages or clans of orientation of

those who are affected. Thus the occurrence of an epidemic dysentery or cholera may be attributed to the gods or ancestors, some malevolent forces or 'spirits'. Under these circumstances, affliction may be viewed as punishment for an unethical behaviour or immoral behaviour on the part of oneself, one's family or some members of the society. The health of the population then becomes a 'significant test' of the effectiveness with which society operates - an instrument for maintaining social and ethical control.

As has already been noted elsewhere in this study, for all ailments in which supernatural causes are suspected, a diarrhoeal illness believed to have been "invaded" by supernatural forces will need to be confronted through a magico-religious medium with the consultation of appropriate fetish priests and/or diviners who will then apply specific remedies such as expiation, supplication and the performance of purification rites for individuals, families, or the society as a whole. It is however worth emphasising that, supernatural therapies may not be pursued as the sole means by which a diarrhoeal ailment must be cured - mothers will in addition seek appropriate natural remedies (especially biomedicine) although the ailment is attributed to unnatural forces at its current debilitating stage. This latter view is supported by evidence from ethnographic information that was gathered on illness behaviour in times of epidemic cholera. Many studies have also documented both natural and supernatural causation of diarrhoeal illness in various places. These include Maina-Ahlberg (1979) in the Gambia, Nations (1982) in

Northeastern Brazil, De Zoysa et al. (1984) in Zimbabwe and Green (1986) in Bangladesh.

In Abu's study (1988) in Ghana, whilst some identified diarrhoea types such as 'fontanel diarrhoea', 'sunken eyes diarrhoea' and 'diarrhoea with malaria' were believed to be naturally caused, it was held in some research sites in the Northern Region of Ghana (Dapouri and Saboro) that diarrhoea as a whole could be transmitted spiritually through a mother's breastmilk.

#### 4.8 Hierarchy of Resort in Diarrhoeal Episodes

The need to restate more succinctly a hierarchy of resort for diarrhoea, incorporating notions of supernatural etiologies and treatment in Pute cannot be overemphasised. Treatment activity in Pute is characterised by the tendency to classify all diarrhoeal illness episodes primarily as being naturally caused and utilise treatments appropriate for them. There is therefore a hierarchy of resort in which self-medication with biomedical pharmaceuticals is used predominantly as the first most accessible type of treatment. These are usually followed by treatment at a government health facility. Mothers will normally exhaust all of these resources before suspecting a supernatural causation of a diarrhoeal episode, subjecting it to rediagnosis and subsequent reclassification and consulting appropriate fetish priests or diviners. Indeed one of the most important criteria used in establishing supernatural causalities is when a diarrhoeal illness persists after trying various healing resources.

#### 4.9 Decision-making in the Quest for Therapy

An important side-light to the patterns of help-seeking and specific treatments used in diarrhoeal episodes as outlined for Pute is the decision-making structure affecting use or non-use of specific health-care resources. It determines why and how decisions are made to use one rather than another treatment option.

Pute mothers were asked to report on the range of factors that influenced their treatment choices during first and second lines of action in the search for cure.

The most important factor influencing the therapeutic choices of mothers during a first line of action was found to be "availability of the resources used". This was reported by 28.7 percent of mothers. Having shown that most mothers self-medicate using pharmaceuticals in diarrhoeal episodes, it is not surprising that most mothers reported easy access to the medications they used. As has already been mentioned elsewhere, mothers usually have these drugs at home as they may be self-prescribed or recommended by the chemical seller and purchased over-the-counter although most of them may be restricted drugs as is the case of antibiotics. The range of factors influencing the decision-making process during a first line of action in the quest for therapy are shown in Table 4.22.

Table 4.22

Reasons for first action taken on  
recognition of diarrhoea

<u>Reason</u>	<u>Frequency</u>	<u>Percentage</u>
Availability at home/ Chemical shop	41	28.7
Drugs/herbs are able to stop diarrhoea	32	22.4
Relative's/friend's advice	29	20.3
Diarrhoea not serious	20	14.0
Reputation of care provider	16	11.2
Cheaper	3	2.1
Husband's advice	2	1.3
Total	143	100.0

Furthermore whilst the role of husbands was insignificant in the decision-making process, those of other relatives and friends were important in the choice of the specific therapies that were used. Whilst only 1.4 percent of mothers reported consulting their husbands, 20.3 percent sought advice from friends and relatives. The low salience of husbands' role in the choice of therapy is perhaps due to the fact that most husbands are out fishing during most illness episodes. Ideally, however, a husband is expected to pay expenses incurred in medical care. Indeed Janzen (1978) and Senah (1981) have shown clearly that, attempts undertaken to re-establish health - 'the quest for therapy' - are often not the prerogative of the patient alone but directly involve his or her "significant others" (relations and friends) who may constitute a "health-seeking management team". These people may not only feel empathy and responsibility for the sick person but also a sense of authority over what should be done.

Another important reason given by mothers for using specific treatments was their efficacy in curing the diarrhoea, as one of the reasons mothers gave for self-medicating with drugs was that they are "able to stop or cure the diarrhoea". It is well known that mothers tend to seek a dramatic cure by attempting to 'stop the diarrhoea' and hence tend to use treatments that are likely to result in such an outcome, whilst neglecting ORT as the most appropriate clinical therapy for most childhood diarrhoeas. The popularity of western pharmaceuticals in Pute as has already been noted is contextual and hence it must be understood within this framework. As Senah (1993) has observed in his study of a rural community in Ghana, these villagers have 'indigenised' ways of using pharmaceuticals based on local concepts of their efficacy for various ailments. Whilst biomedical pharmaceuticals are generally believed to act quickly and forcefully to relieve symptoms and cure illness, herbal medicines on the other hand are believed to act more slowly and naturally without producing undesirable side-effects.

In addition, the strong belief in the power of western pharmaceuticals especially antibiotics in Pute appear to stem from a pharmaceutical invasion of the third world in which multinational pharmaceutical firms promote the use of their products indirectly by suggesting that the quality and efficacy of their products are superior to those of other companies. Ferguson (1988) has described this invasion as 'commerciogenesis'. In Pute, this form of "commerciogenesis" is exhibited by the tendency of people to refer to some drugs by the

names of the firms that manufactured them. Thus people refer to adult septrin as 'Moyee' which literally means 'You are welcome' or 'welcome' in Dangme. Incidentally this is also the name of the manufacturer of the drug in the United Kingdom. In a similar vein Thiazamide is often referred to as 'M & B' (May and Baker) the name of the firm that manufactured it.

One mother commented on the efficacy of these medications as follows:-

"As for 'Moyee', 'M & B' and the red and black capsule, everybody knows they are very good 'blefo tsopa' (pharmaceuticals) for various ailments. 'Moyee' and 'M & B' are particularly useful for diarrhoea - as soon as you dissolve a tablet in a spoonful of water and give it to the child the diarrhoea stops. The red and black capsules are good for all sores - whether in the stomach, in the head or in the body."

Although the sources of knowledge and use of pharmaceuticals for diarrhoea could not be firmly established during the study, it may be the case that former prescription patterns of health practitioners which usually aim at stopping the diarrhoea have influenced lay perceptions of diarrhoea management and over-the-counter self-help initiatives.

This finding therefore corroborates studies by Etkin (1988), Sussman (1988) and Senah (1993) which demonstrate the extent to which cultural constructions of the efficacy of the specific treatments used during illness episodes can influence the biological and behavioural outcomes in the quest for therapy.

Furthermore, some 14 percent of the mothers (refer to table 4.22)

reported that their reasons for first treatment choices was that "the diarrhoea was not serious." Mothers' notions of a diarrhoeal illness not being serious may be linked to the self-limiting nature of diarrhoea, its ubiquity as well as cultural constructions of the efficacy of various health care regimens used. The outcome of such a perception is for some mothers "to do nothing" or use pharmaceuticals based on emic notions of their usefulness in treating diseases of common occurrence.

Another group of mothers (11.2 percent) reported 'reputation of care provider' as the most important reason for resorting to first treatment. As has been mentioned earlier on in chapter three, Pute has no health post. Yet nearby health facilities are hardly patronised in diarrhoeal episodes due perhaps to transportation costs and their concepts of appropriate treatment for diarrhoea. Granted the low educational level of these mothers, and the limited provision of health facilities, the local chemical seller is routinely consulted "almost like a doctor" in a similar fashion reported by Logan (1988) for pharmacists in a Mexican urban study. Mothers therefore present their complaints of a diarrhoeal illness and describe symptoms, expecting the chemical seller to diagnose and prescribe treatment.

The chemical seller at Pute thus constitutes a 'de facto' health care provider in diarrhoeal episodes. Indeed Ferguson (1988) has aptly noted that commercial pharmaceutical practitioners (including chemical sellers) may be preferred to other public

health facilities for one important reason: they are able to "combine local beliefs regarding etiology, diagnosis and treatment of illness with reliance on modern medications...."Furthermore, the health care services offered by chemical sellers are convenient, fast, easy, uncomplicated to use, and allow people to retain control over their own treatment.

The last important factor mentioned by mothers as a determinant of first treatment choices was "cheapness" of the regimens that were used. The local chemical seller plays an important role in matters related to cost of medications used for diarrhoea. As has been noted previously, the chemical seller is aware that many customers cannot afford to buy requisite quantities of drugs needed to treat an illness episode. Hence the tendency is to recommend that customers buy small amounts which are usually not related to any established dosage schedule, and return to purchase more if the diarrhoea did not stop.

When questioned on factors impinging on the decision-making process during a second round of treatment, the majority of mothers (42.9 percent) reported 'reputation of care provider' as the most important factor influencing treatment choices. This reason tallies with patterns of help-seeking observed in Pute during second attempts at treating diarrhoea. Most mothers tended to consult a modern health facility if the diarrhoea did not stop during first treatments. Other factors reported by mothers as determining therapeutic choices are "availability of drugs" (21.4 percent), "efficacy of drugs" (14.3 percent),

"relative's advice" (14.3 percent) and "husband's advice" (7.1 percent). These results are shown in Table 4.23 below.

Table 4.23

Reasons for second action "when diarrhoea  
did not stop"

<u>Reason</u>	<u>Frequency</u>	<u>Percentage</u>
Reputation of care provider	6	42.9
Availability at home/ chemical shop	3	21.4
Relative's advice	2	14.3
Efficacy of drugs	2	14.3
Husband's advice	1	7.1
Total	<u>14</u>	<u>100.0</u>

#### 4.10 Oral Rehydration Therapy

The discussion in this chapter has so far been concerned with an examination of the classificatory systems that exist for diarrhoea in Pute as a whole and the extent to which these relate to the health-seeking behaviour of mothers in diarrhoeal episodes. In a study of this kind, aimed at raising programmatic issues for the control of diarrhoeal diseases in general, it is important that knowledge and use of ORT is subjected to in-depth analysis, in order to explicate some of the factors which may influence its use or non-use from a contextual point of view. The results presented below are based on three kinds of analyses. Firstly, household interview data and those of episode monitoring are combined and used to explore general knowledge and use of ORT. Secondly, cross-tabulations of some socio-demographic features of mothers (education, religion, parity and age) with 'ever use' of ORT were done to determine the extent to which the use of ORT correlated with some social traits of mothers. A

third analysis was performed to test the strength of association between socio-demographic characteristics of mothers which were treated as independent variables and use of ORS which was considered a dependent variable.

Apart from generating some meaningful sociological discussions on variations in the use of ORT, the analyses will provide the means for testing our specific hypothesis that use or non-use of ORT is a function of the social standing of a mother, and that educated mothers are more likely to use ORT than uneducated mothers.

#### 4.10.0 Knowledge and Use of ORT

The data from the interview were analysed in relation to six variables measuring ORT knowledge and use. The variables defining ORT knowledge and use were defined severally in terms of mothers who knew or had heard of ORS packets and home-made SSS, who know what it is used for, who have ever used it (past or recent), and those who could recite modes of correct preparation and administration. The analysis also discriminated between respondents who had heard of ORS or SSS but have not used them before and the reasons for non-use. The distinctions between knowledge and the use of ORS and SSS as specific forms of treatment for diarrhoea were made so as to determine which of them might be considered more appropriate for promotion by diarrhoeal disease control programmes.

ORS packet exposure was quite high as compared to SSS. Whilst 87 mothers (60.8 percent) in the total sample said they had heard or

knew about ORS, 77 mothers (53.8 percent) reported knowing about SSS.

When asked what ORS is used for, 79.3 percent of the mothers who had ever heard or knew of it reported that it is used for diarrhoea, 4.6 percent of them said it is for fever, 3.4 percent reported it being used for vomiting, 2.3 percent mentioned that it is for cough whilst 10.4 percent of the mothers reported 'don't know'. On the other hand, 93.5 percent of the mothers who had ever heard or knew of SSS indicated it as being used for diarrhoea, 5.3 percent said it is for vomiting, whilst 1.2 percent mentioned that it is for headache.

Out of the eighty-seven (87) mothers who reported knowing of ORS, 51 (58.6 percent) had ever used it. With respect to SSS, out of the 77 mothers who knew of it, only a little above half of them 39 (51.4 percent) had ever used it.

The question to determine where mothers had obtained ORS packets found that a modern health facility was the first main source (80.4 percent of mothers), followed by a chemical seller (17.6 percent) and relatives (2.0 percent of mothers).

For mothers (36) who had heard of ORS but had not used it before, the most frequently cited reasons were "prefer other drugs" (63.9 percent), "don't know how to prepare it" (22.2 percent) "child has not had diarrhoea" (13.9 percent). As regards SSS 38 mothers reported having knowledge about it but had not used it before.

The reasons most commonly cited for non-use were 'prefer other drugs' (55 percent) while 45 percent of the mothers reported 'don't know how to prepare it'.

Questions meant to probe concepts of appropriate preparation and administration of ORS/SSS revealed that, most mothers were more knowledgeable about ORS packets than home-made SSS. Most of the 51 mothers stating that they had used ORS packets showed adequate understanding of how the solution should be prepared and administered. About 93 percent of the mothers were able to describe correct preparation methods and about 95 percent as well recited correct modes of administration. Only 7 percent and 5 percent of mothers respectively did not know how ORS should be prepared and administered.

Out of the 39 mothers who reported having used SSS before, only 35.1 percent of them described anything approaching an appropriate form of preparation. Furthermore many mothers (70.3 percent) knew how it should be administered as compared to only 29.7 percent of mothers who reported improper modes of administration.

The overall pattern with respect to the knowledge and use of ORT (ORS/SSS) appears to be that the majority of mothers have heard of or knew of the use of ORT in treating diarrhoea, but tend to use pharmaceuticals as has been shown by case management data and supported further by evidence from the following of episodes, some aspects of which are highlighted as follows. Out of the 23

on-going diarrhoeal episodes that were monitored, there was a high prevalence of the use of allopathic medicines (58 percent) and more especially the use of antibiotics which were being used in about 60 percent of cases. Out of the five (5) mothers who reported using ORS packets at some stage of the diarrhoeal ailment, only 1 mother reported initiating treatment on her own. The rest (4 mothers) were given sachets on reporting at the clinic. An important observation made during monitoring of episodes was the tendency of mothers to discontinue use of packets and resort to pharmaceuticals if the diarrhoea persisted for more than 24 hours. Mothers often complained that, the ORS did not 'stop' or improve the diarrhoea. Many mothers thus tended to attribute antidiarrhoeal qualities to ORT and did not understand its rehydration functions.

Some important preparation and administration problems exposed by the study with respect to SSS need to be highlighted. Apart from household interview data, it was also observed during monitoring of episodes that several women tended to prepare solutions with higher salt concentrations than recommended, perhaps due to the abundance of salt in Pute. With respect to the administration of SSS the most common error was the tendency for some mothers to give it in doses of between 1 and 2 teaspoonfuls 2 or 3 times daily as has been documented elsewhere in rural Pakistan by Mull and Mull (1988). In Pute, this administration problem may be associated with other preparation problems that became evident during household observations. In preparing SSS some mothers add ingredients such as ground pepper, ginger, onyx, herbs, etc.

which makes the solution more of a herbal infusion and hence may not be administered in the manner in which SSS is supposed to be administered.

The limited enthusiasm for ORT as shown by the usage patterns and the 'irrational' use of pharmaceuticals in diarrhoeal episodes appear to stem from the fact that mothers did not adequately understand the concept of rehydration as replacing the amount of water lost through stool output.

In addition to highlighting these preparation and administration problems, the results of the present study indicate that the decision to use or not to use ORT is best understood within the framework of the ethnomedical model of diarrhoeal disease in this area of Ghana.

#### 4.10.1 Correlates of ORS Use

Unearthing some of the socio-demographic processes underlying use or non-use of ORS is a challenging task. An important practical concern that makes this task especially difficult is that, a firmly established and well specified conceptual framework that relates demographic characteristics to use or non-use of ORS does not exist. Instead, only partial and rather ad hoc explanations exist to explicate the relationship between a particular characteristic and use of ORS. (Pickering 1985, Coreil and Genece 1988). Hence the socio-demographic characteristics of mothers (viz: education, religion, parity, and age) that are used in this discussion, as possible predictors of use of ORS should be

regarded as more speculative in nature than as a set of firm predictions. What is more, it may be the case that other socio-demographic characteristics such as marital status and occupation not included in the analyses exert unmeasured predictive effects.

#### 4.10.2 Education and Knowledge and Use of ORS

The level of education of mothers' is a socio-demographic indicator that is frequently found to influence child survival through mothers' specific health knowledge. Although it is not very clear what aspect of education is responsible for health improvement, it has been shown that education induces a change of attitude and an increased self-confidence in women which leads to changes in behaviour that are beneficial to health (Lindenbaum 1983, Ahadzi 1985, Shaban 1986, Gyekye 1988). Educated mothers thus tend to break with traditional philosophies, become highly naturalistic about disease causation and utilise available alternative health care resources in the treatment of child illness.

In the present analysis, education is conceived of as a transmitter of modern ideas which is likely to broaden mothers knowledge and subsequent use of ORS as the most appropriate modern technique for the treatment of childhood diarrhoeas.

Cross-tabulations of knowledge and use of ORS by maternal education showed (refer to Table 4.24 below) that a significant proportion of mothers (70.1 percent) who reported ever using ORS were illiterates. The cross-tabulation results are reinforced by

correlational analysis of maternal education and use of ORS, which did not yield any statistical significance (refer to table 4.25 below). This finding may be explained by the large proportion of mothers (76.9 percent) who were found to be illiterates in the total sample.

Table 4.24

Knowledge and Use of ORS by level  
of Maternal Education

<u>Level of education</u>	<u>Knew/ heard of ORS</u>	<u>Percen- tage</u>	<u>Ever use ORS</u>	<u>Percen- tage</u>
No education	62	71.3	34	66.6
Adult/Informal education	2	2.3	1	2.0
Primary education	13	14.9	11	21.6
JSS/MSLC	8	9.2	4	7.8
Post JSS	2	2.3	1	2.0
Total	87	100.0	51	100.0

Table 4.25

Significant correlations between socio-demographic characteristics of mothers and use of ORS.

<u>Socio-demographic Characteristics</u>	<u>ORS Use N = 51</u>
Education	ns
Religion	ns
Parity	0.27
Age	0.23

\* Pearson *r* coefficients significant between 0.05 and 0.001;  
ns = not significant.

Furthermore uneducated mothers who are more likely to have used ORS in the past are those who seek help for family illness more often. As has earlier on been shown, most mothers who reported ever using ORS reported a modern health facility as the first

most important source of information. Thus contrary to the well-established finding that the better educated are more likely to respond to illness by using appropriate modern health resources during illness episodes, it has been found in a largely non-literate rural community such as Pute that, use of modern health care regimens in the treatment of childhood diarrhoea is not significantly associated with maternal education.

This finding notwithstanding, a plausible explanation to the association between low maternal education and high use rate of ORS may be found in the information dissemination system of the community. In other words, the impact of Maternal and Child Health (MCH) clinics is significant here.

On the other hand, a critical analysis of the cross-tabulation data in table 4.24 reveals that higher maternal education can be an important factor in determining use of ORS inspite of the small number of mothers who reported having formal education. This is evidenced by the fact that, out of the 13 mothers who reported having primary education and knowing of ORS, 84.6 percent had used it before. Furthermore, among mothers with JSS/MSLC education (8) and those with Post JSS education (2) who know/or had heard of ORS, 50 percent of each category respectively had used ORS in the past. Thus although higher maternal education may not be significantly associated with knowledge and use of ORS, the educational background of mothers and information diffusion is seen as an important factor that can be manipulated to improve health outcomes during illness

episodes.

#### 4.10.3 Religion By Use of ORS

Many studies have emphasised the behavioural correlates of religious affiliation and the health consequences of such behavioural differences. For example Redlener and Scott (1979) have demonstrated how religious beliefs could hamper compliance with medical opinions and its implications for child health.

The relationship between religion and knowledge and use of ORS is not very simple but it is assumed here that mothers with orthodox religious backgrounds are likely to perceive diarrhoea in naturalistic terms and hence might have used ORS before as compared to mothers with other religious backgrounds.

Cross-tabulations of knowledge and use of ORS with religious affiliation revealed that 70.6 percent of the 51 mothers who reported ever using ORS were of 'Pentecostal'/'Spiritual' religious backgrounds followed by Traditionalists (19.6 percent), and for mothers with Orthodox religious backgrounds, 9.8 percent had ever used it. These results are shown in Table 4.26.

Table 4.26

#### Use of ORS and Religious Background

<u>Religion</u>	<u>Ever Use (ORS)</u>	
	Frequency	Percentage
Pentecostal/Spiritual	36	70.6
Traditional	10	19.6
Orthodox	5	9.8
Total	<u>51</u>	<u>100.0</u>

Apart from the fact that the present analysis might have been influenced by the large number of mothers who reported being Pentecostals or Spiritualists, the trend appears to be that use of ORS is not significantly associated with the religious affiliation of mothers. In addition, this view is supported by statistical analysis which showed no significant correlation between religion and use of ORS (refer to Table 4.25).

#### 4.10.4 Parity and Use of ORS

Parity, like maternal age, is another important socio-demographic factor that may predict use of O.R.S although this may appear subtle in principle. The proposition made here relates parity and prevalence rates of diarrhoea to predisposition to use of ORS, based on Adjei's study (1988) which found maternal parity to be inversely associated with prevalence of diarrhoea. Adjei found out that, mothers with higher parity (defined as mothers having 3 to 4 children) experienced less diarrhoea in their children than those who had lower parity (1 or 2 children). Based on the varying rates of prevalence among mothers with different parities, it was postulated in this study that mothers with lower parity who were found to have a higher prevalence rate of diarrhoea are more likely to have been predisposed to the use of ORS than mothers with higher parity who were found to have a lower prevalence rate. The parity of women under study ranged from 1 to 12 with a mean of 1.5. In this study, due to the diverse nature of the maternal parity data, the parity frequency distribution is categorised into two main groups so that some meaningful inferences can be made. For the purposes of this

discussion therefore mothers with low parity are defined here as those having between 1 and 3 children, whilst high parity mothers are defined as those having 4 or more children. Based on this categorisation, mothers with low parity (1-3 children) accounted for 67.9 per cent of the total sample whilst those with high parity accounted for 32.1 per cent.

Using the two broad groupings of the parity data, it was observed that mothers with low parity (1 - 3 children) tended to have a higher prevalence of ORS use than those with high parity (4 or more children). For mothers with low parity 66.7 per cent (34) had ever used ORS as compared to those with high parity (33.3 per cent) representing 17 mothers. Table 4.27 presents results of cross tabulations of parity by use of ORS based on the two groupings of the parity data.

Furthermore, the association between parity and use of ORS was found to be statistically significant ( $r = 0.27$ ) as shown in Table 4.25.

Thus the results of the present analyses corroborate our expected relationship between maternal parity, prevalence of diarrhoea and predisposition to the use of ORS.

Table 4.27

Parity by Use of ORS

<u>Parity (Low)</u>	<u>Ever Use (Frequency)</u>	<u>Percentage</u>
1	8	15.7
2	12	23.5
3	14	27.5
Sub-Total	34	66.7
<u>Parity (High)</u>		
4	9	17.6
5	2	3.9
6	5	9.8
7	1	2.0
9	0	
10	0	
12	0	
Sub-Total	17	33.3
Total	<u>51</u>	<u>100.0</u>

4.10.5 Maternal Age and Use of ORS

The relationship between maternal age and use of ORS is not very straight-forward but the analysis made is based on results of some epidemiological studies in Ghana which have found varying levels of prevalence of diarrhoea in children among mothers in different age groups. For example Adjei (1988) found that, young mothers aged between 15 - 29 years had a higher prevalence of diarrhoea in their children than mothers in all other age groups. Consequently it was hypothesised in this study that young mothers aged between 15 and 29 years might have experienced many diarrhoeal episodes in their children and hence might have used ORS before. What is more, young mothers are likely to show scientific attitude towards diseases through modernising factors like formal education and migration which often result in changes

in attitudes and perceptions.

Cross-tabulations of age-group of mothers by use of ORS revealed that the three most commonly found age-groups to have ever used ORS are mothers aged between 30-34 years (31.3 percent) followed by those aged between 20-24 years (27.5 percent) and those in the 25-29 years group (17.6 percent). Table 4.28 shows the results of the cross-tabulations. Statistical analysis also showed a strong relationship between maternal age and use of ORS ( $r = 0.23$ ) as shown in table 4.25.

Table 4.28

Age Group of Mothers by Use of ORS

<u>Age Group</u>	<u>Frequency</u>	<u>Percentage</u>
Below 20	4	7.8
20 - 24	14	27.5
25 - 29	9	17.6
30 - 34	16	31.3
35 - 39	6	11.8
40 - 44	1	2.0
45 and above	1	2.0
Total	51	100.0

The high prevalence of use of ORS among mothers aged between 30-34 years may perhaps be attributed to the fact that ORS as a modern technique for the treatment of diarrhoea was officially introduced into Ghana only a little more than a decade ago when mothers in this age-group were in their 20s.

On the whole however, use of ORS appears to be high among young mothers aged between 20-24 years and 25-29 years as shown by the data which supports our hypothesized relationship between levels

of prevalence, maternal age and use of ORS.

#### 4.11 Summary

The focus of this chapter has been the presentation and interpretation of field data related to maternal notions of childhood diarrhoea and its treatment. The analyses have shown that, local categories of diarrhoea usually classified by their causes, influenced to a very large extent treatment-seeking behaviour in diarrhoeal episodes.

It has been shown that the tendency for mothers to use mainly non-ritualised physical remedies in the treatment of childhood diarrhoea was directly related to their etiological perceptions of childhood diarrhoea which were found to be largely associated with physical factors.

A typical hierarchy of resort has been delineated in which mothers will initially respond to a diarrhoeal illness by engaging in self-medication with pharmaceuticals (especially antibiotics). A modern health facility is usually consulted after a day or two when self-initiated treatment efforts have not proved successful. Supernatural causal explanations for diarrhoea, and for that matter remedies of the same nature are usually sought only when a diarrhoeal ailment does not respond to treatment in spite of several attempts or when symptoms such as high fever, loss of consciousness, and extreme weakness are observed.

It has also been shown that, previous use of packaged ORS was not significantly associated with neither the educational nor religious background of mothers. A positive relationship was however found between parity, maternal age and use of ORS.

Finally, it has been shown that popular health-care treatment and health care seeking for diarrhoea emanate from the social and cultural environments in which illness episodes are experienced and that programmes for the promotion of ORT (including ORS) as a modern technology for the treatment of most childhood diarrhoeas need to be sensitive to cultural factors if promotional efforts are to become successful.

In chapter five, which is the final one, a summary of the whole study will be given as well as the main conclusions, policy implications of the study for public health programmes for the control of diarrhoeal diseases, and problem areas in need of further research.

## CHAPTER FIVE

### 5.0 SUMMARY AND CONCLUSION

This thesis is devoted to an analysis of how mothers at Pute, a rural community in Ghana, manage childhood diarrhoea. The import of the study is to understand mothers' indigenous perceptions of childhood diarrhoeal illness in general and concepts of appropriate treatment, and thereby explicate some of the socio-cultural factors that may influence health - seeking behaviour in diarrhoeal episodes. As a social science health research, the study aims at identifying some of the adaptive as well as maladaptive behaviours of mothers that could have important health ramifications for clinicians and health planners for diarrhoeal diseases. It is also hoped that the study will generate interest in micro-approaches to the study of diarrhoeal illness as well as other diseases of common occurrence from a contextual perspective in other ethno-geographic areas of Ghana. In effect, therefore, the study calls for a new health delivery system for diarrhoeal illness that takes into account the social and cultural settings in which illness episodes are managed.

The research methodology relied on a complementary approach in which evidence was accumulated from three major sources: personalised interviews, observation and focus group discussions.

To capture fully mothers' folk perceptions of diarrhoeal illness

and its treatment, it was found important first to outline the social structure of Pute, in order to provide a background from which the health-seeking behaviour of mothers could be understood and interpreted in the study.

Pute is a relatively small Dangme village situated in the south-eastern part of Ghana, some 118 kilometres from Accra. The society may be described in relative terms as structurally and functionally an integrated one. Fishing is the major occupation and it is engaged in by men and women alike.

In Pute, kinship networks cut-across social, political, economic and religious relations. It has been noted that every individual at Pute belongs to one of seven major clans through the male line. Each clan has several classified lineages under it. Membership of a lineage goes with specific rights and obligations, and there is absolute and unconditional commitment to one's kin group. It is expected of a good kinsman to show interest in, and participate actively in ceremonies such as child-naming, marriage and funerals. Kinship solidarity is exemplified at its best during the annual Asafotufiami festival. Appropriate social sanctions apply to those who falter in the observance of these kinship norms.

Though not much technical change has been effected at Pute, the life-styles of the people have undergone some degree of change through modernising ideas and institutions such as allopathic medical system, formal education, the introduction of money and

christianity as a result of culture-contact with Western civilization. These agents of change have produced considerable transformations in age-old traditional values and institutions which have often resulted in a breakdown of traditional cosmology. New modes of evaluation are being used to challenge time-tested traditional beliefs and practices. There has been an evolution of a power structure and influence in which individuals exert considerable control over their own lives making it extremely difficult to impose ideas upon them when they resist.

Regarding cultural perceptions of diarrhoea and its treatment, the study has found out the following:-

1. That diarrhoea constitutes an important disease construct in Pute to which is associated multiple meanings and interpretations.
2. That mothers' local definition and hence diagnosis of diarrhoea is usually based on the passing of four (4) or more loose motions which deviate from professional medical definitions of three (3) or more watery stools. Adjunct symptoms commonly observed in diarrhoeal episodes were found to be 'continuous crying,' 'weakness,' and 'rise in temperature'.
3. That mothers recognise various clinical signs of dehydration such as "fast breathing" 'sunken eyes', 'little or no urine', and 'loss of skin elasticity', but do not associate them with loss of body fluids through the passing of loose motions.
4. That mothers have a well-defined indigenous typology of

diarrhoeal illness in which four (4) major categories are recognized. These are 'cholera', teething diarrhoea' 'sore diarrhoea' and 'food-related' diarrhoea. Local attributions of cause(s) of diarrhoea are explained largely in somatic terms in which man's interaction with his insalubrious physical environment is seen to play a significant role.

5. That most mothers perceive a diarrhoeal ailment to be distressing and sometimes life-threatening only when debilitating symptoms such as vomiting, measles, the presence of blood, upsurge in frequency of stools and extreme weakness are observed; and more especially when the diarrhoea is classified as 'cholera'. Otherwise, a diarrhoeal illness is conceptualised as a short-term, non-incapacitating ailment which responds rapidly to self-initiated treatments.
6. That contrary to the common dietary practice in many societies to withhold food and fluids (including breast milk) from a baby suffering from diarrhoea, thereby exacerbating not only dehydration but malnutrition, Pute mothers believe that fluids, especially breast milk should continue to be given during diarrhoeal illness episodes. Furthermore, changes in diet during diarrhoeal episodes usually entail a shift from foods that are perceived to be 'heavy' in a humoral sense to those that are believed to be 'lighter' in character. In addition, anorexia has been found to be a constraining element in augmented feeding in diarrhoeal episodes.
7. That mothers' etiological concepts of childhood diarrhoea determined to a very large extent therapeutic choices and hence help-seeking patterns. Thus, the tendency for mothers

to explain the cause of a diarrhoea ailment in physical terms also meant that they tended to use remedies of the same domain when it came to treatment. Mothers use both traditional and modern health care regimens in the treatment of diarrhoea but the latter predominates. The most frequently used modern treatments for diarrhoea were found to be pharmaceuticals of which antimicrobials ranked first. As regards traditional remedies, most mothers resort to enemas as a healing technique for diarrhoea.

8. That a typical hierarchy of resort for diarrhoea entails a process in which a mother will not seek professional medical care with the onset of a diarrhoeal ailment but rather engage in self-treatment with pharmaceuticals - especially antibiotics. Help may not be sought from a modern health facility until after a day or two when attempts at self-medication have failed and/or when the diarrhoeal ailment seem to have aggravated in terms of consistency and frequency of stools or when symptoms such as fever or weakness become evident. Furthermore, mothers will not normally concern themselves with establishing supernatural causalities for diarrhoea and hence finding remedies of the same character until several treatment endeavours have proven futile.
9. That the health-seeking actions of mothers in diarrhoeal episodes are not simplistically triggered by symptoms and that the decision to use or not to use specific health care remedies is a complex phenomenon, being influenced by a multiplicity of factors. These include mothers' classification of a diarrhoeal ailment, the role of

- 'significant others' (friends and relatives), perceived seriousness, availability of regimens, and efficacy of treatment. That the tendency for mothers to "shop around" for health in diarrhoeal episodes is a function of the co-existence of two competing medical systems - modern and traditional.
10. That knowledge and usage rates for ORS sachets were higher than that of SSS. Better preparation and administration methods were also noted for ORS as compared to SSS. Sources of knowledge and use of ORS were mainly linked with modern health facilities.
  11. That previous use of ORS sachets was not significantly associated with the educational nor religious background of mothers. On the other hand, parity and maternal age correlated with use of ORS sachets.
  12. That any effort aimed at promoting ORT as a modern approach to the management of childhood diarrhoea in rural settings such as Pute, needs to address popular health culture and home-care behaviour.

The findings from this study suggest practical implications for public health workers and other medical professionals as well as programme planners for diarrhoeal diseases.

An important finding from this study that should be considered in future diarrhoeal interventions is to incorporate how mothers conceptualise the consequences of diarrhoea. For example, it has been found that mothers show concern when their children become

weak and that the consequences of some diarrhoea types, especially cholera could become fatal. Such perceived consequences of diarrhoea could be used to design appropriate social marketing messages to popularise use of ORT among target groups.

Furthermore, beliefs about food and fluid intake and the resulting practices can be promoted with social marketing techniques in which nutrition (including breastfeeding) and dehydration could be presented as keeping up a child's strength. An important aspect of feeding that requires further clinical investigation is the issue of anorexia, which has been found to hinder nutrient intake during diarrhoeal illness episodes. In addition, fermented corn dough usually used in the preparation of porridge, often administered as a "light food" during illness episodes, should be analysed for its nutrient content and means of enhancing it sought if necessary.

There is also the need to investigate more thoroughly the factors that influence mothers' diagnosis of diarrhoea in their children which may include various signs and symptoms as well as socio-demographic and behavioural characteristics such as a child's normal defaecation patterns which may also be related to both age and feeding patterns. Such information will help in determining which symptoms should be emphasised in educational messages for prompt recognition and initiation of treatment if secondary complications such as dehydration are to be prevented.

It is also suggested that for self-diagnosis and the culminating self-medication to be a useful treatment option, information may

need to be provided about the use and dangers of pharmaceuticals to mothers and significant others in the social network. In this way, some of the dangers associated with drug misuse such as those presented by the immediate pharmacologic properties of the medicine as well as those which may result from behaviours that increase the chances of iatrogenic response may be avoided. To this end, the need to establish local media networks for dissemination of information on the rational use of drugs in the treatment of diarrhoea as well as other diseases in rural areas of Ghana cannot be over-emphasized. These practical suggestions may be particularly useful in Ghana where currently, the commercial pharmaceutical sector is being invaded by the sale of fake drugs. Furthermore, the fact that chemical sellers play an important role in diarrhoea management and over-the-counter self-help efforts calls for the need for their training in basic pharmacology and symptom diagnosis with the view to making their diagnoses and prescriptions more appropriate and less harmful to their clients. Granted that the private pharmaceutical sector is not likely to be replaced by other health care alternatives for the vast majority of people in rural Ghana, it is crucial that the sector is made to function more efficiently. Furthermore, practitioners of various types of non-allopathic therapies such as traditional birth attendants, herbalists and divine healers should be consulted to see how they perceive diarrhoea and where possible, incorporate them into ORT programmes. An important area, in need of research is the sale and utilisation patterns of pharmaceuticals - especially antibiotics and other antidiarrhoeals which by virtue of being readily available over-the-counter are in direct competition

with ORS as alternatives for the treatment of diarrhoea. It is also proposed that CDD programmes assess the extent of micro organism resistance to various antimicrobials such as septrin, ampicillin, chloramphenicol, metronidazole etc. which are all likely to be in popular use in other rural areas of Ghana as has been found for Pute. This will enable health planners to determine the antibiotics of choice for both dysenteric and choleraic diarrhoea among target populations.

Regarding the use of enemas and purgatives in the treatment of childhood diarrhoea research is required on utilisation patterns, emic concepts of when and why they are used; the illnesses for which they are preferred and the toxicity and/or corrosiveness of substances used in their preparation. This information will serve as a guide to the formulation of appropriate educational messages to effect the necessary behavioural change.

The limited predisposition to the knowledge and use of SSS as compared to ORS, and the fact that the former is not being used with anything approaching maximum effectiveness implies the need for social marketing messages to concentrate more on the promotion of ORS. Where SSS is to be promoted, greater emphasis may need to be placed on correct preparation and administration methods. An important issue that needs to be incorporated into national programme evaluative studies for diarrhoea in Ghana is mothers' conceptions of how ORT works, particularly perceptions of fluid replacement, which have been found to influence acceptance worldwide (Frankel and Lehman 1984, Hogle 1985, Green 1986).

Furthermore, diarrhoeal illness management as a whole awaits the discovery of a medicinal drug that 'stops' diarrhoea with minimal side-effects.

The view that mothers recognise signs of dehydration but do not associate it with loss of body fluids suggests the need for communication experts to devise simple ways of educating mothers on concepts of dehydration which should be based on culturally appropriate definitions and dispositions. Health education messages also need to stress that ORS and SSS are not medicines meant to stop the diarrhoea but fluids for rehydration during diarrhoea.

That medical establishments were the most important sources of knowledge and use, point to the important role that medical institutions play in the dissemination of information and supplies for the treatment of diarrhoea. It also shows some degree of readiness on the part of rural health-seekers to patronise modern health facilities. On this note, it is suggested that clinics should implement educational programmes on diarrhoea management.

Furthermore, access to both supplies and information could be important factors limiting use of ORT in rural areas. Hence, it is important that efforts are made to explore the possibility of promoting ORT in non-clinical settings through new strategies such as training of neighbourhood volunteers in the management of childhood diarrhoea and the establishment of 'ORT corners' at places such as the market, church and school.

The morbidity pattern at Pute also suggests that CDD programmes and their 'technico-medical' interventions need not concentrate on effective management of single episodes as diarrhoeal illness constitutes only one disease entity of a people at risk to a host of other health problems that are deeply rooted in poverty, malnutrition, and the web of socio-economic conditions linked to it. It is therefore advocated that programmes concern themselves with eradicating those conditions which contribute to and result from ill-health in general, in poor communities rather than targeting selected diseases. A striking argument in favour of this 'macro' approach to achieving health for the vast majority of rural people comes from the Kasongo Project Team (Kasongo Project Team 1981). Measles was targeted and successfully eradicated in an entire district of 200,000 people. This was seemingly a success story. Morbidity figures and measles related mortality figures improved. But, it was found that the targeted intervention had only a short-term impact on overall mortality figures. Although the targeting of one disease was successful in terms of removing the condition (measles), it was unsuccessful in terms of improving the overall life chances of the children involved. After a relatively short time, the children who had not died of measles, died of some other infections, linked to malnutrition and poverty of the communities involved. It is well recognized that integrated approaches to solving community health problems require increasing allocation of resources to the health sector and significant alterations in health plans. Furthermore, it is also well known that the deteriorating economic conditions that confront third world countries make such laudable structural changes a near

impossibility, and hence, tends to negate any effort aimed at solving rural health problems. These views notwithstanding, it is suggested that any strategy to be adopted in rural communities in Ghana and elsewhere, addressing disease problems, (of which diarrhoea is capital) should be one that creates opportunities and facilitates a learning process wherein communities assume increased control over their health problems. This approach calls for the involvement of communities in the discussion and analysis of their own situation; prioritising their problems; finding out their causes; and deciding on what actions to take to solve the problems using their own resources; carrying out anti-diarrhoeal activities; evaluating their impact and using the results to plan future actions. This is a means by which services can be provided at affordable costs but with a high level of availability and quality maintained for rural folks without relying passively on a government system or international donor agencies. Diarrhoeal disease control programmes can therefore become the "growth pole" for the development of alternative health care delivery systems which can easily be combined with activities in the areas of water, environmental health and hygiene, vector-borne disease, agricultural development and education. In this way, the basest of human ailments, diarrhoea, could become the gateway for learning about community problem solving.

Finally, the results of the present study suggest that 'technico-medical' interventions such as ORT in rural areas like Pute will be successful if it focuses on a medical culture that de-emphasizes physiological malfunctioning and its treatment to the inclusion of

social causality of diarrhoeal illness and ill-health in general and the implied social solutions. To this end, this study casts doubt on the results of decontextualised large-scale epidemiological surveys which most often rely on strict statistical measures to support their findings. Although such studies help to measure progress and identify problems, it is not likely that far-reaching solutions will be found if adjunct anthropologically-oriented perspectives are neglected.

It is therefore being postulated here that if ORT initiatives by both governmental and non-governmental organisations in rural communities such as Pute, are to become effective, then they must be based on an objective assessment of traditional health beliefs, existing health practices and the practical constraints faced by disadvantaged people in rural areas.

APPENDIX 'A'

INTERVIEW SCHEDULE

A: IDENTIFICATION BLOCK

A1. Respondent Number :.....  
Name: .....

A2. House Number/Description:.....  
PROCESSING INFORMATION

A3. Interview No. ....

A4. Date: Day ..... Month ..... Year .....

A5. Interviewer's Name: .....

A6. Outcome

- 1. Completed Interview
- 2. Incomplete Interview

A7. General Introduction:

We are conducting a study on some health problems of children in this community. Our aim is to understand these problems from your own perspectives as caretakers of your own children. This will help in the design of appropriate interventions to solve them. I would therefore like to take a little of your time to interview you.

B: BIOGRAPHICAL DETAILS

I would like to ask you some questions about yourself and your children.

B1. Could you please tell me your age?

- i. (age in years) .....
- ii. Estimated by interviewer:.....

B2. How many children do you have?

.....(State absolute figures)

B3. How many of your children are below 5 years?  
(ie 0-4 years) ( )

B4. What are the ages of your children under 5 years?

- 1. 0 - 2 years ( )
- 2. 3 4 years ( )

B5. Have you ever attended school?

- 1. Yes ( )
- 2. No ( )

B6. What was the highest level of school you attended?

- 0. None
- 1. Adult/infomal classes
- 2. Primary
- 3. Junior Sec. School (JSS) Middle School  
Leaving Certificate (MSLC)
- 4. Post JSS/Senior Sec. School
- 5. Higher

B7. What was the highest standard/form/year you completed at that level?.....

.....

B8. Could you please tell me your occupation?

- 1. Trading ( )
- 2. Farming ( )
- 3. Fishing/Fish-related activity ( )
- 4. Clerical ( )
- 5. Vocational ( )
- 0. Unemployed ( )

B9. What religious denomination do you belong to?

- 1. Orthodox ( )
- 2. Penteconstal/Spiritual ( )
- 3. Traditional ( )
- 4. Other (specify) ( )

C: CLASSIFICATION OF CHILDHOOD DIARRHOEA

C1. In your opinion, what are the most common childhood diseases in this community? Rank them in order of importance:

- 1. ....
- 2. ....
- 3. ....
- 4. ....
- 5. ....

C2. Children sometimes experience (abnormal or watery stools' What is the Dangme name for it?

.....





G6. How did you recognise that it was diarrhoea?  
(Interviewer: Probe for)

1. No. of stools observed:

.....

2. Other symptoms noted:

1.....

2.....

3.....

4.....

G7. What was the first thing you did when your child had diarrhoea?

- 1. Self-treatment ( )
- 2. Clinic/Hospital ( )
- 3. Herbalist ( )
- 4. Diviner/Fetish Priest ( )
- 5. Nothing ( )

G8. If self-treatment, what did you do?

- 1. Used drugs (including ORS/SSS) ( )
- 2. Prepared Herbs ( )
- 3. Used Enemas ( )
- 4. Used Purgative ( )
- 5. Other (specify) .....

G9. Could you please show me or describe the type of drugs/herbs you used? (Interviewer: Record name or description of drug(s) or herb(s)).

.....

G10. Why did you take this course of action in either G7 or G8?

- 1. Husband's advice ( )
- 2. A relative's advice ( )
- 3. Cheaper ( )
- 4. Reputation of care provider ( )
- 5. Availability of drugs ( )
- 6. The diarrhoea was not serious ( )

G11. Did the child get cured after this first treatment?

- 1. Yes ( )
- 2. No ( )

(If yes go to H1)

G12. If no, what did you do next?

- 1. Self-treatment ( )
- 2. Clinic/hospital ( )
- 3. Herbalist ( )
- 4. Diviner/fetish priest ( )
- 5. Nothing ( )

G13. If self-treatment, what did you do?

- 1. Used drugs (including ORS/SSS) ( )
- 2. Prepared herbs ( )
- 3. Used enemas ( )
- 4. Used purgatives ( )
- 5. Other (specify) .....

G14. Could you please show me or describe the type of drugs/herbs you used? (Interviewer: Record name or description of drug(s) or herb(s).

G15. Why did you take this course of action in either G12 or G13.

- 1. Husband's advice ( )
- 2. A relative's advice ( )
- 3. Cheaper ( )
- 4. Reputation of care provider ( )
- 5. Availability of drugs ( )
- 6. The diarrhoea was not serious ( )

G16. Did the child get cured after this second treatment?

- 1. Yes ( )
- 2. No ( )

H: FEEDING PRACTICES DURING DIARRHOEA

H1. Was the child breastfed before he/she got the diarrhoea?

- 1. Yes ( )
- 2. No ( )

(If No, go to H.4)

H2. Did you stop giving the child breastmilk during the diarrhoeal episode?

- 1. Continued ( )
- 2. Stopped ( )

(If answer to H2 is 2 go to H3, otherwise go to H4)

H3. Why did you stop? .....  
.....  
.....

H4. Was the child taking solid food before the diarrhoea started?

1. Yes ( )                      2. No ( )

(If yes ask H5, otherwise go to H6).

H5. Did you give more, less or same amount of food as before the diarrhoea started or you stopped feeding the child?

1. More ( )                      2. Stopped ( )  
 3. Same ( )                      4. Less ( )

H6. If answer to H5 is either 1, 2,3, or 4, why did you take this course of action.

Reasons for Action:

- 1.....  
 2.....  
 3.....  
 4.....

I: FLUID INTAKE DURING DIARRHOEA

I.1 Did you give the child anything to drink (apart from breastmilk) during the diarrhoea?

1. Yes ( )                      2. No ( )

(If no go to I.4)

I.2 List all fluids (other than breastmilk) that were given.

.....  
 .....

I.3 How useful are the various fluids? .....

.....

I.4 Was the child drinking other fluids than breastmilk before the diarrhoea started?

1. Yes ( )                      2. No ( )

I.5 When the diarrhoea started, did you give the child more, less, same amount or stopped giving all fluids (other than breastmilk)?

1. More ( )                      2. Same ( )  
 3. Less ( )                      4. Stopped ( )

I.6 How useful are various fluids?

- 1.....
- 2.....
- 3.....
- 4.....

I.7 Was the child drinking other fluids than the breastmilk before the diarrhoea started?

- 1. Yes ( )                      2. No ( )

I.8 When the diarrhoea started did you give the child more, less, same amount or stopped giving all fluids other than breastmilk?

- 1. More ( )                      2. Same ( )
- 3. Less ( )                      4. Stopped ( )

I.9 If answer to I.8 is either 1, 2, 3 or 4, why did you take this course of action?

- 1.....
- 2.....
- 3.....
- 4.....

J: KNOWLEDGE/USE OF SSS

J.1 Do you know or have you heard of sugar, salt solution ~~before~~?

- 1. Yes ( )                      2. No ( )

(If answer to J.1 is No, go to K.1)

J.2 What is it used for? .....

J.3 Have you ever used it?

- 1. Yes ( )                      2. No ( )

(If answer to J.3 is No, go to K.1)

J.4 How is it prepared? .....



J.5 How did you give it to the child? .....  
.....

J.6 Was it able to stop the diarrhoea?

- 1. Yes ( )
- 2. No ( )

(If yes, go to K.1)

J.7 If you have not used it before, why?

- 1. Never heard of it ( )
- 2. Child has not had diarrhoea ( )
- 3. Don't know how to prepare it ( )
- 4. Too expensive ( )
- 5. Others (specify).....

K: KNOWLEDGE/USE OF ORS

K.1 Have you heard of ORS?

- 1. Yes ( )
- 2. No. ( )

(If answer is No end here).

K.2 What is it used for?.....  
.....

K.3 Have you ever used it?

- 1. Yes ( )
- 2. No. ( )

(If answer to K.3 is No, go to K.8)

K.4 Where did you obtain it from?

- 1. Chemical seller ( )
- 2. Clinic ( )
- 3. A relative ( )
- 4. Others (specify).....

K.5 How is it prepared? (Record spontaneous responses)

.....  
.....

K.6 How did you give it to the child?

.....  
.....

K.7 Was it able to stop the diarrhoea?

- 1. Yes ( )
- 2. No ( )

K.8 If you have not used it before, why?

1. Never heard of it ( )
2. Child has not had diarrhoea ( )
3. Don't know where to get it from ( )
4. Too expensive ( )
5. Others (specify).....

APPENDIX 'B'

GUIDE QUESTIONS FOR FOCUS GROUP DISCUSSIONS

A. IMPORTANT CHILDREN DISEASES

1. What do you mean when you say a child is sick?
2. What causes childhood diseases?
3. What are the major childhood diseases in this community?  
Rank the diseases in order of importance as a childhood health problem.

B. BASELINE DATA ON KNOWLEDGE, BELIEFS, ATTITUDES AND PRACTICES OF MOTHERS

1. Has your child had diarrhoea before? Do you know of someone whose child has got diarrhoea before?
2. What are the types of diarrhoea you know? Rank in order of importance
3. What are the major symptoms of each of these types of diarrhoea? Rank them in order of importance in recognising that type of diarrhoea. (Facilitator: Pick each type of diarrhoea in the order given in (2) and discuss symptoms)
4. If your child had diarrhoea (mention the type), which symptom(s) will make you carry out self-medication, go to a clinic, herbalist, fetish or a spiritualist.
5. Where would you take these symptoms of diarrhoea for treatment, and why?
  - i. frequent stools
  - ii. sunken eyes
  - iii. sunken fontanel

iv. blood in the stool

v. mucous in the stool

6. How does a child get diarrhoea (refer to types in '2')?
7. How is diarrhoea (type) spread from one child to another?
8. What other diseases can diarrhoea (type) lead to?
9. What effects does diarrhoea (type) have on the child?
10. Do children die of diarrhoea (type)?
11. What is the common name for all these types of diarrhoea?

**C. ORAL REHYDRATION THERAPY (ORT) & TREATMENT**

1. What would you do if your child had diarrhoea (type)?
2. What types of foods/fluids would you give a child with diarrhoea (type). Why?
3. What types of foods/fluids are not good/good for a child with diarrhoea (type). why?
4. Do you think it is good to continue breastfeeding a child with diarrhoea? why?
5. Have you heard of ORS? From where?
6. Have you ever used ORS?

If Yes: i. Where did you get it from?

ii. What did you use it for?

iii. How did you prepare it?

iv. How is it given to a child with diarrhoea

If No, Why?

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