

**WHY GROWTH MONITORING FAILS: AN EXPLORATORY STUDY OF CHILD
MALNUTRITION INTERVENTION IN A RURAL AFRICAN AREA.**

1991

Louise Kuhn

Dissertation submitted to the Faculty of Social Science (University
of Cape Town) in partial fulfillment of the degree Master of Arts
(Research Psychology).

Supervisor: Ann Levett

The University of Cape Town has been given
the right to reproduce this thesis in whole
or in part. Copyright is held by the author.

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

ACKNOWLEDGEMENTS

I would like to thank my supervisor, Ann Levett. Special thanks to Hoffie Conradie and Nomtunsi Kobeni for their help in facilitating my work in Thornhill. Thanks to the Thornhill community who participated in the survey and the nurses and village health workers who conducted the survey and participated in the interviews. The assistance of Sharon Stanton and Steve Titus in co-ordinating the field work and Sonia Swanenvelder for statistical support is acknowledged. Merrick Zwarenstein and Lies Hoogendoorn are thanked for their input. The financial assistance of the Medical Research Council is acknowledged.

SUMMARY

This study is an exploratory one of growth monitoring in a rural African village, Thornhill. Growth monitoring is a primary health care approach to prevent child malnutrition in under-developed areas promoted by a variety of development agencies, particularly UNICEF, as a part of the "child survival revolution." It involves weighing children regularly and plotting their weights on a growth chart retained by the child's mother. Growth charts provide a visual display of a child's growth to allow health workers and mothers to identify early signs of growth faltering in order to facilitate ameliorative action (usually food supplementation or nutrition education) to prevent malnutrition. It also aims to facilitate the active participation of mothers in ensuring their child's continual good growth. The history of growth monitoring and its use in the South African context is discussed. The underlying rationale and component processes needed to implement it effectively are identified in a review of process evaluation studies of growth monitoring.

Thornhill is an impoverished African rural area in the Ciskei in which malnutrition is a serious health problem and growth monitoring has been systematically implemented. However, although the health service had a demonstrated capacity for successful health interventions it had been unable to improve nutritional status. Background information and previous research in the area is presented.

The study aimed to explore why growth monitoring had failed to improve nutritional status in Thornhill by investigating the way in which the component objectives of growth monitoring in terms of

making growth visible, facilitating nutrition intervention and facilitating mothers' participation in their children's care were perceived by mothers and health workers.

A survey of mothers or care-givers of children under three years and interviews with village health workers and nurses were conducted. This was integrated with informal observations and previous research in the area.

The results showed that key systems for growth monitoring to be a successful intervention were in place. Most children had a growth chart and were weighed often and regularly. Mothers showed interest in weighing and appeared to understand the purpose of growth monitoring. Health workers were able to understand and explain the growth chart. Many mothers had a construction of growth compatible with the model in the growth chart and many could interpret the growth charts correctly. However, mothers with a malnourished child appeared to be reluctant to acknowledge that their own child was malnourished.

Reticence to acknowledge malnutrition appeared to be a mechanism to resist acquiring a devalued status associated with having a malnourished child. Mothers were described as feeling embarrassed and afraid of the community as having a malnourished child implied they were very poor and were unable to care for their child adequately. They were also afraid of health service censure and blame as health workers appeared to hold mothers personally responsible for malnutrition attributing it to mothers' failure to follow their health promotion guidelines. The concept of stigma is used to discuss the difficulty growth monitoring has in making growth visible in this context. It is further discussed with

respect to the value attributed to children and good growth and images of motherhood which reinforce the stigma.

Growth monitoring had difficulty in facilitating nutrition intervention as the main intervention promoted, food supplementation, was poorly accepted by the community. Attending the nutrition clinic clearly marked a mother with the undesirable social stigma of having a malnourished child and associated blame of being very poor and neglectful about her child. It was also rejected as it assumed control of the mother's role. It was a hand-out which made the mother into a beggar. Although weighing was not perceived as an intervention it had a higher profile and was operationally better supported than food supplementation. Alternative methods of food distribution and the extent to which targeted intervention contributes to the problem are discussed.

Mothers' participation in their child's care was largely constructed as compliance with health service demands by health workers. Although village health workers expressed solidarity with the community and some elements of an empowerment model of education, they perceived mothers as ignorant and emphasised passive obedience to instruction. Nurses' approach was more authoritarian. Both mothers and health workers identified a role of the home-based growth chart to promote self-reliance of mothers but its use to the health service assumed predominance. Health workers' position in the overall health service hierarchy is discussed.

The study concludes that greater involvement of the community would be a valuable beginning to address the problems faced by growth monitoring in Thornhill.

CONTENTS

| | PAGE |
|---|---------------|
| CHAPTER 1: INTRODUCTION | 1 |
| Background to study area: Thornhill, Ciskei | 7 |
| South African context | 8 |
| Ciskei | 11 |
| Social history and socio-economic conditions in Thornhill | 11 |
| Health services in Thornhill | 13 |
| How growth monitoring is organised in Thornhill | 15 |
| Previous research | 17 |
| Review of evaluation of growth monitoring | 20 |
| Screening rationale of growth monitoring | 22 |
| Screening in practice | 26 |
| Coverage | 26 |
| Accuracy | 27 |
| Interpretation | 28 |
| Intervention | 31 |
| Participation rationale of growth monitoring | 33 |
| Participation in practice | 36 |
| Education | 36 |
| Self-reliance | 37 |
| CHAPTER 2: METHODS | 43 |
| Survey of care-givers of children under three years | 45 |
| Questionnaire | 45 |
| Sampling | 48 |
| Administration | 50 |
| Analysis | 53 |
| Interviews with nurses and VHWs | 53 |
| Pilot interviews | 53 |
| Lessons learned from the pilot interviews | 55 |
| Interview schedule | 56 |
| Selection of nurses and VHWs | 58 |
| Process of interviews | 59 |
| Interviews with mothers | 63 |
| Informal observation and discussion | 63 |
| Report back of results | 64 |
| Ethics | 65 |

| | PAGE |
|--|-------------|
| CHAPTER 3: RESULTS | 67 |
| Survey results: Mothers' or care-givers' perceptions | 67 |
| Extent of monitoring | 67 |
| Reasons for clinic attendance for weighing | 70 |
| Care-givers' construction of growth | 72 |
| Knowledge of Road To Health Cards | 74 |
| Characteristics associated with knowledge of the card | 75 |
| Identification of poor growth in own child | 75 |
| Perceptions of origins of poor growth | 77 |
| Strategies to deal with malnutrition | 78 |
| Perceptions of the purpose of the Road To Health Card | 79 |
| Interest in the Road To Health Card | 81 |
| Summary | 82 |
| Interview results: Health workers' perceptions | 83 |
| Does growth monitoring make a child's growth visible? | 83 |
| Knowledge of Road To health Card | 83 |
| Value of children and growth | 84 |
| Malnutrition is hidden | 85 |
| Why mothers are reluctant to acknowledge malnutrition | 87 |
| Stigma | 88 |
| Attribution of responsibility for malnutrition | 90 |
| Does growth monitoring facilitate nutrition intervention? | 92 |
| Perceptions of the nutrition clinics | 92 |
| Perceptions of weighing | 96 |
| Intervention for malnutrition: the referral chain | 97 |
| Does growth monitoring facilitate mothers' participation in their children's care? | 98 |
| Perceptions of the Road To Health Card | 99 |
| The way mothers are perceived | 104 |
| The way nurses and VHWs are perceived | 106 |
| Images of education | 109 |
| Observation results | 112 |
| Well-baby clinic | 112 |
| Road To Health Cards | 114 |
| Nutrition clinics | 115 |
| General points | 116 |
| Report back of results | 116 |

| | PAGE |
|---|-------------|
| CHAPTER 4: DISCUSSION | 123 |
| Does growth monitoring make a child's growth visible? | 123 |
| Coverage | 124 |
| Quality of weight measurement | 125 |
| Health worker knowledge | 126 |
| Mothers' knowledge of the growth chart | 128 |
| Mothers' constructions of growth | 129 |
| Mothers' identification of a child's growth: Denial? | 134 |
| Stigma associated with child malnutrition | 137 |
| Attribution of responsibility for malnutrition | 139 |
| Social context of stigma | 144 |
| Value of children and growth | 144 |
| Poverty | 145 |
| Images of childhood and motherhood | 148 |
| Does growth monitoring facilitate nutrition intervention? | 152 |
| Perceptions of the food supplementation programme | 153 |
| Stigma | 153 |
| Blame | 154 |
| Control | 154 |
| Poverty | 156 |
| Poor quality service | 158 |
| Alternative methods of food distribution | 160 |
| Nutrition education | 164 |
| Does monitoring facilitate? | 165 |
| Referral | 165 |
| Monitoring as the intervention | 167 |
| Principle of targeting | 169 |
| Does growth monitoring facilitate mothers' participation in their children's care? | 171 |
| Empowerment through education | 173 |
| Self-reliance | 176 |
| Position of health workers | 181 |
| Participation potential | 184 |
| CHAPTER 5: CONCLUSION | 190 |
| REFERENCES | 199 |
| APPENDICES | 210 |

LIST OF FIGURES

| | PAGE |
|--|------|
| Figure 1: Overview of methods. | 46 |
| Figure 2: Why have you taken this child to the clinic to be weighed? | 71 |
| Figure 3: How do you know if this child is growing well or not? | 73 |
| Figure 4: What makes a child stop growing? | 78 |
| Figure 5: A summary of the results as reported back to the health service. | 122 |

LIST OF TABLES

| | |
|--|----|
| Table I: Demographic profile of the sample. | 68 |
| Table II: Extent of monitoring. | 69 |
| Table III: Characteristics associated with knowledge of the card. | 76 |
| Table IV: Mothers' or care-givers' identification of poor growth in their own child. | 76 |
| Table V: Relationship between talking and looking at the card and knowledge of the card. | 82 |

CHAPTER 1: INTRODUCTION

Psychology as a discipline and as a profession has always been closely identified with other disciplines in the broad field of health and health care. It has assumed greater prominence with increasing recognition of the limitations of the biomedical model to conceptualise and alleviate the major health problems facing society today. It is argued that incorporation of psychology into health promotion and prevention and treatment of illness can greatly enhance health care (Holtzman, Evans, Kennedy, & Iscoe, 1987).

Psychology has been applied in a wide range of health contexts in addition to its traditional domain of mental health. This includes providing insight into psychological and social factors affecting physical disorders and use of health services and how to change behaviour in health-enhancing directions. However, the contribution of psychology to the improvement of health and health care has demonstrated an ethnocentric bias. There is a dearth of psychological literature on health problems associated with poverty and health service provision in under-developed areas. A recent review concluded that there is little within psychology that is immediately and directly applicable to the promotion of health in under-developed countries (Dasen et al. cited in Holtzman et al., 1987).

This study is in response to this need. It is designed as an exploratory study to investigate the way in which growth monitoring, an approach widely promoted within primary health care (PHC) to prevent child malnutrition, is operationalised in a rural African village.

Malnutrition, although conventionally the domain of medicine, has an important place in psychological research. Psychology has provided important contributions to research on its proximate determinants, including psychosocial deprivation, and its consequences, particularly adverse cognitive development (Lozoff, 1989). However, malnutrition is at root a political problem associated with poverty and the inequitable distribution of resources. Griesel and Richter (1987) in their review argue that malnutrition is social in origin and as such "solutions to its toll lie to a large extent in the social and psychological domains" (p. 72). Therefore it is important that psychological research be directed to examine interventions for malnutrition.

The PHC approach has been, in principle at least, almost universally accepted as the guiding principle for health care in under-developed countries and therefore central in intervention strategies for malnutrition. Although PHC explicitly emphasises social determinants of health in its approach to intervention (Heggenhougen & Shore, 1986), very little psychological research has investigated intervention for malnutrition in the context of PHC.

The study does not, therefore, have a pre-existing psychological perspective which it can use to address the phenomenon of growth monitoring. However, growth monitoring has been discussed by a wide range of other disciplines such as epidemiology, community health and health policy. Evaluation of growth monitoring has also been informed by social science perspectives, mainly from anthropology and sociology. This study therefore faces the problems inherent in inter-disciplinary research.

Different disciplines have different underlying assumptions. One discipline's technical terms are "jargon" to another. One discipline's assumptions are another's research questions. There is a tendency for each discipline to differentiate and refine certain aspects of a problem while lumping phenomena broadly from another field of study (Stein & Jessop, 1988). Inter-disciplinary research faces the risk that the end result is acceptable to no-one, particularly while the practice of research continues within discipline-specific institutions and structures. This study has to face this challenge, recognising that social reality does not conform to traditional disciplinary and professional boundaries. The study therefore explores the potential of psychology to provide insight into the process of growth monitoring and how to strengthen this intervention.

Growth monitoring as an intervention to prevent child malnutrition in under-developed areas is widely promoted by a variety of international development agencies, particularly the United Nations Children's Fund (UNICEF). It is a complex intervention located within the PHC approach and straddling selective primary health care (SPHC) and comprehensive primary health care (CPHC) ideology. The context and history of growth monitoring is outlined.

In September 1978, the World Health Organisation (WHO) and UNICEF convened a conference at Alma-Ata, USSR, at which the central concept of "Health For All by the year 2000" was proclaimed. The means of achieving this goal was through primary health care (PHC). PHC was seen as a strategy to ensure an equitable distribution of appropriate and accessible health care in order to achieve an acceptable level of health in a country. However, health services were only part of this process which was integrally associated with

overall socio-economic development in which people took control over their own lives. Key concepts in PHC were a multi-sectoral approach to health problems, community participation, equity and a broad social definition of health (Warren, 1988).

A year later, Knowles, president of the Rockefeller Foundation, held a meeting at Bellagio around viable health policies. Comprehensive primary health care (CPHC), as the values and approach of the initial PHC strategy became known, was criticised as being too idealistic. In the interim, it was more realistic to target scarce resources to control specific diseases which accounted for the highest mortality and morbidity. Selective primary health care (SPHC) as this approach was called, aimed to provide low cost and cost-effective technologies for prevention and treatment of the most important health problems in under-developed areas. This was argued to be the best means of improving the health of the greatest number of people (Warren, 1988).

UNICEF's declaration of "A Children's Revolution" in 1982/83 fitted within the SPHC approach. Four vital components of improving the nutrition and health of the world's children: Growth monitoring, Oral rehydration solution, Breast-feeding promotion and universal childhood Immunisation were summarised in the acronym "GOBI." Later, the F's were added: Family spacing, Female education and Food supplementation. GOBI-FFF became the spearhead of UNICEF's "child survival revolution" (Warren, 1988). Growth monitoring has been strongly promoted by UNICEF since that time (Grant, 1987).

Growth monitoring essentially involves weighing children regularly (usually monthly) from birth. These weights are plotted on a growth chart or "Road to Health Card" which is retained by the

child's mother or care-giver. The growth chart is to be used by mothers and health workers to review the child's progress at regular intervals. When a child shows signs of growth faltering, intervention, typically food supplementation and/or nutrition education, is initiated in order to prevent malnutrition.

Growth monitoring is therefore a screening strategy to monitor the growth of children and to detect early signs of growth faltering in order to select beneficiaries for targeted intervention. This is an intervention in the SPHC tradition. However, in addition, it draws on the participatory and empowerment aims of comprehensive primary health care. In this way, it aims to increase the participation of mothers in their children's care.

The measurement and recording of children's weight is a long-standing medical practice. As early as 1910, babies were regularly weighed in Jamaica and the Infant Welfare Movement in the United Kingdom in the early 1920s weighed babies and provided child care advice. However, it was David Morley, in the 1960s, who popularised the practice. Through his experience in Nigeria, he introduced growth monitoring as a central component of "under-fives clinics" or "well-baby clinics" and developed a growth chart which provided an accessible visual display of weight measurements. With the inclusion of this practice into the UNICEF/WHO GOBI-FFF strategy, growth monitoring was given added impetus as a basic component of child health programmes in developing countries (Gerein, 1988).

Growth monitoring, despite its high profile, has been increasingly questioned as a viable strategy to improve, and improve cost-effectively, nutritional status of children in under-developed

areas. It is notoriously difficult to design studies to demonstrate the impact of single health interventions. Evaluation of the impact of growth monitoring itself is difficult as it is usually implemented along with other child health interventions. While reports of the positive impact of growth monitoring (particularly on a small scale) do exist, it has not been widely effective in improving nutritional status (Gerein, 1988; Gopalan & Chatterjee, 1985).

This study investigates growth monitoring in one site, a rural village, Thornhill, in the area designated by the South African government as the Ciskei. It appeared that in this village growth monitoring had been unable to improve the nutritional status of children. The aim of the study was to explore why growth monitoring had failed to prevent child malnutrition and promote good growth in Thornhill. A psychological perspective was introduced by focusing on the perceptions of those involved with the process of growth monitoring: mothers who were the target of the intervention, and the health workers (nurses and village health workers) who were responsible for implementing it. The study explored the extent to which their perceptions supported or undermined the underlying rationale and component aims of growth monitoring. It attempted to elicit salient issues for the failure of growth monitoring from the experience of the participants.

In order to introduce the study, it necessary to include background information from two different sources. Firstly, it is necessary to describe how growth monitoring is organised in the study area and to provide background information on the area in order to sketch the context for the study. Secondly, the literature which has evaluated the practice of growth monitoring is reviewed. This

is in order to identify the underlying rationale or component objectives of growth monitoring and the problems it has experienced in practice. This delineates areas for psychological input. The introduction therefore has two main components: a description of the area where the study took place and a review of the literature on growth monitoring.

Chapter 2 discusses the methods used to meet the objectives of the study and chapter 3 presents the results. It is within the discussion (Chapter 4) that psychological theory is introduced to understand the implications of the results. A final chapter synthesises this into conclusions and recommendations.

BACKGROUND TO STUDY AREA: THORNHILL, CISKEI

This study examines growth monitoring in a Ciskei rural village, Thornhill. This village was part of a research project in the area which evaluated child health and health services. From the results and experience of this research project, interest in intervention for child malnutrition and growth monitoring in particular emerged. The following section describes the social history and socio-economic conditions of the area, describes the way the health service, including the growth monitoring programme, is organised, and outlines previous research conducted in the area. This is to provide the context for the study. Firstly, it is necessary to situate this background information about the study area in the South African context of growth monitoring.

South African context

Malnutrition has been identified as a major factor contributing to the high mortality and morbidity among children in under-developed areas (Morley & Woodland, 1979). South Africa is no exception. The precise extent of malnutrition in South Africa remains unclear, given differing criteria and measurements used to define malnutrition, and difficulties in evaluating community versus hospital-based estimates (Griesel & Richter, 1987). The Carnegie Working Group synthesising the food and nutrition conference papers from the Second Carnegie Inquiry into Poverty and Development in Southern Africa conclude that disparities in the extent of malnutrition within the country clearly indicate that the black population is most at risk for malnutrition with the worst conditions existing in the Bantustan⁽¹⁾ areas, particularly the resettlement camps (Fincham, 1985). This distribution should include the growing impoverished squatter settlements outside the major metropolitan areas given rapid urbanisation in the last few years (Hugo-Hamman, Kibel, Michie, & Yach, 1987).

The disparities clearly implicate apartheid and economic exploitation in South Africa as central factors in the aetiology of malnutrition (Wisner, 1988). Bantustan policies, migrant labour and influx control, which disrupted and impoverished both urban and rural households, have been identified as major determinants of malnutrition. Associated with these social factors are lack of access to health care, including inappropriate services and staff

(1) The term "Bantustan" is preferred to the official terminology of "self-governing" or "independent state" in order to acknowledge the apartheid policy antecedents in the creation of these areas and in order to emphasise their political and economic dependence on and integration into "official" South Africa.

and facility shortages, high rates of unemployment and low maternal education (Fincham, 1985). These social conditions have ramifications for the individual at household level. This will not be further discussed here but further information can be found in Griesel and Richter (1987).

Growth monitoring is an important component of the health service's intervention for malnutrition in South Africa. A "Road To Health Card" or "pre-school card" was introduced in South Africa in the early 1970s. Since that time, a number of different cards have become available with an estimated 40 different designs in use in 1987 (Crisp & Donald, 1987). Virtually all the cards contain a growth chart, immunisation record, peri-natal information, personal details and space for medical notes (Donald & Kibel, 1984). The card is widely promoted and issued to mothers upon the birth of a child and its presentation encouraged at all subsequent visits to the health service (Donald & Hesselning, 1984). Well-baby clinics are provided by local authorities in most areas and serve as preventive child health centres providing immunisations and growth monitoring. Follow-up of children identified as at risk for malnutrition differs between areas.

Growth monitoring has to be seen within the history of PHC in South Africa. The establishment of the Polela Health Centre and other community health centres around the country in the late 1930s, marked the beginnings of PHC in South Africa. The Gluckman Commission in 1942 recommended a PHC approach. Although this document was initially received with enthusiasm, it was never implemented. Support for community health centres was gradually withdrawn and in the 1950s the emphasis returned to a more curative approach to health services (Mathews, 1989).

There was a resurgence of interest in PHC in the 1970s and 1980s. A number of non-governmental PHC projects, for example, the Valley Trust Project and Health Care Trust projects in the Transkei and Ciskei, were initiated and aimed to address some of the gross inadequacies in state run services. The state at this time also showed increasing interest in PHC. The 1980 Health Service Facilities Plan demonstrated support for PHC approaches. However, despite the current interest and stated commitment to PHC, resources have not shifted away from their predominance in curative hospital medical care (Mathews, 1989) and PHC is yet to be implemented in a systematic way.

Health services in South Africa remain divided on racial grounds (despite some superficial reforms), divided between South African authorities and those of "self-governing" and "independent states," divided between different departments, provincial administration, local authorities and central state, divided in terms of preventive, rehabilitative and curative services and divided between the private sector, state services and non-governmental projects. Policies and approaches differ widely between different authorities and areas. Integration of these services on PHC lines remains the challenge for the future. This is the context in which growth monitoring operates in South Africa.

The next section provides the specific context for the study. It describes the social history, health status and socio-economic characteristics of the Thornhill community. It describes the way the health services and the growth monitoring programme are organised and outlines the previous research conducted in the area.

Ciskei

The Ciskei became the fourth "independent state" on 4 December 1981 but had been a "self-governing state" since 1975 (Southern African Labour and Development Research Unit [SALDRU], 1983). It had a bitter history of harsh political repression under Lennox Sebe. The state was characterised by corruption, nepotism and inefficiency. Local chiefs and headmen were co-opted into tribal authorities although some had dubious claims to traditional authority. They became rural elites and served to entrench Bantustan power structures. Moreover, various labour policies such as the absence of a minimum wage, severe restrictions on trade unions and tax exclusion encouraged exploitative labour practices by a number of South African and international companies (Turshen, 1986).

Sebe was overthrown in a military coup by Brigadier Oupa Gqozo in March 1990. Since that time there have been some changes in local government structures and talk of reunification with South Africa. However, conditions in the Ciskei appear to have remained repressive and unstable. An unsuccessful coup attempt occurred towards the beginning of 1991. Gqozo blamed this on the African National Congress.

Social history and socio-economic conditions in Thornhill

Thornhill, the area in which this study was based, is a settlement of about 12 000 people situated in the northern province, Hewu, of the Ciskei. The nearest towns are Queenstown and Sada/Wittlesea which are about 50 kilometres away. (Appendix I shows a map of the area.) The village extends along the base of a mountain on a barren and dusty slope. Water is provided through communal outside

taps and sanitation is by means of pit latrines usually one per dwelling. Houses are mainly constructed of mud bricks with corrugated iron roofs. "Upgrading" is presently underway.

Thornhill has no viable economic base. There are negligible employment opportunities within or near the village. Some people own domestic animals but overcrowding and poverty have made the area unsuitable for cattle, the appropriate livestock. The area cannot support agriculture except under irrigation therefore subsistence farming is impossible. In general, it is an impoverished community consisting predominantly of women, children and the elderly. They are dependent on pensions, grants and remittances and wages from family members working in cities in official South Africa.

Thornhill bears witness to the conflictual history of Bantustan politics in South Africa. Most of the adults presently resident in the village originate from the Glen Grey and Hershel areas. They opposed incorporation into the Transkei in 1976 and were allegedly threatened for their disapproval and intimidated to leave by Matanzima. It also appears that the chiefs of these areas, Hinana, Malefane and Bebeza, were promised land by Sebe. Thornhill residents today are those who remain from the approximately 40 000 who moved to the Thornhill farm expecting houses, grazing and infrastructure. When they moved, there were no services and the land could not support the congestion of people. Conditions rapidly deteriorated and a critical shortage of water and food drew publicity to the area. Some infrastructural development was undertaken (Surplus People's Project, 1983). Many people in the village are believed to be vehemently anti-Ciskei and plans to move to squat on South African land have been mooted at various times.

Health services in Thornhill

Health services in the Ciskei are organised through the Ciskei Department of Health. Hewu, the region in which Thornhill is situated, is considered to have a model service, relative to other regions in the Ciskei. The health service consists of three tiers: (1) a community-based component through the village health worker (VHW) programme; (2) a network of clinics which are staffed by nurses and visited regularly by one of the two doctors responsible for the area and; (3) a tertiary care hospital in Sada, a nearby urban centre which takes referral of serious cases. A review of health services in the Ciskei is to be found in SALDRU (1983).

The VHW programme was started in Hewu in 1983. VHWS are lay members of the community who have received basic training in health promotion. They work closely with the clinic but spend most of their time visiting the community in their homes doing health promotion work. VHWS are supposed to be chosen by the community. In Hewu, it appears that VHWS were chosen mainly through the health service and their appointment ratified through the tribal authorities. Many of the VHWS are family members of the tribal authorities. The programme was initially funded independently but later VHWS were paid from a separate fund within the Ciskei health budget. Until January 1990, they received R66 a month for working a five day week, six hours a day. Their status has since been changed to the equivalent of domestic workers in the clinic, and they receive about R200 a month. The Hewu community programme is coordinated by the doctor in the area and supervised by two staff nurses, one of whom resides in Thornhill. There are 15 VHWS working in Thornhill at present, all women.

In November 1987, the way in which the Hewu VHW programme is organised was changed and systematised. VHWs were to visit mothers of young children monthly, from the time the child was born, until the child was about two years old. Their job description was revised and tightened to focus on encouraging the implementation of the components in the GOBI-FFF approach. They received training in GOBI-FFF and community supportive adult education methods. The VHWs in Thornhill were one of the first groups trained and health workers from other villages were trained subsequently. All VHWs in Hewu were trained by June 1990.

In Thornhill, the clinic acts as a "mini-hospital." It is located in an old farmhouse which was initially established as a clinic in 1979 and used as a mini-hospital from 1983. It also acts as a referral centre for seven peripheral clinics in adjacent villages. The mini-hospital is staffed by a matron, five professional nurses, six staff nurses and two assistant nurses, with a regular medical practitioner in attendance. It has in-patient facilities for 16 paediatric patients, 9 adult beds and a maternity unit, in addition to out-patient curative care. It provides various preventive services, including a well-baby clinic (immunisation and growth monitoring), family planning and antenatal care. During 1989, Thornhill mini-hospital had to revert to clinic-only status, due to nurse shortages, but is presently operating as a mini-hospital again.

Local clinic committees, which consist of representatives from the village or tribal authorities and health centre staff, exist to ratify decisions and manage the affairs of the clinics. In general, clinic committees are inactive and administration of the

clinics is constrained in terms of overall Ciskei Health Department bureaucracy.

In the Ciskei there is an overt commitment to PHC. There is also a commitment to comprehensive care. Although all the components of curative, rehabilitative and preventive care are available at one site, the PHC centre or clinic, in practice the implementation is fragmented.

How growth monitoring is organised in Thornhill

Growth monitoring is an important part of preventive services in Hewu. The Road To Health Card has been used in the clinics for over ten years. Each mother is issued with a Road To Health Card for her child by the clinic when the child is born. If the child was not born in the clinic, she receives a card on her first visit. She has to keep the card and present it to the clinic whenever she attends. (A copy of the Road To Health Card is in Appendix II.) It contains demographic information about the child, immunisation history, general clinical notes, the recipe for oral rehydration solution and a growth chart for the child.

Children are weighed at well-baby clinics arranged once a week at the clinic. Immunisations are also given if required at this time. Children are further supposed to be weighed on every consultation i.e. if they attend for illness or any other reason. Mothers are expected to attend the well-baby clinic once a month.

If children are found by the VHWs to be either below the third percentile weight for age, or to have inadequate weight gain, they are referred to the nurses, who then refer them to the doctor. The child is examined for other illness and then referred to one of the

"nutrition clinics." Children considered by the doctor to have "social" reasons for attending the food supplementation programme (e.g. an adult care-giver is unavailable, dire poverty, care-giver alcohol use, signs of neglect or abuse) are also referred. Very little additional detail on these children could be ascertained. Mothers are asked to take their child to the nutrition clinic once a day to receive food supplements and to continue to attend the well-baby clinic for regular monitoring.

There are two sites for the nutrition clinics: the clinic and a distribution point at a school in the village. At the clinic, food is cooked by domestic workers and distributed directly to the care-giver or to the children. This occurs approximately mid-morning from the same building used for the well-baby clinic. At the other site, on the grounds of a primary school in the centre of the village, one of the VHWS cooks and distributes food from outside a locked store room. The food, a protein and energy fortified soup, is donated by Operation Hunger. Although usually available, the soup sometimes runs out, as do other requirements of the clinic, such as vaccines, drugs, supplies etc.

Lactogen supplements, if available, are sometimes dispensed by the nurses to children with growth faltering. The Ciskei policy on the appropriateness of providing milk supplements at the clinic has oscillated over time and it is available quite sporadically. Nurses and VHWS are expected to provide advice about nutrition.

VHWS have received training in the principles of growth monitoring. They visit mothers at home where they are to explain the meaning of the growth chart to mothers and follow up problems. On the record cards which they keep for each child, there is a space to record

whether the child's weight is rising or falling. A recent modification of their record card has included, on their request, a growth chart on to which they transpose the weight information. (A copy of the VHW record card is in Appendix III.) It was suggested at one point that VHWS weigh children when they visit homes. The health workers have expressed interest in doing this. However, logistical problems, insufficient suitable scales, concern for measurement quality and the possibility of compromising other tasks, have shelved this proposal at present. VHWS also motivate mothers about the importance of attending the well-baby clinics and motivate those who they feel should attend the food supplementation programme.

Previous research

Hewu has been the site for an on-going research project. In 1986, an infant mortality study was conducted of the Hewu district. Resettlement villages, of which Thornhill is one, had an infant mortality rate of 68 deaths per 1000 live births. This was a higher rate than the average for the district, combined traditional villages, urban centres and re-resettled villages, which was 41 infant deaths per 1000 live births (Yach, Katzenellenbogen, & Conradie, 1987).

Diarrhoea-related causes were found to constitute 54% of deaths of children below 5 years old. VHWS were then specifically trained in teaching mothers of young children how to prepare oral rehydration solution (sugar-salt solution), a palliative treatment for diarrhoea. A randomised control trial of villages in Hewu (Thornhill was an intervention village in this study), showed that VHWS were successful in transferring information on sugar-salt

solution to the community (Yach, Hoogendoorn, & Von Schirnding, 1987).

An evaluation of the modified VHW programme was undertaken in Thornhill. Three surveys of Thornhill were done, one prior to the new VHW programme, one a year later and the third two years after the programme had been operational, to investigate whether there had been improvements in the implementation of the individual components of GOBI-FFF. These surveys also provided background socioeconomic and health status information about the community.

Most (80%) children were cared for by their mothers and 22% were born at home. Very few mothers (11%) of children under 2 years old were employed. The education level of mothers was low, 9.6% of mothers had received no schooling and 32% had greater than a Standard 5 education. Being born at home and having a mother with less than a Standard 5 education were identified as being risk factors for undernutrition. Breast-feeding has widely practised, immunisation coverage was good, diarrhoea was common and most mothers knew how to make sugar-salt solution correctly. The nutritional status of the children under two years old in Thornhill was poor with 18% of children between 18 and 24 months having a weight below the third percentile weight for age, a cut-off for acceptable nutritional status.

The evaluation of the VHW programme showed that they were visiting the majority of children under two years old in the village on a regular basis (Kuhn & Zwarenstein, 1990a). This had resulted in some improvement in immunisation coverage and breast-feeding practices but had not changed nutritional status (Kuhn et al., 1990).

Further evaluation of the VHW programme was undertaken. This involved workshops using participatory adult education techniques with groups of VHWS in Hewu, including Thornhill, which facilitated VHWS through a process of critically examining their role in the project (Kuhn & Hoogendoorn, 1991). The results from these workshops of relevance to the issues explored in this study will be included in the discussion.

The results of the previous research in Thornhill showed that although child malnutrition was an important health problem (the proportion of under-weight children in the area was high), intervention was unsuccessful. There was no improvement over a two year period in the nutritional status of children in the village. This was despite an apparently well-organised health service which had systematically implemented interventions for child malnutrition and had been able to make an impact in other areas of health promotion. The study showed improvements in other aspects of health since the onset of the systematised VHW programme such as increases in immunisation coverage and breast-feeding practices.

This section has shown Thornhill to be a community where malnutrition is a serious problem. It is also an impoverished community reflecting many of the dynamics and conflicts of rural areas in South Africa. It is into this context that growth monitoring has been introduced. Yet despite systematic implementation by a health service with a demonstrated capacity for successful health interventions, growth monitoring has been unable to improve nutritional status. Why the overall process of growth monitoring in Thornhill had failed to prevent child malnutrition and promote good growth, was the starting point for this study.

This study therefore grew out of the author's involvement in research in the area which began in May 1988. Relationships were already established with many of the health workers in Thornhill. Involvement with the previous research lay the ground work and infrastructure for access to further investigation and possible implementation of results.

REVIEW OF EVALUATION OF GROWTH MONITORING

There is no inherent reason why watching children grow should have any beneficial effect on their nutritional status. Therefore, in order to investigate reasons for the failure of growth monitoring, it is necessary to elucidate the rationale underlying the process. This section reviews the literature which has evaluated growth monitoring. It is less concerned with the impact of growth monitoring directly but focussed on the processes involved in its operationalisation. The section extracts and clarifies the rationale and component aims of growth monitoring and then reviews the extent to which these aims are met in practice.

The study is concerned with the way in which the underlying aims and component processes of growth monitoring are understood and perceived by the key actors in the growth monitoring process, the health workers, nurses and VHWs, and mothers or care-givers of young children. In other words, to assess the correspondence between the views of those who are the target of growth monitoring (mothers of young children) and those who are responsible for implementing it (VHWs and nurses) and the aims of growth monitoring as promoted as a PHC intervention for child malnutrition. The

following literature review therefore serves to identify the areas where psychology can provide input.

Growth monitoring, within its overall purpose of promoting good growth and preventing malnutrition, has a dual emphasis. Firstly, it is a screening strategy directed at improving the quality and efficiency of the health system and secondly, it is an educational strategy which emphasises participation in health care (Gerein, 1988).

As a screening strategy or form of child health surveillance, growth monitoring aims to detect early growth faltering to intervene before a child becomes severely malnourished. In other words, it aims to make growth visible. The process of identification or making visible allows children at risk for malnutrition to be targeted for intervention, usually food supplementation or nutrition education. In other words, it aims to facilitate nutrition intervention.

Growth monitoring, in addition, aims to facilitate participation of mothers or care-givers in their children's care. It aims to empower mothers by presenting child growth in an accessible way and making available information and resources for their participation in malnutrition prevention and amelioration on all levels.

The practice of growth monitoring may vary between these two emphases: ranging from being a therapeutic, health service intervention focused on the individual; to being a community-based, participatory activity to empower and inform those involved in child care and encourage action to address the fundamental causes of poor health. While both these objectives can be

implemented simultaneously, one end of the continuum usually predominates (Gerein, 1988).

The two most important aims of growth monitoring are screening, or the extent to which growth monitoring makes growth visible and facilitates nutrition intervention, and participation or the extent to which growth monitoring facilitates mothers' involvement in their children's care. The aim of the study was to examine the perceptions of mothers and health workers in relation to these aims of growth monitoring.

Screening rationale of growth monitoring

In order to justify screening, various criteria need to be met. Firstly, there needs to be a screening instrument which predicts the condition within a reasonable range of accuracy. Secondly, screening is only justified if the disorder would not have been detected in any other way. Thirdly, intervention must be available for those identified and through early detection and treatment a disorder can be eliminated or its severity decreased (Butler, 1989). Each of these criteria is examined with respect to growth monitoring.

The screening instrument in growth monitoring is the growth chart. The growth chart is based on an anthropometric approach to assessment of nutritional status. It uses the principle of comparing a child's weight to a norm or standard relative to its age. The norms were constructed from data from the United States and debate exists as to whether these are appropriate references or standards against which to measure South African children (Cameron, 1986). Low weight for age is considered an indicator of acute malnutrition. However, the growth chart is primarily constructed

to give longitudinal information. Repeated weight measurements detect growth faltering or the extent to which a child's weight gain falls short of the expected increase for its age. Growth faltering is therefore the stage prior to the onset of clinical malnutrition (Morley & Woodland, 1979).

There is wide consensus about the relationship between anthropometric status and morbidity and mortality (Gorstein & Akre, 1988) although there is some concern that growth faltering is not the most cost-effective predictor of malnutrition. Some studies suggest that weight at six months is as good a predictor of future malnutrition (Henry, Briend, & Cooper, 1989) and low weight for age is the best predictor of mortality (Briend & Bari, 1989). However, overall, the underlying medical rationale for the growth chart as a screening instrument appears to be sound. This is not further discussed in this study.

The second criterion (screening as the only means of detecting the condition) assumes that growth faltering is "invisible" or that mothers do not know or recognise that their child's growth is unsatisfactory (Briend & Bari, 1989). This assumption has been challenged with some arguing that low weight and inadequate weight gain is obvious to every mother and does not require a scale to identify it (Geefhuysen & Soetrisno, 1988).

This may be true of serious forms of malnutrition which manifest in illness such as kwashiorkor and marasmus. However, the more insidious and widespread phenomenon of failure to thrive or inadequate weight gain is unlikely to be identified without reference to weight change. The growth chart therefore provides a

means of identifying children before they have become noticeably and clinically malnourished.

Growth monitoring therefore raises the questions how growth and malnutrition are understood in the community. This study investigated criteria which mothers used to identify whether their child was growing well or not and the extent to which they considered their own child to be growing well or not.

With reference to the third criterion, available intervention, growth monitoring attempts to avert the difficult and costly process of treating malnutrition itself. There is no quick "technical fix" for malnutrition. Intervention requires sustained motivation, ability and resources to implement effective action. Interventions which combine nutrition supplementation, education and emotional support for mother and child appear to be most promising (Lozoff, 1989; Richter-Strydom, Griesel, & Glatthaar, 1985). Food supplementation or nutrition education are usually provided through growth monitoring programmes but are aimed at children at risk for malnutrition rather than those who are already malnourished. This remains an important objective, even though these interventions have been implemented with only marginal success.

Previous research in the area had demonstrated that the health service had been unable to motivate care-givers of children in need of nutrition intervention to attend the food supplementation programme. The study therefore explored perceptions of the food supplementation programme. It explored what interventions mothers considered appropriate for child malnutrition and what they considered the cause of malnutrition to be.

The screening objective can also be perceived more broadly to incorporate the metaphor of making a "young child's growth visible" (East African Medical Journal Editorial, 1987). It aims to make growth a tangible, visible attribute which will reassure and encourage the care-giver whose child is growing well: "[the card shows] the mother that the child is progressing well and that she is 'doing the right thing'" (East African Medical Journal Editorial, 1987, p. 793). The layout and design of the growth chart provides a visual record and graphic display of a child's growth which is argued to be easily understood by mothers (Crisp & Donald, 1987).

The study aimed to find out whether mothers in the community with malnourished children were aware that their children were malnourished and whether growth monitoring had met its objective of making growth visible.

Growth monitoring has also been promoted as a means of monitoring trends in nutritional status in populations. Population-based screening information is needed for health management. A study in Swaziland found that survey-based underweight prevalence estimates corresponded well with age-adjusted estimates from clinic-based surveillance of malnutrition using growth charts (Serdula et al., 1987). Weight for age estimates from local clinics in El Salvador were found to be good indicators of the extent of malnutrition in the population (Trowbridge, Newton, Huong, Straehling, & Valverde, 1980). The growth chart model itself was used for community evaluation. Children's weights from an entire community were plotted onto a facsimile of a growth chart in an attempt to provide accessible routine information to health service staff (Tulchinsky,

Acker, El Malki, Socolar, & Reshef, 1985). This was not further investigated in this study.

Screening in practice

In order for the aim of growth monitoring to be an effective screening tool to be put into practice, good coverage of the community is required both in terms of reaching the majority of the children and their being weighed with sufficient regularity. Their weights must be measured and recorded accurately and the meaning of the weights correctly interpreted. An appropriate intervention is then required for the identified child. There are many points at which this growth monitoring chain can fail and evaluation has highlighted some of them.

In this study, previous research had shown that there was good coverage of the community and most children were weighed often and regularly. This study aimed to confirm these findings which suggested that the foundations for growth monitoring to be a successful screening strategy were in place.

Coverage

Coverage of the population by growth monitoring programmes has varied enormously between different countries and projects. Monthly weighing was concluded not to be feasible in an Indian project given mothers' infrequent visits to the clinic (Gopalan & Chatterjee, 1985; Gopaldas, Christian, Abbi, & Gujral, 1990). This is particularly the case as children become older and more at risk for malnutrition but less likely to be brought to the clinic. (East African Medical Journal Editorial, 1987).

Other projects have found high attendance and even considered the benefit of growth monitoring to be the increased contact between the community and the health service. Growth monitoring is described as a strategy to encourage regular attendance of the clinics so as to bring mothers "under the promotive and preventive influence of the clinic network" (Donald & Kibel, 1984, p. 424).

Infrequent attendance at child health clinics is not necessarily related to lack of knowledge about their function. A study in Nottingham found that mothers who reported negative attitudes of staff and perceived clinics to be useless were less likely to attend (Karmali & Madeley, 1986). The extent to which attitudes of staff and mothers' perceptions of the service affect attendance for growth monitoring needs to be investigated.

In order to address problems of mothers not attending clinics, regular weighing has been made a part of community health workers' home visiting routine in some areas. This is quite rare and in general other strategies to encourage people to attend have been used such as having frequent sessions, locating the centre in an accessible place and community mobilisation and publicity (Gerein, 1988).

Accuracy

Detailed observation of weighing and recording techniques in child health programmes in Zaire showed that staff could measure and record weight accurately (Gerein & Ross, 1991). However, the quality of weight measurement and recording has differed between projects. Some projects have been hampered by technical factors such as poor quality equipment and an inconsistent supply of charts (Gerein, 1988). Considerable effort has been put into the design

of appropriate scales which minimise error. (This area is discussed in Dixon [1986], Morley [1986], and Morley & Woodland [1979].) Problems with the accurate measurement and recording of weight were investigated in this study.

Interpretation

The extent of understanding of the growth chart by health workers has been questioned. Marked weight loss or clear low weight for age is usually recognised, but inadequate weight gain is less frequently understood (Gerein, 1988). It has been noticed that some health workers are more concerned with the degree of the child's malnutrition than with the shape of the growth curve. In a study in India, dots were not joined up and a low rate of gain was not considered very important (Lancet Editorial, 1985).

Careless and deficient weighing practices by clinic staff interact with lack of understanding of the charts. This may lead to incorrect decisions on the basis of the growth chart and irresponsible counselling. This may generate unnecessary anxiety for care-givers. It would also contribute to their feeling that weighing is a waste of time (Davies & Williams, 1983) and therefore make mothers less likely to attend.

Yet growth monitoring is promoted as a simple technology that can be easily understood by those with little formal training in medicine such as lay health workers, and community or village health workers (Cameron, 1984). In other areas it appears that health workers have good understanding of the card. In Ghana, lay health workers, who themselves had only 6-10 years of schooling, could adequately transfer knowledge of the cards to village mothers

(Pielemeier, 1985). This study aimed to determine health worker knowledge of the growth chart and their ability to explain it.

Mothers' or care-givers' understanding of the card has also been found to be widely variable. The growth chart was created to be understood by all including those who are illiterate or with minimal schooling. Low rates of literacy are commonly assumed to be a barrier to the understanding of the cards. A study in India attributed the extremely poor rates of understanding the growth charts to the "genuine inability on the part of the illiterate mother to grasp the concept of growth monitoring" (Gopaldas et al., 1990, p. 325).

In other situations some success has been achieved in teaching illiterate mothers to read the cards. In rural villages in Somali, illiterate mothers were found to be able to read growth charts after an intensive period of growth chart use and education (Aden, Brannstrom, Mohamud, Persson, & Wall, 1989). In a predominantly illiterate population in Afghanistan, 62% could understand the card (Grant & Stone, 1986). However, very poor knowledge of the cards was found in a study in Papua New Guinea (Forsyth, 1982) and attempts to teach mothers about weight charts produced no changes in their understanding of the cards (Forsyth, 1984). Other studies have produced variable results. A study in Lesotho and Ghana showed good understanding of the growth charts (Pielemeier, 1985) whereas a similar study in Harare revealed low understanding (Woelk, Moyo, & Mehlomakhulu, 1986). In a South African study, 54% of mothers attending Soweto clinics could rank three growth charts in their correct order (Wagstaff & de Vries, 1986). In all cases where it could be distinguished, low weight was generally better

understood than growth faltering. This study investigated mothers' understanding of the growth charts.

There is no evidence that understanding of the card is associated with an improvement in nutritional status. On this basis, Grant and Stone (1986) question the value of the amount of staff time required for explanation. Forsyth (1982) found in Papua New Guinea that although there was no direct relationship between mothers' understanding of weight graphs and their children's weight for age, it appeared to be a beneficial factor in situations where the mother had the necessary resources to make changes (Forsyth, 1982).

It appears that most people can be taught to read the charts if they have sufficient contact with appropriate education through the clinics. This does not necessarily imply that it is the best model for education. The card may be understood, but be decontextualised from mothers' own circumstances and therefore carry no salience for action. If the chart is seen merely as a technical tool which is unrelated to the perceptions of the community, it will have limited success (Fagbule, Olaosebikan, & Parakoyi, 1990). Some studies have suggested that mothers were not interested in the weighing of their children because they could not relate weight to their children's health (Lancet Editorial, 1985). It is therefore suggested that if growth monitoring is to provide an instrument accessible to those who are going to use it, the growth chart should be based on "indigenous" or "traditional" concepts of growth and not "Western" or "medical" ones (Cape, 1988). Except some growth charts which contain indications of developmental milestones, no information could be found on a growth monitoring system which employed alternative conceptions of growth. This

study investigated lay conceptions of growth and the origins of malnutrition.

Growth charts are also promoted as a means of improving and coordinating communication between professionals in health services in different sectors and areas, in addition to their central aim as a means of communication between the health service and care-givers (Donald & Kibel, 1984; Lakhani, Avery, Gordon, & Tait, 1984). Home-based records overcome problems of the inaccessibility of centrally kept records and mobile populations. Growth charts contain much information of use clinically such as historical information not available from a single consultation and problems not necessarily accompanied by symptoms. Cameron (1984) argues that purely from a "clinical point of view" the effort in promoting growth monitoring is worthwhile. The extent to which health workers use this information has not been assessed.

Intervention

The interventions provided through growth monitoring programmes have had rather disappointing results. In some cases this may be due to lack of clarity or specificity about what the intervention actually should be. Jelliffe and Jelliffe (1987) argue that feasible and appropriate actions on identifying growth faltering have to be selected, defined and prioritised given the complexity of the problem. Simply stating "refer and revisit" does not give the health worker adequate guidelines. This is exacerbated when health workers have to deal with large numbers of people and are overloaded with other activities (Jelliffe & Jelliffe, 1987).

The benefit of food supplementation was found in a review to be small. This was largely due to failure of food to reach the target

group and if increased dietary intake could be confirmed, showed effects on the rate of a child's growth (Gerein, 1988; Beaton & Ghassemi, 1982). That the main purpose of growth monitoring is to select "beneficiaries" for food supplementation has been criticised. It is argued that although precise, individually targeted food supplementation is a considerable cost saving, in communities with high rates of malnutrition, community orientated nutrition programmes are more appropriate (Gerein, 1988; Gopalan & Chatterjee, 1985).

Nutrition education assumes that although malnutrition is largely a reflection of poverty, there is space for households to make better use of their resources. Health education is generally most effective when people perceive a risk and the possibility of effective action. The growth chart, by displaying the child's growth, uses this principle. It shows the mother that her child is at risk and illustrates the adverse effects of various negative events or circumstances. It also provides prompt feedback and reinforcement on her efforts to help the child. Despite this plausible approach, education has not been demonstrated to have an impact on nutritional status (Gerein, 1988). The way in which health workers perceived education was investigated.

Evaluation of growth monitoring has noted the absence of appropriate treatment of illness and lack of referral services (Gerein, 1988). Poorly organised food supplementation programmes is one example. While this reflects poor delivery of health services in general and is not confined to growth monitoring, it demonstrates the extent to which growth monitoring is constrained within the overall health service infrastructure. Growth monitoring is dependent on the organisation of services and if

placed in a failing service is only likely to be false hope for mothers and health workers (Gerein, 1988). In implementing growth monitoring, attention needs to be given to training, continuing education and supervision of health workers at all levels (Gerein, 1988).

Participation rationale of growth monitoring

Growth monitoring, as a component of the GOBI-FFF package, stands in an ambiguous position with respect to the participatory ideals of PHC.

Although GOBI-FFF is not equivalent to selective primary health care (SPHC), it is argued to have much in common with it. SPHC has been harshly criticised as a vertical programme which seeks quick technical, medical solutions to health problems. This approach is described as "irreconcilable" and "diametrically opposed" to the aims of CPHC which takes an integrated, inter-sectoral approach, is committed to a wider range of development issues over the longer term, and is committed to involving the community in decision making (Social Science and Medicine Editorial, 1988).

The rationale for the promotion of GOBI-FFF is based on a recognition of scarce resources and the availability of low cost, simple, accessible technologies. Implicit is the criticism that CPHC is too costly and taking too long to implement and that some of its fundamental aims are unrealistic. As such, GOBI-FFF has been criticised as imposing an external definition of need on the community which undermines the participatory and community based ideals of CPHC. Community participation is constructed in the GOBI-FFF approach merely as ways to ensure acceptance of the package. Local definition of needs, empowerment and organisation

is ignored. GOBI-FFF becomes increasingly "targeted" at individuals, in particular asserting the notion of "ignorant" mothers (Wisner, 1988).

Alternatively, GOBI-FFF could be seen as complementary to or the "leading edge" of PHC, providing the technical content and building support for developing PHC structures. GOBI-FFF, if integrated into CPHC and sensitively and appropriately implemented, could arguably take this role (Wisner, 1988). In this way it is argued that participation of the community in growth monitoring programmes could be an important part of the struggle for health and development. Growth monitoring, most notably among the GOBI-FFF components, has been described having the potential to be the foundation of PHC, actualising the principles of equity, empowerment and choice in health care and acting as catalyst for social action on the part of the mother, the health worker and the community (Gerein, 1988).

Some growth monitoring projects have attempted to take on a participatory and community development approach with some success. A Tanzanian project was designed as a multi-sectoral approach to nutrition issues with self-reliance and community responsibility as underlying principles. The programme was able to train large numbers of volunteers to weigh, chart and monitor the village nutrition status. However, few villages moved beyond weighing and charting and it remained an isolated component of the overall project. In an Indonesian project, some villages developed income generating schemes for the feeding of needy children. A critical factor in the evolution of projects from clinic based growth monitoring to community based development activities has been found

to be the involvement of women and community groups in the activities (Gerein, 1988).

It may be unrealistic to expect that health workers turn growth monitoring into community development in the face of complex social and political forces (Gerein, 1988). Instead, it may be more appropriate to restrict evaluation of growth monitoring to its position as a focus for integrated child services or the extent to which it meets its screening aims. However, within the health service-based intervention framework, growth monitoring still aims to facilitate individual mothers' participation in their children's care. This could be seen as the proximal or personal part of the process of community participation discussed above. It was at this level that health workers' and mothers' perceptions of participation were explored.

The aim of growth monitoring is to empower care-givers by teaching them about their children's growth, the relationship between food and growth and how they can improve the nutrition of their children (Cape, 1988). By gaining insight from the growth chart they can be prompted to take action (Briend & Bari, 1989).

A further role of the growth chart is to increase care-givers' self-reliance and autonomy. It aims to support their responsibility in looking after their child's health care. With a home-based record card, the mother is made "a partner in the health care of her infant" (Donald & Kibel, 1984, p. 424). Growth monitoring is considered to be the actualisation of the concept of self-care, promoting continuing and comprehensive health care (Woelk et al., 1986). The home-based record card is intended to

spur discussion among mothers about nutrition (Keusch & Scrimshaw, 1986).

The study aimed to describe health workers' and mothers' perceptions of their own and each others' roles in the growth monitoring process. This included describing health workers' approach to education and the notion of self-reliance, the way in which the Road To Health Card was perceived by mothers and health workers and limited description of interaction between health workers and mothers.

Participation and empowerment exist not only as principles but may themselves be important pathways by which growth monitoring can have a beneficial impact on nutritional status over and above the screening and treatment objectives described above. Increased feelings of personal control have been found to be beneficial in a wide range of health related contexts (Peterson & Stunkard, 1989).

Participation in practice

While growth monitoring could potentially carry the script for these interlocking aims of participation and empowerment via education and self-reliance, it is in the actual practice of growth monitoring that they became distorted.

Education

The approach of health workers to education may undermine its empowerment potential. Health workers may have insufficient nutrition knowledge to impart. In an Indonesian study, health workers did not know the specific messages to be given to mothers whose children were not gaining weight (Lancet Editorial, 1985).

They may also lack skills in techniques of adult education to transfer information effectively (Gerein, 1988).

Studies of growth monitoring in India found that the time allocated to mothers at each clinic attendance (2-5 minutes) was too short to allow for health education (Lancet Editorial, 1985). In Papua New Guinea, it was found that 70% of consultations lasted less than two minutes. In only 10% of cases was any nutritional advice given and this advice was general and non-specific such as "feed the child more greens." The child's weight was not told to the mother but noted on a piece of paper, plotted on the charts by a nurse in her office, and returned to the mother without comment (Cape, 1988).

Hurried consultations with at best brief standardised nutrition directives provide little opportunity for health workers to listen to mothers and elicit their ideas on the reasons for poor growth and their ideas for feasible interventions (Gerein & Ross, 1991; Gerein, 1988). This makes successful education almost impossible.

The way in which health workers perceived their role as educators and their reported education messages were investigated in the study.

Self-reliance

Health workers may exclude mothers from full participation and therefore growth monitoring does not necessarily give mothers more power to make them less dependent on doctors and clinics (Nabarro & Chinnock, 1988).

Wagstaff and de Vries (1986) found that nurses in Soweto clinics assigned a passive role to mothers. Their role was to bring their child and the chart to the clinic. The mother was not expected to

initiate independent responses on the basis of her own understanding. Mothers, similarly, perceived their role as the carriers of a card required by others, the clinic, doctors, creche and school. The authors themselves used the metaphor of the card being "a passport to health and health services" and suggested that two cards may be required, one with the detail and complexity for professional health workers and one with the clarity and simplicity for home-based community health education. Grant and Stone (1985) are dismissive of the value of involving people in their own health care and show that, despite good knowledge of the cards, many mothers still see the overall purpose of the card as a passport to the clinic or to expedite their passage around it.

Health workers who hold this perception of the role of the mother may, other than stressing the requirement of having the card for every clinic visit, give very little information to mothers. In a study in Cape Town, between 10 and 50% of mothers from different clinics answered that they had received no explanation on the purpose of the card (Donald & Hesselring, 1987) although most mothers arrived at the service with their card and reported having been told to bring it (Donald & Hesselring, 1984).

With a passive and dependent view of mothers' roles and difficulty in implementing education, mothers are effectively excluded from participation in the growth monitoring process. As such growth monitoring, rather than encouraging self-care, may mystify and obscure the entire process.

This study probed the way in which health workers perceived mothers' roles. It also described what they perceived the purpose of the Road To Health Card to be and the extent to which they

understood it as a means of increasing mothers' autonomy and participation in their child's care.

The attention to detail and protocol involved in the weighing process may result in weighing being perceived as the intervention. Child health programmes became "formal weighing rituals" as measurement and its notation become an end in itself (Geefhuysen & Soetrisno, 1988). So much attention is given to measurement that following up children or talking to mothers is neglected (Nabarro & Chinnock, 1988). Health workers themselves may not appreciate that the weighing itself makes no difference to the child: that the card is simply a tool to facilitate action (Lancet Editorial, 1985). This may lead to a false sense of action when weighing is only the catalyst.

The practice itself of weighing may take on ritual characteristics. Ritual serves to mystify an intervention as Nations and Rebhun's (1988) discussion of the way in which oral rehydration therapy is administered by the health service demonstrates. Through evocative, stylised symbols health workers dramatise their authority and control over social and natural forces. In this way, they entrench their status as superior to the client (Nations & Rebhun, 1988).

The confusion or mystification is reported in some studies which have found that mothers thought that taking the child to the clinic to be weighed was their duty which in some vague way guaranteed the child's continual growth (Jenkins, Orr-Ewing, & Heywood, 1984). Griesel and Richter (1987) refer to mothers' blind reliance on the nurse to protect their child against malnutrition.

Mystification and exclusion from the process does not seem to absolve the mother from responsibility or blame when her child fails to show adequate growth. Wagstaff and de Vries (1986) note that mothers reported that if the dots on their child's growth chart were going down, nurses were upset and singled them out for special instruction. Positive reinforcement for good progress was not forthcoming. Nabarro and Chinnock (1988) argue that growth monitoring, instead of being a supportive process, confers anxiety and guilt on mothers about factors which may be beyond their control.

The extent to which weighing was perceived as an intervention was examined in this study. Aspects of the practice of weighing which would serve to exclude mothers from participation were investigated.

The participatory aims of growth monitoring are elusive and difficult to put into practice. The rhetoric and ideology of PHC concepts are essentially democratic, while the health service and social structures into which it is integrated are often authoritarian and hierarchical (Nichter, 1986). The open sharing of knowledge and equanimous relationships which are the ideals of PHC may be incongruent to the needs of health workers to maintain their power through claim to special knowledge (Nichter, 1986). This poses difficulty for the implementation of growth monitoring.

This review of evaluation of growth monitoring has shown that growth monitoring has complex aims and faces many difficulties of implementation. The combination of screening with participatory objectives gives it tremendous potential, not to be a "success" like oral rehydration therapy or immunisation, but to produce

profound changes in consciousness and behaviour of health workers, mothers and communities (Gerein, 1988). Gerein (1988) in her review concludes that the research base is weak and growth monitoring needs to be further investigated. "Growth monitoring may turn out to be a medical myth, like the cholera vaccine, or it might indeed turn out to be the multi-purpose tool it is claimed to be" (Gerein, 1988, p. 192).

This introductory chapter has introduced growth monitoring, an approach widely promoted in PHC to prevent child malnutrition in under-developed areas. It has described an impoverished rural village, Thornhill, in which growth monitoring had been implemented without success. Through a review of process evaluation of growth monitoring the aims and component processes of growth monitoring were identified. It is the perception of health workers and mothers in Thornhill of these aims (making growth visible, facilitating nutrition intervention and encouraging mothers' participation in their children's care) that are explored in this study. The study aims to uncover problems with growth monitoring from the perspective and experience of the participants themselves. It aims to open up the neglected area of the application of psychology to address poverty-related illness and health in under-developed areas.

In doing this, the study aimed to contribute to practical strategies which could be implemented to improve intervention for child malnutrition. This required an engagement with the topic and the people involved. It demanded a commitment to sharing findings with the health service and discussion of alternatives to solve problems identified. This iterative process allowed concepts and conclusions to be clarified, confirmed or revised in the

interaction. This process could also be the first step towards changing the situation not just describing it.

CHAPTER 2: METHODS

This chapter describes the methods used in the study. A combination of methods (survey questionnaires, individual and group interviews and informal observation) were used. These were staged over a period of time and were flexible to respond to the issues which emerged. Before describing the specific methods and process of data collection, an introductory rationale is given for the overall approach.

As this was an exploratory study, the overall approach was based on the principles of grounded theory (Charmaz, 1990). It started with a broad, general research question: why growth monitoring had failed to improve nutritional status in Thornhill. It aimed through close engagement with the people in the area to discover the salient issues or to understand the way in which they constructed and experienced the problem in their own terms. In other words, the study aimed to develop conceptual categories from the data rather than impose them at the outset. The purpose was to generate detailed descriptive information. Through an iterative process, emerging hypotheses were further explored, refined and checked. Interpretations were fed back and further developed.

However, the context in which the study was undertaken set limitations to this approach. Thornhill is an area relatively isolated and geographically remote. This restricted the gathering of information to short visits to the area. Negotiation of access and planning of logistics could not be conducted prior to visits to the area. There was also limited opportunity to follow up issues in more depth.

In addition, the area is not only geographically distant, but the social context is vastly different. The research is therefore from the position of a conspicuous outsider not only distanced by life experiences but by power in terms of race, education, financial position, access to resources and information and connection to authority. Relationships had to be negotiated and acknowledgement made of the social differences between the researcher and participants in the research process.

The most immediate embodiment of distance was language. Very few people in the area can speak English and the author cannot speak Xhosa. This required that issues of interpretation and translation had to be addressed. How language differences were addressed are described within this chapter.

The overall methodological approach used, while it was flexible and open-ended and aimed to explore the problem from the perspective of the participants, was not unstructured. In order to balance a grounded theory approach with the distance of the area (geographical, social context and language), repeated visits to the area, structured interviews and formal report backs were included.

In addition, a variety of different methods were used. Qualitative and quantitative data from different sources and instrumentation were combined to provide different levels of explanation for why growth monitoring fails. In this way, the study was based on the principle of triangulation. The use of multiple methods to study the same phenomenon is widely advocated. Triangulation is promoted as a powerful means of analysis and the interpretation of data (Glik, Parker, Muligande, & Hategikamana, 1987). The study aimed

to add weight to its conclusions by replicating its findings in different sources of data.

The methods used for this study consisted of three main components: (1) a sample survey of care-givers of young children; (2) individual and group structured interviews with selected VHWS and nurses; and (3) informal observations at various sites. These were staged over a period of time and results were reported back to the health service and community representatives. (Figure 1 provides an overview of the methods.) This chapter describes each of these components and discusses the process of data collection.

SURVEY OF CARE-GIVERS OF CHILDREN UNDER THREE YEARS

A cross-sectional sample survey of care-givers of children under three years old was conducted in Thornhill in November 1989. Nurses and VHWS from Hewu interviewed the usual care-giver of the child, in most cases the mother herself, using a structured questionnaire with fixed response and open-ended questions. This was to explore care-givers' perceptions of growth monitoring.

Questionnaire

The questionnaire included the following topics:

- (1) Ability to identify whether the child was growing well or not;
Do you think that this child is growing well at the moment?
 1. Yes, growing well
 2. Sort of, neither well nor badly
 3. No, not growing well
 4. Don't know

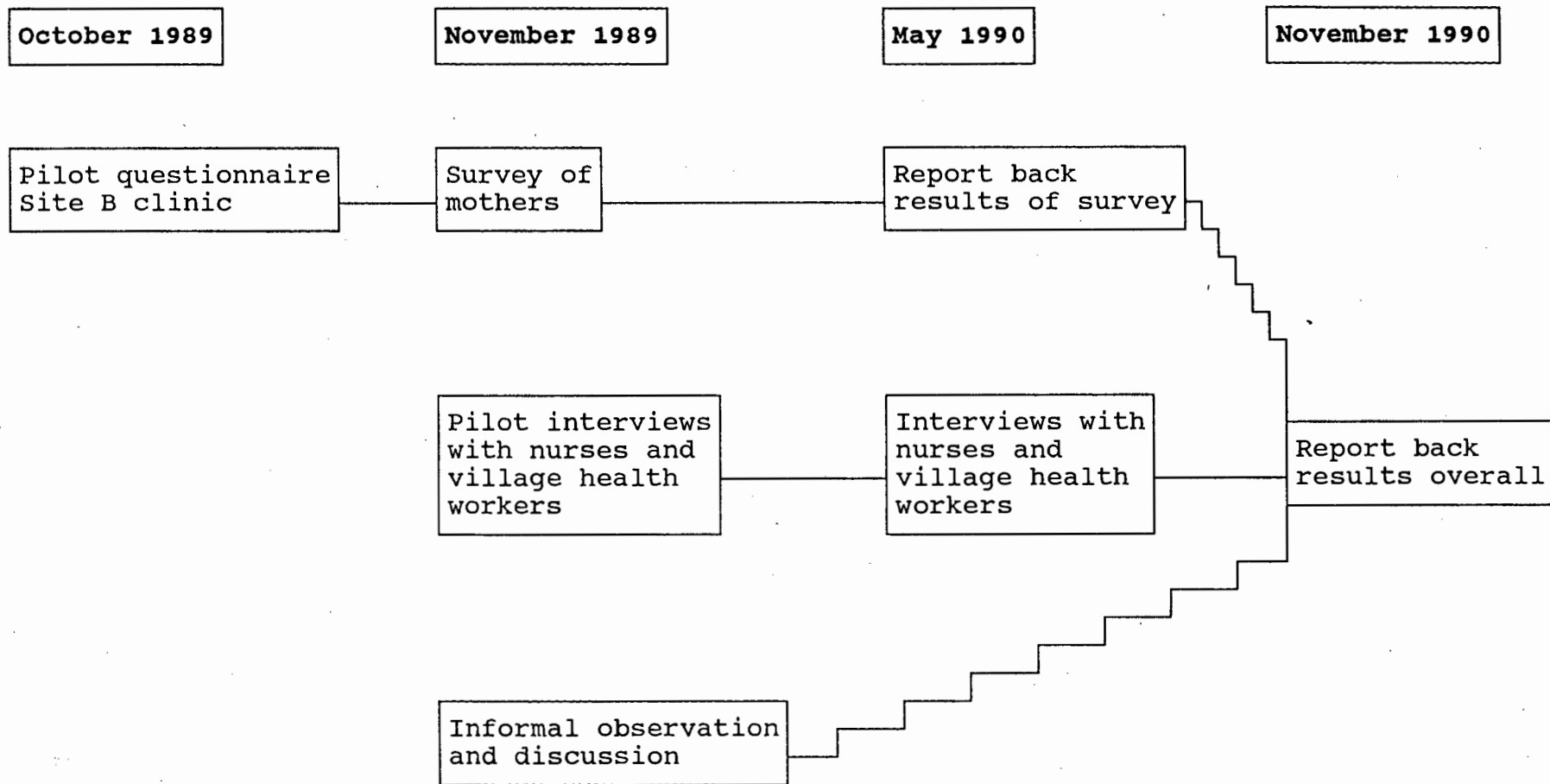


Figure 1: Overview of methods.

(2) Lay constructions of growth including perceptions of indicators of good growth and origins of malnutrition;

How do you know for yourself whether this child is growing well or not?

What do you think makes a child stop growing?

(3) Strategies to deal with a child who is not growing well;

If this child is not growing well, what can you, yourself, or anyone else do about it?

(4) Perceptions of the use of the Road To Health Card.

Why do you think that children have Road To Health Cards (pink clinic cards)? (Prompt: Is the card of any use to the mother? Is the card of any use to the clinic? Ask for all reasons.)

(5) Perceptions of the purpose of weighing;

Have you ever taken this child to the clinic only to be weighed, even if he or she is not sick?

1. Yes
2. No
3. Don't know

Why have you or have you not done so?

(6) Knowledge of the growth chart;

The respondent was presented with two Road To Health Cards which had the growth of an 18 month old child depicted on it. Both cards showed unsatisfactory growth, the first, card A, weight constant over the previous few months but above the third percentile and the second, card B, weight constant but below the third percentile.

(See Appendix II.)

Show card A: This is a picture of a child's growth chart. Is this child growing well or not in the last few months?

1. Yes, growing well
2. Sort of, neither well nor badly.
3. No, not growing well
4. Don't know

Why do you think so?

(7) An indicator of interest in the growth chart;

Have you ever looked at the pink card or Road To Health Card at home?

1. Yes
2. No
3. Don't know
4. No card

Have you ever discussed the pink card or Road To Health Card with anyone?

1. Yes
 2. No
 3. Don't know
 4. No card
- If yes, with whom?

The questions were piloted by a Xhosa-speaking interviewer prior to the survey in Thornhill. Ten mothers attending the well-baby clinic at the Site B Day Hospital, Khayelitsha, were interviewed. On the basis of the answers to the questionnaire and discussions with the interviewer and the sister-in-charge, the questionnaire was revised. In the pilot, photostat copies of the Road To Health Card was used. The copies were not easily recognised by the mothers. In the survey, actual Road To Health Cards were used.

Sampling

This survey had a dual purpose. The study evaluating the impact of the VHW programme in the area (Kuhn et al., 1990) required a third survey for its completion. The logistics and questionnaires for this planned survey were modified to accommodate the needs of this study.

Two types of questionnaires were printed. One included only the questions required for the evaluation study and the other included, in addition, questions for this study. The questionnaires were numbered. Every fifth questionnaire was the longer questionnaire with the above questions included. Interviewers were asked to

systematically administer the questionnaires they were given. Therefore, every fifth interview included the questions for this study.

The village was divided into sections and every house was visited systematically. In each house with a child under three years old, one of the two questionnaires was completed. A total of 504 interviews were conducted, of these, 97 provided data for this study.

Systematic sampling poses the risk of bias (Abramson, 1974). However, as the dwellings in Thornhill are scattered haphazardly, a systematic approach is likely to generate a relatively representative sample. A bias may have been introduced by interviewers not following the procedure correctly, for example, by selecting the most cooperative respondents for the longer questionnaire. It is impossible to assess the extent to which this was done, but they were closely supervised and appeared to be conscientious about protocol. When the demographic profile of the sample was compared to the overall population, the profile was found to be almost identical which suggested there is unlikely to have been any sampling bias.

The questionnaire included the following topics which were required, in addition, for the evaluation study:

(1) Demographic information: respondent's relationship to the child (mother, grandmother or other care-giver); the child's age, sex and place of birth; age and education level of the mother; and the usual care-giver of the child.

(2) Other information of relevance to growth monitoring: whether the child had a Road To Health Card; if it was available, the number of weights plotted were counted, the two most recent weights were transcribed, and their date of measurement and plotted position were recorded; whether the child was attending the food supplementation programme; and whether the care-giver had ever been visited by a VHW.

(3) Other components of GOBI-FFF: diarrhoea occurrence and treatment, including knowledge of sugar-salt solution; breast-feeding practices; contraception use; and if the child had a Road To Health Card, immunisation dates were transcribed.

(4) The child's weight.

See appendix IV for questionnaire.

Administration

Staff for the survey were organised by the doctor of the area. Six staff nurses and four VHWs, some from Thornhill and the others working in other parts of Hewu, most of whom had done survey work before, were trained in the administration of the questionnaire in a one day training session conducted by the author. Follow up group training was done after two days and individuals were further supported when problems were detected throughout the fieldwork. Two other researchers from Cape Town assisted the author to coordinate and supervise the fieldwork.

The interviewers, each accompanied by a VHW from Thornhill, went door to door to find households with a child under three years where they interviewed the child's care-giver in her home. The care-giver then brought the child, the questionnaire and the Road

to Health Card, to a central point to be weighed. These central "weighing stations" were set up within residents' homes in the vicinity of the interviewers and were staffed by the coordinators who were assisted by VHWs. The questionnaires were numbered in order to trace respondents who did not come to the weighing station.

Here the child was weighed by one of the coordinators, without clothing, on a 25 kilogramme Salter hanging scale suspended from a drip stand. Ten percent of weight measurements were repeated to assess inter-observer variation. The coordinators also transcribed the information from the Road To Health Card and checked the questionnaires. Ambiguities or missing information in the questionnaires were clarified with the care-giver present, if possible.

The fieldwork lasted seven long hard days of blazing sun, thunder storms, hail, wind storms, cold and rain. A speech by the matron at the first training session, a sheep braai party at the end, carefully negotiated working hours, singing and seemingly endless lunches of polony sandwiches and Lemon Twist helped to keep "labour relations" relatively contained and spirits up.

The interviewers were clearly associated with the health service. This was unavoidable logistically but is likely to have led to some bias. It would have increased the apparent support for clinic practices and opinions and minimised expressing alternative world views or preferred services. This is further discussed in chapter 5.

It was decided not to translate the survey questionnaire into Xhosa and rather to allow the interviewers to freely translate the

questionnaire which was written in English. Each question was extensively discussed with the fieldworkers during initial training to explain the purpose of each question and what sort of information was expected. In this way the underlying rationale rather than specific words was emphasised. While it is recognised that all interviewers may not have asked exactly the same question or individual interviewers consistently the same question, it was felt that an available translation would not have led to greater standardisation or validity. This point is debated in SALDRU (1982).

Interviewers also freely translated the responses of respondents. They were encouraged to record the words used by the respondents and given the option of recording the answers in Xhosa (which none did). It was emphasised that even if respondents said things they felt were irrelevant to the question that these responses were to be recorded as well. However, undoubtedly much information was lost in summary and is entirely reliant on their interpretations. Few of the interviewers have more than a standard 8 education and are not usually involved in extensive written work, let alone the difficult recording of open-ended responses. Employment of more educated or experienced interviewers from outside the community could not be considered given the constraints of time and resources. Moreover the interviewers had the advantage of being experienced and familiar to the community and therefore possibly more trusted than outsiders. The results must be viewed in this context.

Analysis

The questions with pre-selected answers were coded. A category system was devised, on the basis of the answers, for the open-ended questions prior to coding. This data was punched into the Medical Research Council mainframe computer and univariate frequencies and cross tabulations produced using SAS (SAS Institute, 1985). Chi-squared tests were done using Epistat (Dean, Dean, Burton, & Dicker, 1990). Weight for age was used as an indicator of nutritional status and was calculated using the World Health Organisation standards (National Centers for Health Statistics, 1976). Children with a weight for age below the third percentile were considered to be malnourished (Gorstein & Akre, 1988). This is consistent with the Ciskei Road To Health Card.

INTERVIEWS WITH NURSES AND VHWS

Interviews were conducted with VHWS and nurses working in Thornhill to explore their perceptions of growth monitoring. Pilot interviews were conducted in November 1989, the time of the survey, to uncover the salient issues and assess the feasibility of conducting the interviews. A structured interview schedule was drawn up and administered to VHWS and nurses in May 1990.

Pilot interviews

Pilot interviews were conducted with two VHWS who were chosen because they spoke the most English of the group, although their knowledge was rudimentary. The one was young, had recently become a VHW and lived in a neighbouring village. The other was older and one of initial women trained. A group interview was conducted with four staff nurses working on the survey. One was the supervisor of

the VHW programme and the others were clinic nurses at nearby clinics, but either lived in Thornhill or had worked in the Thornhill clinic. Their English was good.

A broad and exploratory interview schedule was prepared and used as a rough guide. It covered their perceptions of the purpose of and problems with all the stages of growth monitoring, the roles of mothers and health workers in the process and their perceptions of education and malnutrition. Each interview took over an hour. Notes were kept and were transcribed in the evenings. The topic was introduced as their feelings or opinions about pink cards and weighing. Permission to write down their answers was requested. It was explained that no names would be used. The Xhosa word, "nompilo," was used for VHW and Road To Health Cards described as "pink clinic cards." These terms recur in the VHWs and nurses responses which are reported in the results.

The interview schedule included the following topics:

1. Do you think it is useful to weigh children and write down their weights on the clinic card? Why do you think it is useful and if you don't think it is useful, why is it done?

(Prompt: Why weight, why growth, why young children, its use to mothers, its use to health workers, why write it down, why does the mother keep the card?)

2. What problems are there with it?
3. (a) What do you think that (you as a) nurse(s) should be doing? Are you / they able to do this? Why / Why not?
 (b) What do you think that (you as a) VHW(s) should be doing? Are you / they able to do this? Why / why not?
 (c) What do you think that carers or mothers of young children should be doing? Are they able to do this? Why / why not?
4. Do you think mothers or carers of young children need to be taught about their children's growth?

(Prompt: are mothers ignorant about their children's growth, who should teach, why these people, what to teach, is the card helpful, do they understand?)

5. What do you think would be the best thing you or anyone else could do to make sure the children of Thornhill grow well?
6. Are there any questions you would like to ask me?
7. Is there anything else you'd like to talk about around this topic?

Lessons learned from the pilot interviews

During the pilot interviews, it was necessary to keep re-iterating the type of answers required, that is, long explanations and not short answers and answers from the "heart" and from "experience" not "book" or "school" knowledge. Clear instructions as to the sort of information required were included in the following interviews. The need to make explicit usually unacknowledged social etiquette or norms of answering questions has been previously noticed. Brislin (1976) points out that it may be necessary to provide instructions on how to answer questions when interviewing respondents of a different language to help to put them in the same frame of mind as the interviewer.

Some of the health workers interviewed for the pilot speak very little English. However, it was felt that direct interaction, if possible, was a better way to reach clarity than interviewing through an interpreter. The pilot interviews alerted the author to the need for a careful consideration of the language used.

Brislin (1976) provides guidelines on "translatable" English. These are useful suggestions, in addition, for simple language to use with non-English language speakers. He emphasises that short, simple sentences in the active rather than the passive voice should be used. Nouns should be repeated rather than using pronouns and

the possessive form avoided. Explanatory additional sentences and words, which may be redundant in the original language, are advantageous to include in order to elaborate the context of key ideas. Specific rather than general terms should be used and familiar local words used as much as possible.

On this basis, the interview schedule was revised to be concrete, simple and specific. The interviews were structured and alternative words and formulations were considered for re-explanation. Local terminology was used as much as possible.

Interview schedule

The interview schedule used to explore health workers perceptions of growth monitoring covered the following topics: the role of the well-baby clinic, the roles of VHWs, nurses and mothers in the growth monitoring process, reasons for the reluctance of mothers to acknowledge malnutrition and attend the nutrition clinics, perceptions of the use of the Road To Health Card and reported interaction with mothers. The interview was introduced with the following explanation and included the questions below:

Last year we did a survey of mothers and now I want to do a survey of nompilos and nurses. We found in the survey that there are many children in the village who are malnourished. For these children we see that most have a pink card and go to the clinic often to be weighed. But very few go to the nutrition clinic. We have talked about this problem but we must find out more about it. So then we will have what the mothers in the village think, what the nurses think and what the nompilos think and then maybe we will be able to solve the problem. We are interested in the best way to help mothers who have children who are malnourished.

Because you work in the village you have experience which is very important. I want to find out how you see things. I want to write down what you say because it is important and so that I can remember. It is not a test and I will not write down your name. I don't want to find out what you know in your head, but what you feel in your heart.

1. Position: nompilo / staff nurse / assistant nurse / professional nurse.
2. How long have you been working in Thornhill?
3. What is your main work in the clinic / village?
4. At the well-baby clinics what do you think is the most important thing that happens?
5. (a) What do you think is your job as a nurse / nompilo in making sure that children grow well? (Weighing and writing down, teaching about the cards and about food, doing something about a child who is malnourished.)
 - (b) (i) What problems do you have with this?
(ii) Is it a big or small part of your work?
 - (c) What is the nompilo's / nurse's job? What is the difference between what the nurses and the nompilos do?
 - (d) Mothers are very important in making sure that their children grow well. What is the difference between what mothers do and what nompilos and nurses do?
6. (a) Do you think it is a good idea for mothers to keep the pink card?
 - (b) What do you think they should do with it?
7. (a) In the survey we found that mothers who have a malnourished child say that their child is growing well. Why do you think they say this?
 - (b) (If embarrassment has not come up) Some mothers whose children are not growing well get embarrassed and don't want to talk about it. Have you come across this? Why do you think they feel like this?
8. (a) What do you think nurses should do when a child is not growing well?
 - (b) What do you think nompilos should do when a child is not growing well?
 - (c) What do you think mothers should do when a child is not growing well?
 - (d) What problems are there with this?
 - (e) Some mothers think when they are told to go to the clinic for food that they are making themselves into a beggar. Why do you think they feel this way?
9. (a) I'd like us to do a role play. Imagine I'm the mother and I come to you with this card. (Present card with child's weight above the third percentile but not increasing adequately) What would you say to me?
 - (b) How would you explain the card to me?

(c) What would you tell me to do?

(d) Is there any other information you would want from me?

(e) What do you think will happen to this child?

10. Are there any questions you would like to ask me?

Is there anything you would like to add?

Selection of VHWS and nurses

Initially it was planned to interview six VHWS. However, when the staff nurse who coordinates the VHW programme was approached to organise and interpret the interviews with VHWS, she expressed concern that not everyone was included. Time pressure, particularly interpreter time, made it impossible to interview all 16 health workers. It was decided to interview all the VHWS but in groups of three.

All the VHWS were addressed before the groups were organised and thanked as a group for their participation after completion of the interviews. The VHW coordinator acted as the interpreter and translation accorded sufficient time to record all responses in full.

Five groups, each consisting of three VHWS, were interviewed. Only one of the VHWS in the area was not available at the time. Three of the VHWS had recently (December 1989) become VHWS having worked in the clinic as Red Cross workers since 1983. The others had all been working since 1983 except one who had joined in August 1989. Two of the health workers lived in a settlement adjoining Thornhill and one was from a neighbouring village. The remainder were Thornhill residents.

The senior professional nurse in the clinic was approached for permission to interview some of the nurses in the clinic. She conferred with the district matron who was in Thornhill at the time who asked to see the questionnaire. Two professional nurses, two staff nurses and an assistant nurse were requested which represents half of the clinic nursing staff. The interviews were conducted in English. This required that exact words, hesitations and revisions in answers, and requests for clarification often had to be summarised. Detailed notes were kept during the interview and transcribed in the evenings.

The senior professional nurse selected the nurses to be interviewed. It is not clear what criteria were used to select these nurses. The two professional nurses were the most junior members. One was from Fort Beaufort and had spent 3 months in Thornhill, the other was from Ghana and had been in the village for two years. Of the two staff nurses interviewed, one was from Thornhill and had been working in the clinic for 7 years, and the other was from East London and had been in Thornhill for the past six months. The assistant nurse interviewed had been in Thornhill since 1983 but was originally from Queenstown where she was now hoping to get a job. The nurses' length of time in Thornhill does not represent how long they had been working, as nurses are moved periodically to posts in different areas to ensure that all rural areas are served.

Process of interviews

VHWS' insistence that they all be interviewed was unexpected. Researchers often anticipate resistance of subjects to being interviewed. In this case, resistance appeared to be to sampling.

This phenomenon has been noticed previously in occupational health studies where workers have expressed concern about being excluded from benefits of screening (Malcolm Steinberg, personal communication). The decision to interview all VHWs was enthusiastically supported by the VHWs themselves. They stated that they all had something to contribute on the subject. There appeared to be a strong feeling of group cohesion among them. Interviewing in groups may have been supportive and counter-acted some of their feelings of anxiety about being evaluated. Individual differences were, however, minimised in this process. In all the groups, all VHWs contributed, although some participated more than others. An attempt to facilitate more active participation of quieter members of the group was resisted and described as "milking".

The interviews with the VHWs although quite formal were open and trusting. They appeared committed to improving child nutrition and perceived that they were contributing to solving the problem rather than being the ones evaluated for having failed to solve it. However, the threat of censure appeared to persist given the author's relative power and access to the authority of the health service. They appeared to be anxious to give the "right" answers but were uncertain what exactly these were. Writing down appeared to convey a "test" situation and they tended to defer to the perceived authority of the interviewer. For example, in answer to a question, one remarked: "But you know more about that than me, you tell me, I want to know." They were also reluctant to criticise the existing status quo or make negative comments. They expressed the view that to criticise did not help solve problems and that it was a sign of disrespect.

While having their supervisor as the interpreter undoubtedly influenced VHWS' answers, it was unavoidable logistically. It may also have been beneficial as it seems that she is well liked and trusted and looked to for guidance. She may have facilitated the relationship with them and without her cooperation the interviews would not have been possible at all.

The nurses appeared more confident but took the interview less seriously. They appeared to think that the questions had hidden agendas or were demanding obvious information which made them frustrated. They appeared to be wary about the purpose of the interview and expressed doubt about the relevance of their opinions.

Both the VHWS and nurses seemed unfamiliar with open-ended "opinion" questions and with the notion that there were not necessarily right or wrong answers. They requested the "real answer" and asked whether their answers were acceptable. Explanation that there were no "real answers" only different individuals' experience appeared to frustrate them. They appeared anxious and to have limited confidence in their views.

X Interpretation of the interviews relies heavily on the quality of the translation. In an attempt to strengthen this process, the questions were discussed with the staff nurse who interpreted prior to the VHW interviews. She is confident, assertive, experienced in interpretation, and has a good knowledge of English. She appears to see value in the research done to date. Simple English was used throughout so that VHWS with some English could follow the questions.

Research has drawn attention to the complexities of interactions involving interpreters. Interpreters can exert considerable power as they control scarce resources, their skills, and can consciously or unconsciously manipulate the outcome of an interaction either through selective translation or partisan roles (Anderson, 1976). In addition, translation is not only an inter-personal process but is an inter-group experience. Given the context of race relations in South Africa, the relationship between interviewer and interpreter is fraught with potential conflict as power relationships between social groups may be re-enacted (Drennan, Levett & Swartz, 1991). However, interpreters also play an important role in facilitating entry and building trust and are valuable sources of information about social customs and socially appropriate interaction (Anderson, 1976). Given this, interaction between researcher and interpreter has to be sensitively negotiated. Anderson (1976) argues that the problem of maintaining rapport with the interpreter has even greater bearing on the quality of the interview than the time-honoured problem of maintaining respondent rapport. In a discussion of translation in cross-cultural psychology, Triandis and Brislin (1984) argue that translators should play a role more like collaborators in research than "hired help."

The question of using a tape recorder both to record the interviews and to have a possible second check on the interpretations was considered. However, it was felt to be inappropriate. Already the careful recording of people's answers to questions seemed to imply formality or a "test" and introducing a tape recorder, something entirely foreign to the context, was felt likely to introduce

further anxiety about being evaluated. It was also felt that it may have undermined trust and led to suspicion.

Interviews with mothers

It was originally planned to conduct further open-ended interviews with selected mothers. This was not done as an interpreter was required. The only person available to interpret in the village was the VHW coordinator. She was reluctant to assist with further interviews. She has a heavy work load and excused herself in these terms. It did not appear to be due to resistance to the topic or to the research itself.

INFORMAL OBSERVATION AND DISCUSSION

In order to observe the practice of growth monitoring, three sites where components of the growth monitoring process occur were selected for informal observation. These were the well-baby clinic where children are weighed and the two venues for food distribution, one at the clinic and one within the village.

Permission was sought from the matron to attend the well-baby clinic. The process involved in having a child weighed was observed. Specifically, how long it took, interaction between the nurses and the mothers or care-givers, interaction among the mothers, their response to weighing, and the layout of the clinic were noted. No translation was available at the time.

The food distribution point at the Thornhill clinic and the food supplementation outlet at a school in the centre of the village run by one of the VHWS were visited at the time that children and their care-givers were waiting for food to be distributed. No-one was available to translate and although limited discussion with the VHW

took place, it was impossible to talk with the children or their care-givers.

The fieldwork of the survey required spending time in the village, with the VHWS and nurses and visiting residents' homes. Issues relating to growth monitoring were probed informally. A diary was kept of each day. Informal discussions were also held with the doctors responsible for the area.

REPORT BACK OF RESULTS

In May 1990, the results of the evaluation of the VHW programme study were reported back to the VHWS, nurses and doctor in Thornhill. Members of the clinic committee (a local authority structure to which the clinic is accountable) and members of the residents' association (the new local authority structure replacing the tribal authorities since the coup) also attended. A main focus of this meeting was discussion of the deteriorating nutritional status of children in the village and discussion of the poor attendance of the nutrition clinic. The results of this study specifically were reported back in November 1990. These meetings are summarised in the results.

It was noted with concern that the process of interviewing may have raised expectations about research being able to solve the malnutrition problem in Thornhill. It was stressed throughout that research provided information, it did not itself solve the problem. However, it was considered important that the research be an educative process which could explore possible solutions and initiate action to address some of the issues raised. Sharing information collected in research is therefore a minimum requirement and is a basic step if research is to be accountable

and useful. The report back meeting also aimed to confirm interpretations of the results and gather feedback on these interpretations.

This process draws on the principles of participatory research. Participatory research raises the issue of knowledge as power. It emphasises the need to address the question of the relationship of the researcher to the people who are the focus of study in the context of power relations. Participatory research in its purest form offers a strategy for local education, organisation and action as well as inquiry (Brown, 1985). In this study, only a small step along this road was taken but it remains an important component of the method.

ETHICS

Permission to do the research was discussed with the doctor in the area who was interested and supportive. Community permission for the survey fell under the blanket access the clinic has to the village. Any individual in the survey could have refused to participate, and interviewers were explained this right, but only two respondents refused. The appropriate superiors were approached to interview the VHWS and nurses and individual negotiation undertaken with each interview. Although the perceived power of the author would have made it difficult for any health worker to refuse, established trust and perception of the value and importance of the topic facilitated good relationships and smooth access.

This chapter has presented the different methods, emerging from and part of other research in the area, that were used to explore why growth monitoring fails. The following section presents the

results collected through this process. While confidentiality of individuals is maintained (Steere, 1984) the village itself is identified. Locating the individuals would be relatively easy for those familiar to the area. However, those involved have seen and discussed these results prior to further exposition to others which begins to address this concern.

CHAPTER 3: RESULTS

This chapter presents the results in terms of the different methods used. Firstly, the results of the survey are presented, followed by the interviews with health workers (nurses and VHWs) on their perceptions of growth monitoring and finally the observational data. It concludes with an overview of the key findings which were reported back to the health service and community representatives, and their response to the conclusions.

SURVEY RESULTS: MOTHERS' OR CARE-GIVERS' PERCEPTIONS

The survey of mothers or care-givers of children under three years collected information on indicators of the extent of growth monitoring in the community and mothers' perceptions of the growth monitoring process. This section presents these results which will be further discussed in chapter 4. In order to contextualise the results, certain key demographic indicators are displayed in Table I.

Extent of monitoring

The survey provided information on the extent of monitoring and showed that operational requirements, for growth monitoring to be a successful screening strategy, are being met. (See Table II.) Most respondents (88.4%) could produce a Road To Health Card and only 6.3% reported not having one at all. The central mechanism for growth monitoring to occur is well in place. VHWs were reported to visit mothers on a regular basis with 69.1% reporting that they had been visited by a VHW in the last month. This suggests that follow up of clinic attenders with explanation and support is being done. Most children had been weighed in the last

Table I: Demographic profile of the sample

| | % | n* | |
|-----------------------------|------|------|-----------------|
| Questionnaire respondent: | 79.2 | (76) | mother |
| | 11.5 | (11) | grandmother |
| | 9.4 | (9) | other |
| Usual care-giver of child: | 82.5 | (80) | mother |
| | 11.3 | (11) | grandmother |
| | 6.2 | (6) | other |
| Sex of index child: | 52.1 | (50) | male |
| | 47.9 | (46) | female |
| Age of index child: | 22.7 | (22) | ≤6 months |
| | 19.6 | (19) | 7-12 months |
| | 19.6 | (19) | 13-18 months |
| | 10.3 | (10) | 19-24 months |
| | 27.8 | (27) | 25-36 months |
| Mother's age: | 22.9 | (22) | ≤20 years |
| | 45.8 | (44) | 21-30 years |
| | 25 | (24) | 31-40 years |
| | 6.3 | (6) | 41+ years |
| Birth order of index child: | 30.9 | (30) | first born |
| Child's place of birth: | 70.8 | (68) | clinic/hospital |
| | 27 | (26) | home |
| | 2.1 | (2) | unknown |
| Mother's education: | 15.9 | (15) | no schooling |
| | 47.9 | (45) | Gr. 1 - Std 5 |
| | 36.2 | (34) | Std 6 - Std 10 |

* Totals do not add up to 97 (Total N of the sample) due to missing data on some of the questions. Percentages are reported as percentages of available data only.

Table II: Extent of monitoring

| | % | n* | |
|-----------------------------|------|------|---|
| Road To Health Cards (RTHC) | 88.4 | (84) | Could produce a RTHC |
| | 5.3 | (5) | Reported having a RTHC but could not produce it |
| | 6.3 | (6) | Had no RTHC |

Number of weights plotted on the card:

| Child age (months) | median | range |
|--------------------|--------|--------|
| 0 - 6 | 3 | 1 - 25 |
| 7 - 12 | 9.5 | 4 - 26 |
| 13 - 18 | 14.5 | 7 - 21 |
| 19 - 24 | 15 | 6 - 25 |

Visits from village health workers in last month 69.1 (67/97) had been visited

Children who had a weight plotted in last two months 61.5% (59/96)

Children attending daily nutrition 9.4 (9/96) had ever attended

Nutrition status of child 23.7 (22/93) below the 3rd percentile weight for age

* Totals do not add up to 97 (Total N of the sample) due to missing data on some of the questions. Percentages are reported as percentages of available data only.

two months (61.5%) and were weighed regularly and repeatedly. The high coverage of the community by the growth monitoring system was consistent with mothers' reports. Most respondents, 90.5%, stated that they had taken their child to the clinic to be weighed even though it was not sick and only 9.5% said they had not.

Despite good coverage and follow up, the nutrition supplementation programme was poorly attended with only 9.4% stating that they had ever attended the nutrition clinics. The high rates of malnutrition in the village (Table II) indicate that only a small percentage of those who require food supplementation are receiving it.

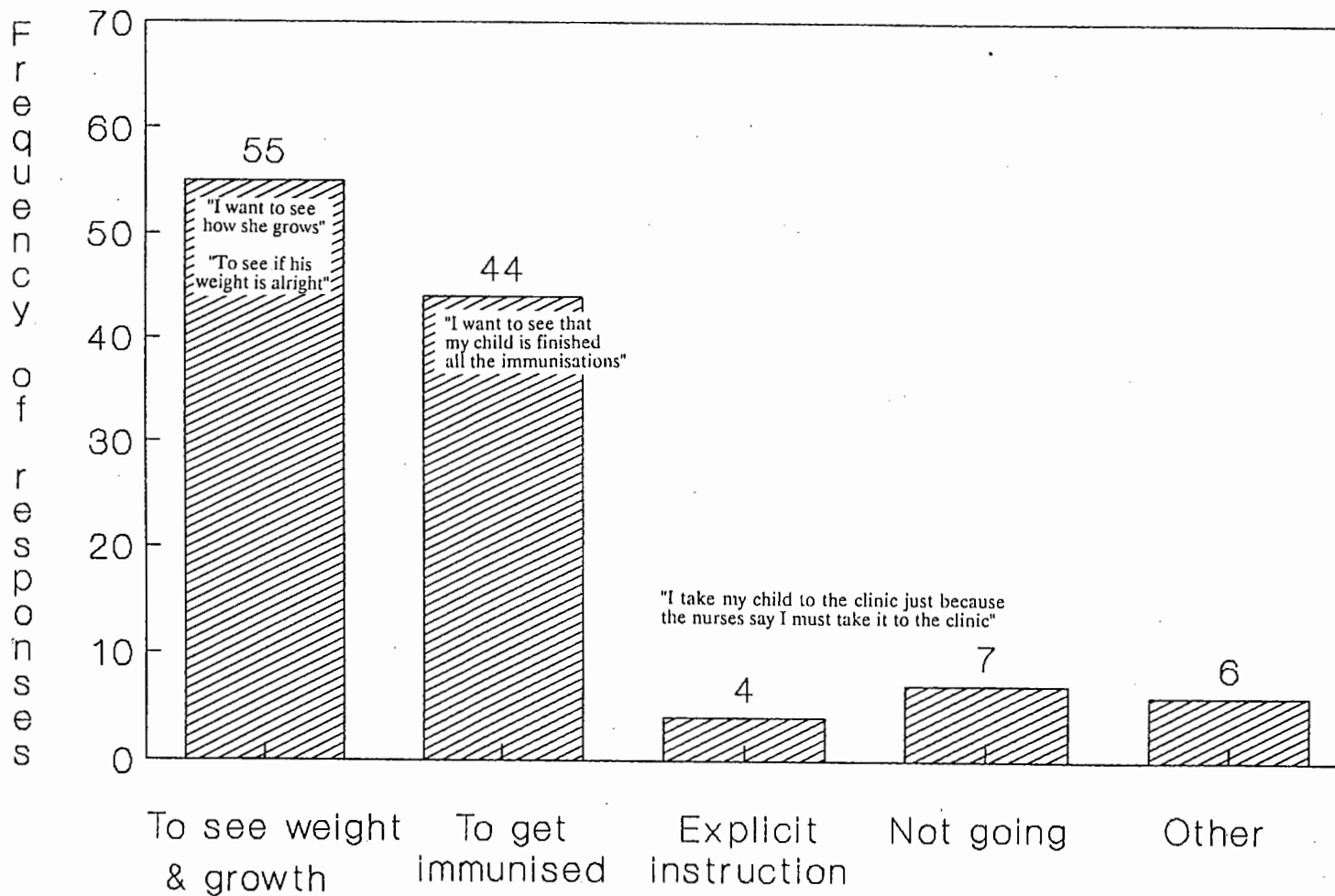
Reasons for clinic attendance for weighing.

The reasons given by care-givers for attending the clinic are shown in Figure 2. Direct interest was expressed in weight by 58.5% of the respondents as weight enabled mothers to see if the child was growing or not. Weight itself was important and provided reassurance. The second most frequently mentioned reason (46.8%) for clinic attendance was to receive immunisations. (Totals do not add up to 100% as more than one answer could be given.) Hence the majority of respondents provided reasons for attending the well-baby clinic which are consistent with its aims.

Only four respondents' motivation for attending the clinic was explicit instruction to attend by the clinic staff. "I take the child to the clinic just because the nurses say I must take it to the clinic."

Reasons for not attending the clinic included distance, child's illness, lack of knowledge, fear of the clinic if the card had been

Figure 2: Why have you taken this child to the clinic only to be weighed?



* A total of 94 respondents answered this question. More than one answer could be given by each respondent. Percentages in the text are reported as percentages of available data only.

lost and "laziness." Although failure to make use of the clinic services for weighing does not appear to be an important problem in this context, these reasons do point to potential barriers to its use.

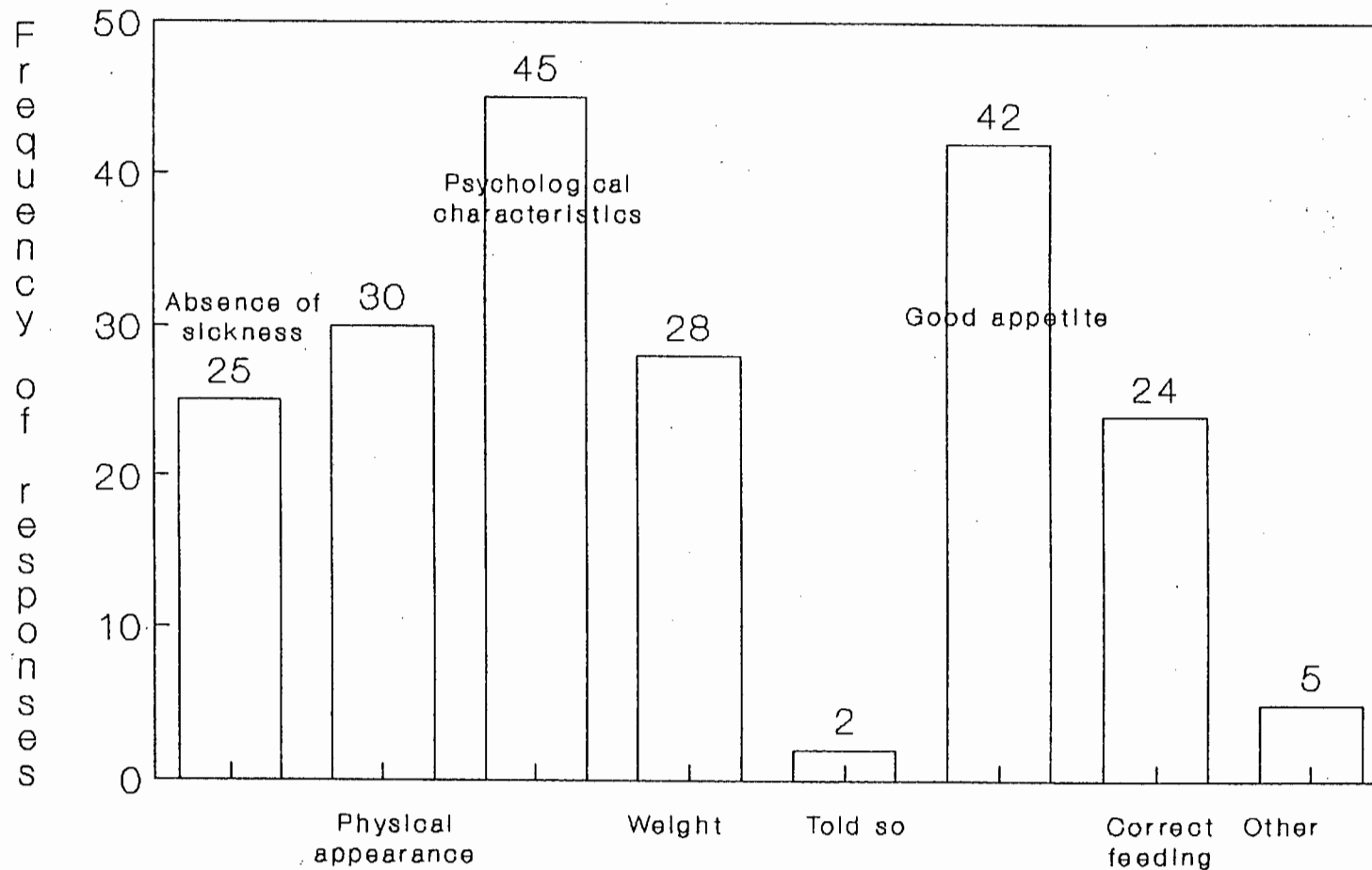
Care-givers' construction of growth

The care-givers of young children mentioned a number of different factors (Figure 3) which informed their perception of whether their child was growing well or not. The range of answers suggests a holistic conception of growth which extends beyond the weight-related criteria of growth monitoring (although these were mentioned) to include the child's physical appearance, emotional state, developmental milestones, and appetite, absence of sickness and good feeding practices of the mother. These are consistent with a clinical assessment of malnutrition and compatible with growth monitoring. Good growth is integrated with concepts of overall well-being and development. These constructions of growth are elaborated below.

The importance of psychological factors in assessing growth were mentioned by many mothers. The child's emotional state such as being "happy," "playful" and "cheerful" and developmental milestones such as talking, walking, sitting at the appropriate age were emphasised. "He can walk properly, talk properly." "She looks happy and is playing with others all the time."

"Feeding well" or specifically "taking the breast well" indicated a well-nourished child. Mothers considered a child with a good appetite, who enjoyed all types of food, "he is eating everything," to be growing well. "It is because he likes to eat food."

Figure 3: How do you know if this child is growing well or not?



* A total of 95 respondents answered this question. More than one answer could be given by each respondent.

The child's physical appearance either not appearing ill ("she is not ill-looking") or healthy appearance ("she looks well and healthy") indicated good growth. A well-nourished child looked "fresh," "bright" and "not dull."

Growth was characterised by an absence of sickness in a non-specific way ("she does not give me problems of being sick") or by the absence of coughing, diarrhoea or persistent illness.

Included by many was the weight of the child and the need for weight measurement. "I am satisfied with the way my child is gaining weight." "I saw the weight when I took her to the baby scale."

Assessment of the child's growth also included actions of the care-giver particularly around feeding practices (breast-feeding, being well-fed, given the correct food) with some mention of caring for the child if it was sick.

Only two respondents relied on being told about their child's growth. "I was never told by the clinic that she is underweight." "They said she is growing well at the clinic." One respondent mentioned the practice of putting beads around the child's waist to assess its growth. "It was loose now it is tight again." Another used the child growing out of its clothes as an indicator.

Knowledge of Road To Health Cards

Children's care-givers appeared to have a reasonable level of knowledge of how to read the growth charts. Card A which showed a constant weight pattern but above the third percentile was correctly identified as inadequate growth by 62.1% respondents. Knowledge of card B was slightly better with 71.3% correctly

identifying a pattern of a constant weight below the third percentile as inadequate growth. The difference between card A and card B indicate that cross-sectional interpretation of weight i.e. being below an expected standard, is better understood than the longitudinal interpretation of appropriate individual weight gain.

Characteristics associated with knowledge of the card

The respondents who indicated that they did not understand the card attributed this to lack of education. "I don't know because I am uneducated." "I never attended school." "She can't read. She does not understand. She does not even want to look at it." Slightly more respondents with more than a standard five education could read the card correctly (Table III) but the association did not reach significance. Limited formal education did not preclude knowledge of the card and relatively good knowledge of the card was found in a community whose overall education level is low (refer Table I).

Mothers had a slightly better knowledge of how to read the growth chart than other care-givers, particularly grandmothers, although this only approached significance for card A ($\chi^2=2.9$; $p=0.08$). (See Table III.)

Identification of poor growth in own child

The most startling finding was when mothers were asked to report on their own child's growth. Most respondents (92.9%) stated that their own child was growing well. Out of the 19 children identified as being under-weight, defined as being below the third percentile threshold weight for age using the child's weight as measured in the survey, only one was identified by its care-giver

Table III: Characteristics associated with knowledge of the card

| | Knowledge of Card A | | Knowledge of Card B | |
|-------------------------|---------------------|--------------------------|---------------------|--------------------------|
| | Correct | Incorrect/ Don't know | Correct | Incorrect/ Don't know |
| | n (%)* | | n (%)* | |
| Respondent: | | | | |
| Mother | 50 (66.7%) | 25 | 55 (74.3%) | 19 |
| Grandmother | 3 (30%) | 7 | 4 (40%) | 6 |
| Other | 5 (55.6%) | 4 | 7 (77.8%) | 2 |
| Education level: | | | | |
| <= std 5 | 36 (59%) | 25 | 40 (66.7%) | 20 |
| >= std 6 | 23 (67.6%) | 11 | 27 (79.4%) | 7 |

* Row percentages shown

Table IV: Mothers' or care-givers' identification of poor growth in their own child

| | Care-giver perceives child as | | |
|------------------------|-------------------------------|------------------|------------|
| | Growing well | Not growing well | Don't know |
| < 3rd percentile | 14 | 1 | 0 |
| Child's weight for age | | | |
| >=3rd percentile | 64 | 2 | 3 |
| | 78 | 3 | 3 |

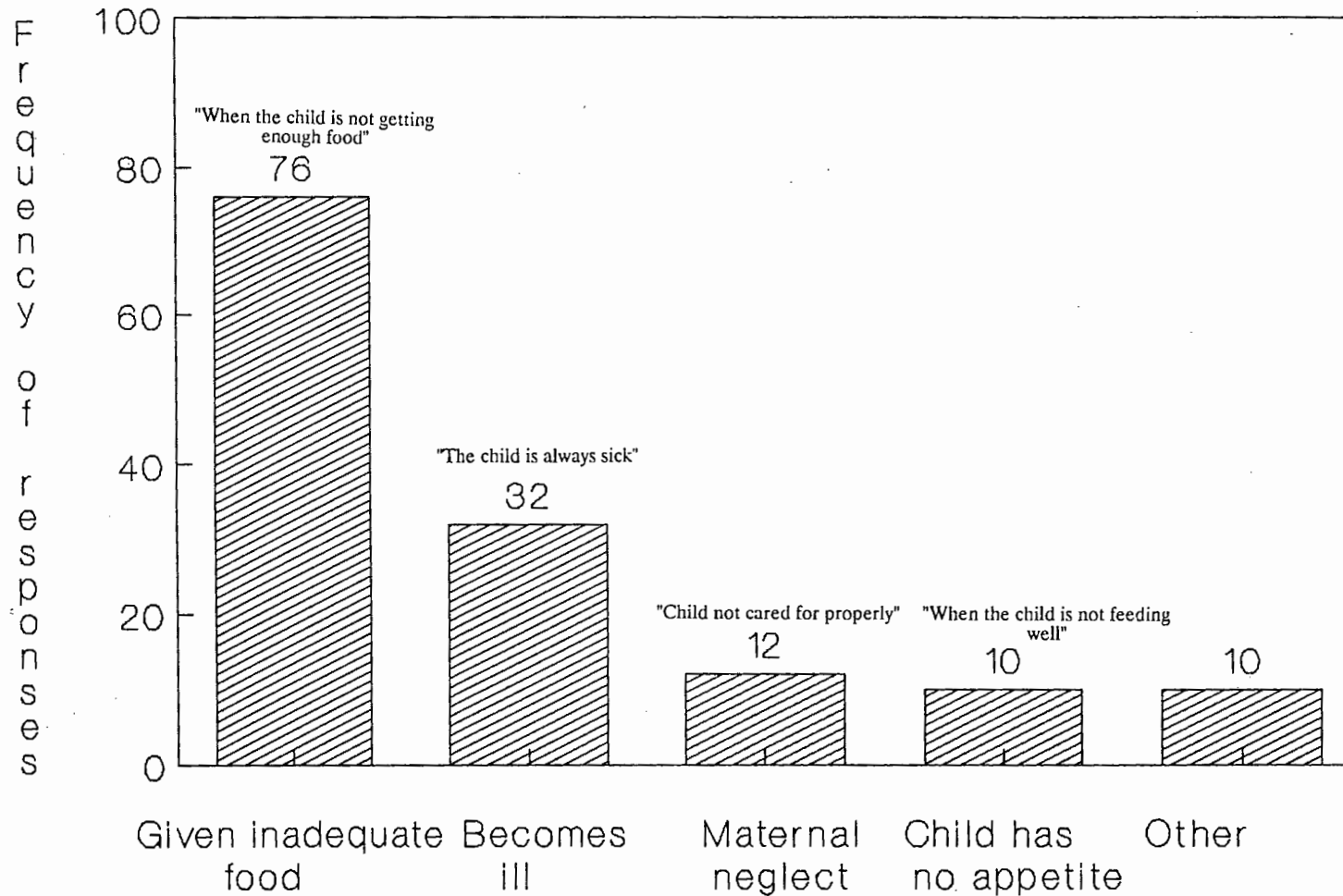
as not growing well. (See Table IV.) Mothers with a malnourished child did not identify their own child's growth as inadequate.

Perceptions of origins of poor growth

When asked why they thought children stopped growing, the practices of the mother were emphasised. Poor growth was attributed to inadequate feeding by 88.4% of respondents. (See Figure 4.) Poor growth occurred if a mother stopped breast-feeding early, did not breast-feed, did not provide a varied diet of "healthy" or "body building food" or did not give the child enough food. "He is underfed." Poor growth was also attributed to the child being sick (37.2%) and lacking appetite (11.6%). "He stops growing when he is not eating or does not like food." (The totals do not add up to 100% as respondents could give more than one answer.)

The mother was more overtly blamed or held responsible for her child's growth through the identification of a variety of practices which contained moral judgements of maternal neglect. Breaking social taboos was mentioned. For example, "sleeping with the father before the age of one year." Value-laden statements attributed poor growth to: "Baby not being cared for properly" or "maybe her mother doesn't care about her child" or "when you don't love your baby." A mother may leave her child with inappropriate care-takers such as "other children" or "very old or helpless people." "If he stays with the grandmother who is old and cannot make food properly." Some mothers themselves were described as inadequate care-takers. "Nobody to cook for the child because her mother she is drinking and wasteful." Mothers who did not follow the health service's advice were considered responsible for

Figure 4: What makes a child stop growing?



* A total of 86 respondents answered this question. More than one answer could be given by each respondent.

malnutrition. "If I don't apply advices from the VHWs." "If the mother is not spacing children correctly."

Within these reasons there is clear acknowledgement of the role of an inadequate diet in malnutrition. However, the focus was on the proximal determinants of malnutrition. Noticeably, only one person mentioned money. "If you do not have enough money to buy food for the child." While lack of food implies the poverty of the area, poverty itself is hidden behind the emphasis on mothers' actions. Mothers were held responsible for their child's nutritional status and a moral taint extended to those with a malnourished child.

Strategies to deal with malnutrition

Most (95.2%) respondents indicated that they would consult someone from the health service, either the clinic nurses, the VHWs or the doctor, if their child was not growing well. These sources were to give advice. "I'll tell unompilo that my child is not growing well so that she must advise me what to do about my child." "I would take my baby to the clinic where the nurses will tell me what to give the baby." Other sources of consultation ("chemists" and "witchdoctors and the coloured women") were each mentioned only once.

Others mentioned that they would provide food to a malnourished child (16.7%) and breast-feed. A few other strategies were mentioned such as giving medicine or other preparations and keeping the child clean. (The totals do not add up to 100% as respondents could give more than one answer.)

The strong preference expressed by mothers in the survey to consult the health service should a child not be growing well may have been

perceived as the most appropriate response to give the interviewers and not necessarily mothers' chosen action in practice. "Consult the health service" is a main message promoted by the VHWS. However, it may also suggest real reliance on and acceptance of the health service by the community.

Perceptions of the purpose of the Road To Health Card

When asked why they thought children had a Road To Health Card, 90.2% of respondents reported its purpose to be conveying information about the child. The information that the card was reported to convey was about the child's weight (65.2%), immunisation status (58.7%) and general illness profile (10.9%). (Totals do not add up to 100% as more than one answer could be given by each respondent.)

The card was able to inform the mother whether the child was growing well and allow her to check that growth was adequate. "It is important because I can see if my child is growing well or not judging through the weight." It was also considered important for the nurses to see the child's growth. A central image was the ability of the card to "show" or to allow the mother to "see" her child's growth.

The card alerted the mother to immunisations required. "I can see the injections that the child has missed" and provided information for nurses "when the nurses are immunising, this they must look at to see whether they are finished or not."

The card summarised the child's medical history as a record of illness and as an indicator of the child's general well-being. "It is in this card where the nurses record everything that concerns my

child." "It is in this card where nurses will know how fit my child is."

Contrary to expectations, mothers' perceptions of the purpose of the Road To health Card and the aims of the card appear to be similar.

The card was predominantly considered to be of use to the clinic: with 60.9% indicating that it was of use to the clinic while 47.8% indicated that the card was of use to the mother. Only 5.4% stated explicitly that the card was of no use to the mother. In 22.8% of cases the information was too vague to distinguish. (Totals do not add up to 100% as some respondents indicated that the card was of use to both.) The question was further analysed and a role attributed to the card to facilitate or smooth entry into the clinic by 55.9% of respondents. The role of the card in facilitating entry into the clinic was often the main reason why it was perceived as useful to the mother.

The way in which the card was described as facilitating entry is elaborated below. The card was required for general clinic attendance particularly if the child was sick. "It enables me to take the child to the clinic." "It is important, because nurses use it when the child is sick." It appeared to be required for prompt treatment ("when the child is sick the nurses attend to me immediately because I've got the child health card") or to be attended to at all ("when I attend the clinic for ailments or child health clinic, nurses don't attend to you when haven't got the pink card").

The card was associated with the health service and therefore considered important. Explicit instruction and motivation from

health workers about the importance of producing the card was mentioned. "We are always asked to bring the pink card." "At the clinic they insist to bring along the card." It also served as a checking device. "They can see if we are not regular at the child health clinic."

Finally, other purposes of the card included "reminding us when the child was born" and allowing school entry. "I think that this card will in the long run act as an admission card to pre-school and as a birth certificate." Entry into the nutrition clinic was mentioned: "it helped me one time when my child was not well and was fed from the nutrition clinic." And one respondent: "To have a card, as the mother, shows how much I care for my child."

This shows that although the card is considered important in terms of its aims, underlying this, it is a policing device of the clinic. It is a card required by others. In doing so it also gained perceived value for the mother as it facilitated her passage through the clinic.

Interest in the Road To Health Card

As an rough indicator of interest and the extent to which growth charts fulfil their role in facilitating autonomous participation, 66% of respondents stated they had looked at the Road To Health Card at home and 56% had discussed it with others. The people with whom the card had been discussed included the VHWs (7), various family members (19), friends (6), neighbours (7) and women attending the child health clinic (7).

If a mother had looked at the card at home she was more likely to be able to read the card correctly: card A ($X^2=3.8$; $p=0.051$), card

Table V: Relationship between talking and looking at the card and knowledge of the card.

| | Look at card | | Discussed card | | | |
|-----------------------------|--------------|------------|----------------|------------|------------|----|
| | Yes | No | Yes | No | Yes | No |
| Knowledge of card A: | | | | | | |
| Correct | 42 (70%)* | 15 (46.9%) | 57 | 33 (71.7%) | 19 (52.8%) | 52 |
| Incorrect or don't know | 18 | 17 | 35 | 13 | 17 | 30 |
| | 60 | 32 | 92 | 46 | 36 | 82 |
| Knowledge of card B: | | | | | | |
| Correct | 47 (79.7%) | 18 (56.3%) | 65 | 36 (80%) | 23 (63.9%) | 59 |
| Incorrect or don't know | 12 | 14 | 26 | 9 | 13 | 22 |
| | 59 | 32 | 91 | 45 | 36 | 81 |

* Column percentages shown

B ($X^2=4.5$; $p=0.034$). The direction was consistent for discussing the card but did not reach significance (Table V).

Summary

In summary, the results of the survey suggest that key systems in the growth monitoring process are in place. Most children have a Road To Health Card and are weighed often and regularly. Mothers express some interest in weighing and appear to understand that a purpose of the growth chart is to display their child's weight. Many have a conception of growth compatible with the model provided by the growth chart. Many can interpret the growth charts correctly. This however is insufficient to allow mothers to identify their own child as malnourished even if the child is

under-weight. Proximal determinants of malnutrition, particularly the actions of the mother, are emphasised and mothers report that they consult the health service if their child is not growing well. The Road To Health Card is perceived as useful predominantly because it facilitates mothers' passage through the clinic although mothers appear to look at it and discuss it independently of the clinic.

INTERVIEW RESULTS: HEALTH WORKERS' PERCEPTIONS

This section presents the results of the interviews with health workers. The analysis of the raw interview data was done under the broad guidelines suggested by Miles and Huberman (1984) and Patton (1980). The main themes and content of health workers' replies were extracted in terms of the aims of the study. In this section, key points and summaries of the answers given are presented in the text. The words of the health workers are included as much as possible to give the tone of their replies and their language has not been changed. Theoretical discussion of the implications of the results is in the next chapter.

Does growth monitoring make a child's growth visible?

Knowledge of the Road To Health Card

All the health workers demonstrated a good understanding of the growth chart and an ability to explain it, when asked to role play how they would explain it to a mother using an example Road To Health Card. The third percentile line, marked in red on the Ciskei Road To Health Card, was described as "the danger line" and

the "line that we are afraid of." It was used as an indicator that a child should not grow toward.

"I will tell them that the child must grow up towards that line (points) not down to it. If the child goes down to it or if the child's weight comes across into this red line then the child is at risk and get any disease."

Within their explanations were dramatic images which impressed the seriousness of low weight. "I don't like the way of this child." "Your card is not alright." "Why are you not panicking about the weight of your child when his weight is there?" They motivated the need for this concern by explaining that a child with poor growth was vulnerable to other infections and would become marasmic and die. They insisted that the child's prognosis without intervention was poor and emphasised the need for medical attention.

"You can see these lines are three. If going up near the medium line, it is fine, if going down to the red line then mother you must worry. This line is danger. Line is red. Child is going down to very bad danger. Then if child is going down to the red line, if child stays there he will become marasmus."

Value of children and growth

VHWS and nurses considered ensuring that children grow well as central to their role as health workers. VHWS described it as "the duty of the *nompilos*" to make sure that children were well-nourished. A healthy child was an indicator which affirmed their efficacy and provided satisfaction "we also feel happy when we see a child is growing well."

A high value was attached to a child's growth. Good growth represented overall health and well-being in terms which extended beyond physical health. Early growth determined the child's future development and success in school and work.

"Because the child must grow up very well while she is still young. If it didn't get the right food can get any type of disease and will not be alright at school and will never be an alright person."

"The young child if he is growing then his brains are alright. If growing quickly then his body is ok. If not growing, he don't eat, he don't know nothing, he just sits like this (stares vacantly into space)."

Children's growth was relevant to the whole community as children were highly valued and described as a resource for the community.

"Yes, it's very important to us because we know a child is growing well so at the end the child will be able to help us. The child can become a magistrate because his foundation was alright."

"It is because the child is so very important in our lives. The child is something for us for tomorrow."

Mothers were reported to share the value attributed to good growth. The positive affirmation of good growth was reflected in the way the well-baby clinics were perceived. "Well-baby clinics are like a competition. Mothers come with their children to show them off. They can then brag if their children are the heaviest." In this context, poor growth was seen in a very serious light.

Malnutrition is hidden

VHWs reported that a child with poor growth caused them a lot of sadness. "It is so important because we don't like it when a child is going down." "If we refer a marasmus baby to the nurses we can see they are not happy with this child." They considered malnutrition a difficult subject to talk about but the gravity of the situation impelled them to discuss it. "It is not easy, but we are forced to talk about it." Health workers' reluctance to discuss malnutrition extended even more strongly to mothers with a malnourished child.

Malnutrition was something not to be freely spoken about. It was described as something which is hidden. "Mothers do not take their child to the clinic when it has diarrhoea as she knows the child's weight will be down." Mothers were reported to be reluctant to discuss it. "It's a pride for them. When mothers come to the baby clinic, then from the scale they are talking about the baby's weight. If weight has dropped they won't talk about it." Malnutrition was a problem which was not freely acknowledged.

Weighing was a means of bringing into the open the hidden problem of malnutrition. VHWS and nurses ascribed the value of weighing to its ability to provide more accurate and precise information than the mother herself could give. Weight measurement could look beyond what the eye could see. A scale avoided human distortion and subjectivity. Weighing gave deeper insight and overcame individual perceptions which were regarded fallible and (potentially deliberately) distorted. Scales overcame mothers' tendency to overlook underweight. An invisibility of malnutrition without the "medical gaze" of the scale was implied.

"It's a good idea to weigh a child to see if it's growing. Maybe at the clinic they will discover some things that the mother can't see. She may think that the child is well but she is not."

"If got no scale, take him like this (shows picking up child). Pick him up, can feel and use eyes."

So why use a scale?

Scale better than eyes, sometimes hands are tired, think he is heavy but he is not.

Can the mother use her eyes?

Yes, she uses her eyes but some using scale because not have good eyes. Eyes are too big. Not thinking."

"Some mothers don't see that their child is growing, they only say that their child is growing well."

The reticence of mothers to acknowledge malnutrition was further explored when health workers were asked why they thought mothers of malnourished children had not said that their child was malnourished when asked in the survey.

VHWS felt that many mothers may not know their child was undernourished. They argued that mothers could be misled by particular presentations of malnutrition, particularly oedema and kwashiorkor, which did not present as the child being visibly thin. "Eyes are not good like a scale. Like kwashiorkor, the child may be big but may still be underweight." They felt that mothers may also consider their child to be well-nourished as it displayed other characteristics such as playing or feeding well which did not support believing that the child was malnourished. "This child is playing and everything. I think he is alright." Other mothers were reported to hold the view that their children were inherently small, this being a family trait. "This weight is so tiny. The grandmother is also small like her."

Nurses too assumed that the reason mothers with a malnourished child did not say so was because they did not actually know the child was malnourished or were "ignorant." They felt that many mothers could not read the card and clinic staff may have neglected to explain the implications of low weight at the well-baby clinic. "Some don't even know how to write down their own name. You cannot take it for granted that they know what the lines mean."

Why mothers are reluctant to acknowledge malnutrition

VHWS distinguished between mothers who did not actually know their child was malnourished and those who knew but did not want to

mention it. It was in probing reasons for this that the stigma associated with having a malnourished child emerged.

Mothers were described as feeling "embarrassed" or "ashamed" if their child was not growing well. They were afraid of being seen or found out by the community as being a mother with a malnourished child. They were afraid of what the community would think, and afraid of being laughed at. Malnutrition was felt to make one different or an outsider, not part of the community. "These people won't take me as someone like them. Her friends are not bringing their child here."

When VHWS were reflecting on some of their own problems one of the health workers remarked: "When you are out of food at home then your worry is, what will people say if I have a kwash at my house. You are a *nompilo*." This relates to VHWS setting themselves up as models to the community and a concern at not being able to live up to these expectations. It implies that malnutrition taints a good example. Malnutrition appears to be a problem which reflects badly on the mother.

Stigma

There were a number of reasons for embarrassment. Poverty appeared to carry its own disgrace. Acknowledging malnutrition implied admitting to being very poor. "They will take me as very poor, without support."

Malnutrition also implied incompetence or a failure to cope. Either the mother had resources which she did not know how to use or was unable to deal with her situation successfully. Mothers were blamed or held responsible for their child's malnutrition.

They had failed to care for their child properly. They were either deliberately neglectful, or else incompetent. They had failed in the important maternal role of feeding their child adequately.

"My husband is sending money. He is sending enough money. Why do I go to the nutrition clinics when I have enough money?"

"Others are going up and down all the time. This mother does not care for her child. She is only going for liquor. She becomes embarrassed. They will laugh at her and say she can't feed her child properly."

"They feel embarrassed. It is as if she is not feeding the child well. Even if she knows she is not coping. Maybe the father is not supporting. But she feels embarrassed."

"You will take one as an irresponsible somebody. You can't feed your child. If I go out and ask for help you can laugh at me."

A mother with a malnourished child had to admit that she was not following the rules for ensuring her child's good growth. "They know that they are supposed to plough their fields and they feel embarrassed because of their neighbours." Acknowledging malnutrition carried the threat of censure or reprimand. "Sometimes the mother is not breast-feeding her child and she doesn't want to tell people. She gets embarrassed. If now find out [the weight] is dropping down, will find out why she is not doing it." There was also a fear specifically of clinic reprimand. "She has got this feeling that the nurses will shout at her."

Health workers were adamant that it was the response of the community that mothers with a malnourished child feared. However, the clinic was acknowledged as a source of threat as well. The reticence to acknowledge malnutrition related not only to fear of the community but a to a reluctance to bring it to the attention of the health service and expose oneself to health service censure.

Health workers' understanding of the origin of malnutrition suggest that they tend to "blame the victim."

Attribution of responsibility for malnutrition

The way in which VHWS constructed the cause of malnutrition emphasised mothers' responsibility. They described malnutrition to be the result of mothers' failure to follow health promotion advice. Mothers either did not know what to do, "the mother does not know how to make the right food for the baby," or actively refused to act on their advice, "mother does not want to breast-feed."

They also associated malnutrition with a mothers' lack of concern about her child. Implications of maternal neglect and even abuse, including "drinking" and not taking "good care of the child" were within their explanations of malnutrition. "If a child is not cared for by its mother it will not grow properly." Moral judgements were implied and VHWS saw their own role as including advice around more general aspects of child care.

"Nompilos are training mothers about how to bring up a child. If child given love then it's good. If child scared (huddles and looks up), then not growing well. Not good to be rough. Mothers who push children, it's not good. We tell them no."

There was acknowledgement of reasons for malnutrition beyond individual mothers' volition, knowledge or control. Poverty was clearly identified.

"Sometimes we get to houses where there is no food. There is nothing to be taken. They are dependent on pension money. Granny says she has not got her pension yet."

"When we reach some homes children are staying with a child and that child cannot care for the child. There is a little bit of food in the house and that little bit of food is for the whole day."

"Others are very poor mothers, no food, no money, no anything."

"Not all houses have the same and not all have money. Last month I found a house with no food. The old lady goes to ask for food from next door. She got mielies to grind as food for the child."

Despite the rational acknowledgement that there may be material reasons for malnutrition, it was still associated with implications of neglect. The emphasis was on how mothers could adjust to impoverished circumstances. One of these was insisting that the mother herself should care for the child and not leave it with others.

"Some are ignorant about caring for their baby. They just leave the child with other children or with a grandmother and they do not do anything for the child. Some children even have to stay with their fathers!"

"Sometimes mothers are schooling and leave children with grannies who can't give the child food. The old lady has no means to feed the child. Or she goes to work far away and does not send back money."

Even financial difficulties could be constructed as the mothers' fault. Family planning rhetoric of having too many children was invoked. Health workers insisted that mothers should pressurise their husbands for a sufficient income.

"Some mothers have so many children that they do not have enough money to feed them. They must use family planning. They must have no children or only have one child."

"The father must support the child. If he not support, you must go to the office and write to him to tell him to support."

In terms of the aim of growth monitoring to make growth visible, health workers identified a reluctance to talk about malnutrition. Good growth and children were highly valued and weighing was needed to overcome individual mothers' reticence to acknowledge malnutrition or inability to notice it. They expanded further on this hesitance to acknowledge malnutrition as having a malnourished

child implied a mother was very poor, that she was unable to cope adequately and had to admit that she had not followed health workers' health promotion guidelines. Health workers themselves seemed to reprimand mothers with malnourished children and hold them responsible. Reticence to acknowledge malnutrition appears to be a mechanism to resist acquiring a devalued status associated with having a malnourished child. Stigma appears to be associated with malnutrition and prevents growth monitoring from achieving its aim of making growth visible.

Does growth monitoring facilitate nutrition intervention?

Referral to the food supplementation programme is the central intervention promoted when a child is identified with poor growth. The survey demonstrated that the nutrition clinics were poorly attended and health workers were aware of this. The following section describes what health workers thought were the reasons why mothers did not attend.

Perceptions of the nutrition clinics

Health workers reported that mothers felt "embarrassed" or "ashamed" to take their child to the clinic for food. They were reluctant to attend as they feared the community's reaction. "They are afraid of their neighbours." Friends or neighbours within the village would laugh. Health workers reported that to attend the nutrition clinic was a disgrace and aroused scorn or derision within the community.

The health workers insisted that mothers were afraid of the community and not of the clinic. They asserted that clinic staff did not reprimand or denigrate a mother who needed food

supplementation. "I'm a health worker so I won't feel that way, but a person who is not a health worker will think and feel that." However, there was evidence of clinic censure as mothers were reported to be afraid of being blamed for not following their advice. "It is because they don't want to be told that they didn't feed their child."

The disgrace associated with attending the nutrition clinic appeared to be, because by attending, the mother clearly identified herself as having a malnourished child. The nutrition clinics marked or made visible a mother with a malnourished child. "You know there is this place where these mothers go if the nompilo has seen that the child is not well fed. And then the neighbours heard that..." It distinguished the mother from the rest of the community, singling her out for disgrace. "Nompilo must advise that mama. She thinks it is her only. We must tell her it is not her only."

As such it laid the mother open to the stigma associated with having a malnourished child. Particularly, it made her vulnerable to being blamed or held responsible for having a malnourished child. She had failed to feed her child adequately. "People will laugh at her, say she can't feed her child."

By association with the stigma of having a malnourished child, the nutrition clinic was perceived as appropriate only for sectors of the community that people did not want to be associated with. "Others think that they are too high to bring their child to the nutrition clinic. It is not good for them." The appropriate recipients of the nutrition clinic were those who were negligent in some way and the very poor. "Nutrition clinics are made for those

who don't want to breast-feed their babies and they leave their babies with the grannies." "The nutrition clinic is for poor children."

Being "very poor" carried its own disgrace. No-one wanted to identify themselves as being unable to afford to feed their child. "The mother will say that she can afford to feed the child." By attending the nutrition clinic, the mother showed herself to be "very poor." "They think that people will say they are very poor." "It is because those with everything have money to feed their child. They don't have to feed at the clinic but those without have to come to the clinic."

The stigma of poverty was reinforced in the structure of a food supplementation programme. It required receiving food without paying for it. It was a hand-out from the clinic. This made "the mother feel she is making herself into a beggar." "If you are given food just out of nothing, you are a beggar. You didn't pay for it. You are very poor." "Because they laugh at them that they are beggars. Why can you not afford to feed your child."

The nature of a nutrition clinic undermined a mother further as it required that she hand over responsibility for caring for the child to the clinic. Her role as a mother was usurped by the clinic. "They say it is not nice to get food from the clinic because the baby does not belong to the nurses it is hers." Instead of support, the clinic assumed control. A mother had to relinquish her autonomy and responsibility to feed her child. "At first she doesn't feel happy. She thinks she is the only one to feed the child."

If a mother had a malnourished child it was already a tacit admission that she had failed. It implied she was unable to give her family what she wanted to or what she should as a mother. "If I felt I couldn't care for my family. If I can't give them what I feel I'd like to do." The feelings of failure were compounded by the clinic assuming responsibility for the child. "They are afraid that their friends will laugh and say, oh mama, you cannot feed your baby. You take your baby to be fed by the other women."

In addition to the disgrace associated with the food supplementation programme, mothers were reported to be reluctant to attend as the nutrition clinics were perceived as a poor quality service in general. Health workers reported that mothers had complained about the quality of the food served. Mothers said that the food made their child sick. "Some think soup is not enough. If they take soup they say they will get diarrhoea." The food served was not special or different to that provided by the mother herself at home. "Others say, I see no need to take my child to the clinic. They give which I give at home. I also buy jabelas."

Distance to the nutrition clinic and the time required for daily attendance were also described as barriers to its use. "Others say that they have their own work to do in the house. It is very far." Mothers were felt not to have the motivation to overcome the inconvenience. "They are too lazy to wake up just to feed their child."

Despite the problems identified with the food supplementation programme, health workers were adamant that nutrition clinics were essential. They felt that there were insufficient numbers of them and that attendance at them should be encouraged. It appeared as

if having the nutrition clinics provided them with some active strategy that could be invoked to addresss what they perceived as a substantial problem. It gave them a sense of efficiency and control, of being able to do something even if ineffective. "It is important to have nutrition at the clinic. If you see a child has a falling weight you can tell them where to go." The need to intervene was particularly pressing as VHWs appeared to define their role in terms of their effect on child health. "If things are not working out, it is the fault of the nompilos."

Perceptions of weighing

It is useful at this stage to point out that the health workers clearly saw food supplementation as the intervention to prevent malnutrition. Weighing itself was not perceived as a solution to malnutrition. Weighing was to identify children who needed to attend the nutrition clinics.

Health workers described the purpose of the well-baby clinics to be giving immunisations and weighing children. This enabled both the mother and the health worker "to see if they are growing well by looking at their weights." They could reassure the mother that "this month is growing alright" and detect problems as mothers were reported to be not necessarily aware of whether their child was growing well or not. "The mother didn't notice that this child is going down but due to weighing she will see and find out what is wrong with the child."

VHWs' description of their own job was consistent with this perception of weighing as an assessment tool. The central images were to "see," to "look," and to "check." Their home visits provided a strategic point at which to assess mothers' situation.

"The job of the nompilo is to visit home to home and to see if this child is alright and has the right weights. These are things the nompilo must check at home."

Similarly, nurses' description of their role included assessment. They outlined their specific task to weigh children, "plot the weights on the pink card" in order to "see by weighing the child if he is going down." Monitoring of a child's growth through regular weighing was clearly acknowledged by health workers to be a means to facilitate nutrition intervention and not the intervention itself. The health workers reported no community rejection of weighing.

Intervention for malnutrition: The referral chain

There appeared, however, to be some weaknesses in the step between weighing and the intervention. Health workers described an elaborate system of referrals required for a child who was not growing well.

Nurses described their role as referring the mother either to the doctor, to the nutrition clinic or to other categories of nurses. They even referred back to themselves by encouraging further well-baby clinic attendance. "I'll tell the mother to keep on coming to the child health clinic." Nurses were the route to the doctor and the nutrition clinic. "As soon as the child is not growing well, he should be referred to us [nurses] so that we can refer the child to the doctor."

VHWs' main task when encountering a malnourished child was referring the mother to the clinic where the nurses or the doctor would take care of it. Their role became motivating and encouraging clinic attendance. "The duty of the nompilo is to ask the mother to take the child to the clinic so the child can see the

nurses and doctors there." A central component of their work became ensuring that mothers complied with this instruction to consult the clinic. "Sometimes the mother is not coming here so the nompilos go and fetch it."

There appeared to be some ambiguity about who took responsibility for the nutrition clinics themselves. Health workers appeared to emphasise compliance with the referral chain rather than attending the nutrition clinics directly.

In sum, although weighing is not perceived as an intervention, there appeared to be some uncertainty around whose responsibility the nutrition clinics were and there was a complex referral process when a child was identified as needing nutrition intervention. In addition, the main intervention promoted, food supplementation, is poorly accepted by the community. The reasons for this appear to be that by attending the nutrition clinic, a mother clearly identified herself as a mother with a malnourished child and made herself vulnerable to being accused of being very poor and neglecting her child. The nutrition clinics also appear to be resented as they take control or assume responsibility for feeding the child which was the mothers' role. Health workers remained convinced that food supplementation was an important intervention to promote.

Does growth monitoring facilitate mothers' participation in their children's care?

The extent to which growth monitoring facilitates mothers' participation in their children's care is examined by describing health workers' perceptions of the use of the Road To Health Card,

their perceptions of mothers, their own roles, and the image of education which they hold.

Perceptions of the Road To Health Card

VHWs and nurses were asked whether they thought it was a good idea for mothers to keep the Road To Health Card and what they thought mothers should do with it. The home-based record card is an important component of facilitating mothers' self-reliance. The way in which it is perceived by health workers gives some indication of the extent to which they facilitate or undermine it fulfilling this role.

The growth chart's use to others

The use of the Road To Health Card was primarily in it being required by others. The card was described as important to the mother because it was required by school authorities and allowed easier access to the clinic. "It is easy for the mother to take the child to the clinic." "If the child is going to attend school she should come with the pink card. If the child is sick she should come with the card."

The card had to be produced for the health service as it contained information they needed about the child. Furthermore, it could be transported and provide other health professionals in other areas with information.

"It also helps the mother when she is going somewhere else. If she goes with the card, the nurses in that place can see what immunisation is due for and how this child is growing."

"When travelling the card is like a passport for the child. The child might be sick or need immunisation. She will need the card."

"It's good if the mother is going away. If she goes to Queenstown to attend the clinic they ask to see the card, even private doctors ask to see the card."

VHWS indicated that the Road To Health Card was necessary for them to "fill in the yellow cards." They appeared to have value almost because they allowed the completion of VHWS' own records. As one of the VHWS explained, if a mother had her Road To Health Card, the VHW could "[write] down for all the questions and then nompilo will have a full form. [A VHW] says, come nompilos we must make statistics.... But they are important statistics." Records per se seemed to be accorded value. However, VHWS also indicated that the information on the card assisted them in their work, "when we visit this mother we can also see the weight of the child" and allowed them to know when it was appropriate to refer the mother to the clinic.

A Road To Health Card was considered similar to an identity document or reference book. "She has the ID of the child in her hand." "She must make it into the reference book for the child." The card contained demographic details about the child. VHWS described it as an indicator of whether the child had been born in the clinic. "If there is no card then we know the child was born at home." It allowed one to "remember the age of the child." The card was described as serving a bureaucratic or identifying function.

"Yes, if the child has no reference will need to get a new one. If mother is dead can see, oh this is, she is staying in Thornhill."

"I've always explained a Road To Health Card like a reference. If you go to the post office, you take your reference so that they can know who you are. You don't forget it. Also with a Road To Health Card you take it with you to the clinic. So that they have got all the information they need. That's what I tell people when they forget it."

The growth chart's use to mothers

Although the primary role of the Road To health Card was its use to others, VHWS in particular affirmed the importance of the card for the mother herself. The card was described as providing information about the child for the mother. It represented the immunisation status and growth pattern of the child for the mother to see. This provided reassurance to confirm that the child was growing adequately and could prompt the mother to take action if it was required. It was described as important in allowing the mother to care for her child. Not having a pink card showed that the mother did not interact with this system.

"Mother can see whether the child is growing well or is going down. Because the pink card is in her hand and she can see and do something. If it is away, there is nothing she can do."

"It is also important if the mother is to care for her child. She can look on the card and see what immunisations are needed."

"If don't have a pink card, you stay at home and don't know nothing."

They suggested that the card created an opportunity for the mother to challenge the clinic. It allowed the mother to be active in consulting the clinic. "So if she didn't get immunisation on that day then the mother can ask the nurses, why did I not get immunisation as it was due." She could ensure appropriate treatment and check up on the clinic. The card also provided some independence from the clinic. This was most particularly the case in making sugar-salt solution for diarrhoea.

"If the child has got this pink card, now the child has diarrhoea, you can look on the card and there is the strength of the unxube [sugar-salt solution]. She can help the child without going to the clinic or to the nonpilos."

Nurses were less convinced of the value of the card for mothers themselves. Some mentioned the importance of a mother looking at the card to know for herself how her child was growing. "They too must be motivated so they will know. They can even look at the dots for the weighing and will see how growing." None of the nurses indicated that the card had any value in increasing maternal autonomy as VHWs did. Some expressed doubt about whether the card was of any use to mothers at all. One of the nurses expressed rather cynically that the only reason mothers should keep the card was because it was easier than the clinic keeping them. "It is too difficult to keep their pink cards with us."

Nurses expressed concern that mothers did not appreciate the card. "They don't know the use of the card because they don't keep them clean or tidy." One of the nurses felt that it would be better if the clinic kept the card as mothers lost them.

"If we were allowed to discuss the matter I think the card should be with us. They should be here so that each time they come and get their cards. Sometimes we have a difficulty in the mother losing the card. They come here and we ask them how many immunisations has the child got and they say they don't know."

Mothers' ability to read the card

VHWs were optimistic about mothers' ability to read the card. The card was felt to be appropriate and understandable to everyone. The card itself, they felt, was structured to accommodate different levels of literacy and knowledge. The card was a concrete record which facilitated understanding. By writing measurements down, VHWs felt it made the implications of weight clearer and easier for the mother to remember and understand.

"Some know that they must look at the dots and they know that if the dots are going up, the child is growing well."

But others forget. But many know. Even old people. Even grandmothers."

"Pink card is helping. If not gone to school, see the dots, if went to school, see the numbers. So it helps both."

"Remember, not forget. Have dates when the child was born. Mothers sometimes say, oh I forgot where the child was born, oh let me look on the pink card. It helps remember where his weight is, where is what."

Nurses were less confident that mothers were able to read the card. Some reported that mothers who were "not educated" had problems understanding the card. "They don't know about the card because they can't read." Although they still felt that the card was "for everybody."

Looking after the card

In all discussion of Road To Health Cards, health workers insisted that the mother must look after the card carefully. Keeping the card in good condition, "clean and smart," and in a safe place "so that it does not get lost" seemed to be the most important role mothers were accorded. The card had to be available and presentable to others.

"This card is so very important to children. For everywhere she goes she needs it. Must keep it clean and in a safe place. We also give them a plastic so that they can keep the card clean. We don't like these cards to be dirty."

In sum, VHWS and to a lesser extent nurses, do attribute value to the Road To Health Card in providing mothers with accessible information about her child to encourage self-reliance. VHWS also perceive the card as a means by which mothers can gain some independence from the clinic. However, the card is primarily perceived as useful to the health service personnel and required

for school entry. Mothers are instructed to look after the card carefully to have it available and presentable for others.

The way mothers are perceived

In describing mothers' roles in ensuring a child's good growth, health workers indicated certain elements of how they perceived mothers. A mother carried the final responsibility for her child's health. Mothers were predominantly seen as "ignorant" and requiring education. Mothers had to obey the rules or follow instructions. The image of mothers contained in health workers' descriptions is at times quite disdainful. Mothers are blamed for their own misfortune and are seen as passive compliers with health service demands.

Mothers were firmly accorded the central and final responsibility for their child's health. Although health workers saw themselves as available to give advice and assistance, it was the mother who had to look after the child and carry out their advice. She was the one who "stays with the child at home day and night" and "is always with the baby." "The mother is more involved because it is her who must actually do it. If mothers are not motivated there is nothing we can do."

Although health workers accorded mothers responsibility, this did not imply that they necessarily thought that mothers were knowledgeable about how to care for their child. They appeared to perceive mothers as "ignorant" about many of the requirements they felt were essential for ensuring a child's health. Both VHWS and nurses stressed that mothers did not know the correct procedures to follow to ensure that their child grew well. "The mother does not know what to do when the child is sick."

Because health workers appeared to perceive mothers as ignorant, they could not acknowledge mothers' own experience or opinions. Mothers were almost not allowed to have knowledge other than that given them by the health service. If a mother insisted that she knew about child care, it was assumed to be wrong and equivalent to rejecting the health service. One of the nurses described how some mothers rejected their intervention on the grounds that they had their own experience. "Some mothers say, I've got other children that are grown up already. I know how to bring up children. I know what to feed them. There is no need for me to come." Health workers did not indicate that they attempted to find out what mothers actually did know or whether it was appropriate.

Mothers' "ignorance" was set up in opposition to health workers' knowledge. Mothers became defined precisely in terms of their need for advice from health workers. As such this seemed to affirm health workers' roles as health educators. It acknowledged the special information they had access to.

"Mother does not know how to cook for her child. Nurses and nonpilos are trained they know what the mother must do. Child must get such and such."

A mothers' role is seen as obeying the rules. Health workers stressed that mothers should follow the directives issued by the clinic. She was to consult the health service, ask their advice and follow it meticulously. Careful conformity was an indication of responsible behaviour. The authority of the nurses was emphasised. If a mother did not comply, it indicated lack of concern or neglect.

"If not growing one month, I go to the clinic and ask the nurses what am I doing. They must say what I must do. And what they say, I must do."

"Those who don't want to go [to the clinic] and don't want to do so they don't like our children. If they like their child they must do what they are told. If nurses give the mother soup and pap and tell her to cook it she must do it."

Health workers lamented that mothers ignored or did not correctly act on their instructions. They described the main problem in their work as mothers not following their advice. While this had an element of judgement about negligence and disobedience, they also expressed it with grave concern, disbelief and sorrow. Throughout disdain was mixed with what seemed to be real sadness and frustration.

"The mothers are careless about their children. They don't take our advice or the VHWS' advice. They don't know how to. If the VHW or nurse explains about breast-feeding and nutrition ngalo ngalo [and so on] they agree to it but they do not do it in the correct or right way. You find that she didn't know. She gives the baby milk but she doesn't know how to prepare it. That's why I say she is careless."

"If mother listened it would be easy but they don't listen or take our advice."

The way VHWS and nurses are perceived

VHWS and nurses both shared the above perception of mothers and both indicated that they (VHWS and nurses) were engaged in very similar activities. They sought the same information and provided the same health promotion guidelines. "On the yellow cards [i.e. VHW records] we are doing the same as the nurses are doing on the pink cards." "Things we teach the mother they also teach." However, in their discussion of their roles, some important differences emerged.

Same message without the medicine

Nurses had access to "medicines and injections" and were the route for referral to the doctor. Nurses also had access to scales

whereas the VHWs had to rely on the information contained in the Road To Health Card.

"The difference between the nurse and the nompilo is that the nurse has a scale. The nurse can weigh. The nompilo can just look with her eyes and look on the pink card to tell."

Nurses as authoritarian

The image of nurses also contained more overt reference to being authoritarian. Nurses were reported to reprimand mothers and to "shout at mothers if they lost their card." Mothers were described as being "afraid" of nurses and some refused to return. "So she won't go back." In describing her own experience as a user of the clinic service, one of the VHWs said:

"That time I was a mama I kept the card safe. Because I must keep it safe because the nurses shout if I lose it and ask lots of questions. Others just shout but they give you another."

Authoritarianism was apparent in nurses' response to mothers who persistently refused to comply with their instructions. When motivating and advising had failed, nurses had recourse to higher authority. They could invoke the power of the tribal offices to enforce compliance with clinic directives.

"They [VHWs] not get tired. If visited [the mother] today and not wanted, they visit again tomorrow and try something new. If that does not work I call them [mothers] to the tribal offices and then tell them. They know it is for their own good."

VHWs as close to the community

VHWs vehemently denied having the same attitude to mothers as nurses did. They described themselves and were described by nurses as being close to the community. They identified with the

community and felt part of and one with the community. They showed a strong feeling of solidarity with mothers.

"I do not shout as a nompilo. The people and me we are the people. The housewife she is like me. I not shout. There is no need for shouting. We can sit down and talk very nice."

"If nompilos wearing white dress, child is scared, thinking about injections but nompilos are like mothers, have the same dress."

A reason identified for this difference was VHWS' contact with the community. VHWS visited mothers in their own homes whereas nurses were confined to the clinic. VHWS went "straight to the home" whereas nurses were "unable to go and take visits there only the VHWS can do this." VHWS described home visiting as allowing them the opportunity to talk more intimately to mothers and uncover problems mothers were reluctant to discuss. They were able to directly observe what was happening in the household and assess the nature of mothers' problems. This provided a more holistic view and ability to see an individual in the context of their family. Nurses considered VHWS to know more about the community and to be more in touch with their attitudes.

"Since now we are VHWS we see even at home mother does not want to tell us. But we can see this mother is not alright or this child is not alright. We refer the child to the clinic. It is a good chance to stay with the mother and to talk to her and find out her problems. Nurses do not have that chance. They are always here. They do not have that chance."

"You as nompilo you can see how is the condition of this house. Why is the child so marasmus? Is it the condition of the house or the ignorance of the mother? Or the mother going up and down, going to drink, going to another person's house and not caring for her child."

"VHWS deal with the home as a whole, not just concentrate on one person but on the family. Nurses just attend to that one person they do not visit the home."

"They are directly there in the community. For the nurses it's not like that. It's not that we are out of the community but VHWS are in the community and know the

culture better than us. VHWS are in a better position to dispel beliefs that people might have from a person's mind."

Through home visiting and their closeness to the community, VHWS were able to reach mothers nurses could not. Nurses lamented their inability to help those who were unwilling to attend the clinic. VHWS motivated and encouraged mothers to come to the clinic in this way they were the "foundations" for the nurses' work.

"They [nurses] are doing it well to those who are attending. But for those who are not coming they cannot do it well for them. VHWS are visiting those who do not want to come to the clinic. "

"We [VHWS] go out and we are doing the foundations of this work. They [nurses] cannot do the foundations of this work and get the mothers to come."

In addition, it was only VHWS who indicated any positive value in creating independence of mothers from the clinic. They described how some of their work, particularly teaching how to make sugar-salt solution, allowed mothers to be more autonomous and less reliant on the clinic. "After given sugar-salt solution then the child is alright. Then the person need never go back to the clinic." VHWS' position also made them more aware of inadequacies in clinic practice. Some oblique criticism of the clinic was found as VHWS complained about the quality of weight measurements at the clinic. Mothers were reported to have challenged the clinic on their practices.

"When the child is weighed and the child is crying the scale goes like this (moves her hand to show the scale fluctuating). The mother says she is not satisfied with the nurse. The child was not weighed right. They are not happy with this weight."

Images of education

VHWS and nurses considered education an important part of their work. It was described as "giving advice," "teaching,"

"motivating," and "encouraging" and covered a range of topics around nutrition and general health promotion. The specific content is not relevant but the terms in which it was described provide indicators of the way health workers perceive education.

The education messages described were of a high level of generalisation. Nurses reported encouraging breast-feeding, giving advice about "the preparation of feeds" and recommending "a well-balanced diet." They reported motivating mothers to "continue feeding well," "increase nutritional content" and "get all the food constituents." It is impossible to tell whether more specific information was imparted to mothers in real interactions.

Some of the reported education messages seem inappropriate to the context of Thornhill. Nurses suggested that they should "educate the mother that they must try to plough vegetables." Nurses also described VHWS' role in education to include topics which VHWS themselves had not included in their own description of their role, notably growing food. "VHWS should promote ploughing of gardens to plant vegetables like spinach and potatoes because we have financial problems. Can't all have money to buy things." Some of the nurses were aware that they were providing inappropriate health education messages and expressed frustration that what they were promoting was not possible to implement in the village.

"We must advise the mother about ways to improve the quality of life, like having a garden. But in Thornhill we don't have water. The person will tell you that at home you don't have water. So it's useless."

VHWS described their educative role as supportive of mothers. Teaching was expressed in an assistance manner. "I will say an unompilo must help a mother how to give her feeds." VHWS described education in a participatory manner. Mothers could learn from VHWS

and from each other, and VHWs could learn from mothers. They described a sharing approach to education in which problems were discussed, alternative solutions found, insight deepened and one person's solution shared with others.

"If know already, if you then speaking you are learning more and more, each time you speak you get a little bit more."

"Who should teach?"

"Everybody. Others teaching others. Everybody. And a child teaching the big mother. You know child is growing up and has sense. If child is hungry, he say he is hungry. It tells the mother, she may be forgetful."

This image of education is in direct contradiction to the way in which health workers, VHWs included, appeared to perceive mothers. Mothers were perceived as passive and ignorant and their role was to comply with instruction from the health workers. Whether a more democratic orientation to education, which they overtly expressed, could operate in practice in the context of these opposing perceptions of mothers seems doubtful. However, this vision of education is consistent with the closeness they express to the community and reported desire to understand mothers on their own terms and in the context of their household circumstances.

There is no information on real interaction between VHWs and mothers, however, the role play exercise is closer to this than the interviews. In this regard, there was a difference between the type of questions VHWs and nurses mentioned that they would ask a mother whose Road To Health Card showed a child with poor growth. Both the VHWs and the nurses wanted to find out why the child was not growing well, but VHWs asked specific questions such as whether the child had an illness which could explain its weight loss whereas nurses asked in more general terms such as "I'm going to

ask her why did the child lose weight." Although both indicate an attempt to understand the reasons for poor growth before "giving advice," the way in which nurses describe themselves doing this seems to imply underlying judgements or assumptions which the VHWs do not. One nurse described herself asking: "Are you really giving food to this child?"

The extent to which growth monitoring is seen to encourage mothers' participation is limited. Health workers perceptions of mothers are as passive compliers with their instructions. VHWs emphasise mothers' autonomy and independence to a greater extent than nurses and express solidarity with the community and a less didactic approach to education. There are elements which appear to encourage a more participative approach but this is located within a distinctly authoritarian context.

OBSERVATION RESULTS

This section presents some selected observations of the well-baby clinic, mothers' use of the Road To Health Card, nutrition clinics and experience in the village. Aspects of relevance to the aims are selected.

Well-baby clinic

Most of the women taking their children to the well-baby clinic arrived before the nurses had set up. They sat along the walls of the building and talked to each other softly, smiling at their own and others' children and playing with them as they sat waiting. The mood was relaxed and attending the well-baby clinic appeared to be a relatively social event which took the whole morning.

The way in which the well-baby clinic was organised was bureaucratic and ordered. Tasks were divided between the different health workers and attention given to attending to the mothers in turn. All Road To Health Cards were collected by the nurses. Mothers then had to wait to be called to bring their child to be weighed. After the child had been weighed the mother joined a queue to consult the nurses. If the child needed to be immunised, a staff nurse gave it the injection or drops. Mothers were able to leave once their Road To Health Cards was returned to them.

Weighing was conducted by a volunteer Red Cross worker. The scale used was a 50 kilogramme Salter scale hanging from a drip stand which requires patience to read correctly as children scream, jump up and down or cling to one of the adults or to the drip stand. Children were weighed with some clothing and the scale was not reset to zero in between weighing different children. Other opportunities for measurement error came from the numerous steps required for recording the weight.

The Red Cross worker read the weight off the scale, wrote the weight under the notes section or on a loose sheet in the Road To Health Cards and returned the card to the nurses' table. One of the professional nurses who sat at a central table then examined the card, recorded it in a clinic record book, passed the card to the other nurse at the table who plotted the weight on the growth chart and checked to see if any immunisation was required. Although the person doing the weighing was friendly and smiled at mothers, mothers were not told the weight of the child and few showed any response to the process.

Interactions between nurses and mothers were brief and perfunctory. When a mother reached the front of the queue, she stood next to the nurse sitting at the table, who would look at the card and say a sentence or two usually without looking up. "Consultations" generally lasted less than a minute. Nurses did not generally ask mothers anything and neither did mothers initiate interaction with the nurses. Mothers stood passively and nodded. The nurses did not talk to each other and only cursorily to the women attending. They seemed quite aloof.

Some interaction between nurses and mothers seemed more reprimanding and abrupt. A mother arrived without her pink card and immediately was told to go and fetch it which she did. Another woman who did not have a Road to Health Card was reprimanded by the nurse who seemed to not hear an explanation that the mother presented softly. The nurse completed a Road to Health Card for her and explained the purpose of the card. However, the way in which she did this was speaking loudly, not directly at the woman concerned, and loud enough for the whole room to hear.

Some separation was evident between mothers who attended the nutrition clinic and other women at the well-baby clinic. Women who had been seen at the nutrition clinic sat apart from the other women and one stared vacantly into space not interacting with anyone.

Road To Health Cards

Most mothers appeared to look after Road to Health Cards carefully. Most of the cards were still kept in the plastic bags given by the clinic. Although many of the cards, after years of use, were dog-eared, battered and torn, they were almost always carefully packed

away often in the most unlikely of places, such as, tucked under a bed, behind the plates, in old suitcases and tins. They sometimes required a great deal of searching to retrieve.

Nutrition clinics

The nutrition clinics were merely points at which the supplementary food was prepared and distributed. Very little interaction took place between those receiving food supplementation and those distributing it. At the nutrition clinic operating at the clinic itself, domestic workers cooked food in a separate room. The few mothers there (only 4 on the day visited) waited for over an hour while the food was cooked. They did not talk or interact with each other or with the staff. The domestic workers did not engage the mothers in any way and simply dished up the food once it was prepared into the containers which the mothers had brought with them. Mothers then left immediately carrying home the food in plastic lunch boxes in plastic bags.

The atmosphere at the second site, outside a locked storeroom on the grounds of a school in the village, was similarly bleak. There was no shelter and the approximately 30 children there huddled around the storeroom attempting to get out of the wind. Children were not accompanied by adult care-givers but were reported to have been sent by their mothers. The VHW dished up the rather unappetising thick brown broth into the containers (jugs, plastic bowls, lunch boxes) which the children had brought themselves. The food had been cooked in a cast iron three-legged pot over a fire using wood collected from the slopes a substantial distance away from the village. The children sat on the ground and ate quietly. There were three women helping to clean up and feed the children.

The VHW appeared very proud of her work and was flattered that "her" nutrition clinic was visited. She did not directly engage or interact with the children and they seemed to be merely passive recipients of her food.

General points

There seemed to be a high level of motivation amongst all the health workers and a commitment to improving health rather than concern with form and protocol. VHWs, particularly, were enthusiastic and the doctor and the matron appeared dedicated and sensitive to other members of staff and patients' needs.

In terms of malnutrition carrying a social stigma, two interesting comments warrant presentation. The doctor described how "kwash" was used "almost as a swearword." It also appeared to be the subject of jokes and was used in a derogatory or ridiculing manner by some of the nurses teasing each other. Authoritarianism in nurses' attitudes was also remarked upon by the doctor in the area. He expressed distress and frustration at the nurses' attitudes. He called it an "attitude of kuteni." "Kuteni" is the Xhosa word for "why." "Why did you do that? Why didn't you do this? All this blaming and chastising." Have doctors passed their own "patient-blaming" onto nurses and moved themselves into "nurse-blaming?" he reflected.

REPORT BACK OF RESULTS

The point at which "data" are synthesised into "interpretations" and then into "recommendations" and finally translated into problem-solving or action, is by no means clear cut. In this study

there was a conscious attempt to report back "results" or share the information collected in this study in an accessible and constructive way, gather feedback on interpretations and explore options to address some of the problems raised. This process itself provided information as well as generating feasible recommendations and supporting a process of moving towards change. The next section describes selected aspects of two workshops in which the results were reported back and discussed. Contained within this is a particular type of summary of results.

The results of the survey which showed that the food supplementation programme was poorly attended were reported back to the health service at a workshop in May 1990, the same time as the interviews were conducted with VHWS and nurses. The workshop attempted to problem-solve practical solutions to the food supplementation problem. The meeting was attended by the VHWS, clinic nurses, matrons from the district and hospital, doctor and researchers and, in addition, representatives from the Residents Committee and Clinic Committee.

Various alternative ways of distributing food in the village were discussed. Mothers could come to the clinic each day (as with the present system), food could be distributed through the creches, mothers could fetch a supply and cook it themselves, VHWS could deliver it to the children they visit at home or no food need be given at all. Each of these options raised problems.

Teachers in creches had been approached to discuss the possibility of their being used as outlets for food. They were reported to be resistant to serving food to children not belonging to their creche and there also appeared to be some reluctance on the part of the

VHWS to work with the creches who were reported to treat the VHWS with disdain. It was argued that they were not a viable option as many were not functioning and younger children, many of whom needed food supplementation, did not attend a creche.

The suggestion that mothers be given food to prepare at home was rejected as it was felt that mothers could not be expected to cook the food only for the target child and would distribute it amongst the whole family.

VHWS were resistant to being entrusted with the task of distributing food to individuals. They felt that they would be accused of favoritism or corruption. "If the people in the street know we have food, we will be grudged if we only give it to some."

It was reaffirmed that providing food was still an important intervention. It was the first step. The matron suggested that the service was doing their share even if people were "too lazy" to come.

This stalemate generated frustration and sadness. The discussion turned to how to involve the community in solving the problem. It was suggested that the residents' committee and clinic committee be consulted and community meetings organised. Attempts were made to concretise this consultation. There was much discussion about appropriate processes and procedures and indicated complex social dynamics. "At the present time there are many changes. The people are frightened, the committee members, the clinic, the nonpilos. There is much confusion. No-one knows what is happening." At the closure of the meeting there seemed to be a strong commitment to consult the community and attempt to gain their participation and support.

Later, in discussion with the doctor, he remarked that one of the demands of the present residents committee, who before the coup had been the political opposition of the tribal authorities, had been for soup kitchens. He suggested hopefully that linking food supplementation into this political demand could potentially override the negative connotations.

The second workshop, conducted in November 1990, focused on the results of this study and aimed to follow up the community consultation developments since the previous workshop. Newsprint with photostated line drawings and photographs were prepared and put on the walls to represent key elements of the results and discussion encouraged throughout. (See Figure 5.)

The way in which the results were summarised emphasised the following points. Many children in the village were malnourished. This was despite mothers being visited regularly by VHWs. The health service, despite being able to encourage mothers to attend the well-baby clinic and being able to improve other aspects of health (breast-feeding, immunisation), was unable to motivate mothers to attend the nutrition clinic when their child was not gaining weight. Mothers did not like the nutrition clinics and thought they were not good enough for them.

Possible reasons for mothers' reluctance to attend the nutrition clinics were presented. It was found that all mothers said their child was growing well even those whose children were malnourished. This was not because mothers did not know how to read the Road To Health Cards as many could read the card. Mothers felt embarrassed and afraid if their child was malnourished and did not want to speak about it. If a mother then went to the nutrition clinic, she

showed to everyone in the community that she had a malnourished child. The reason why mothers felt embarrassed was because they thought people would say it was their own fault that their child was malnourished. Health workers would shout at mothers and say that they were to blame because they had not followed their advice. People would think that the mother was very poor and could not afford to feed her child properly. She would feel that she was the only person in the community with this problem.

The discussion extended the concept of a stigma associated with malnutrition. It was described that a malnourished child was not "favoured" even at the well-baby clinic. Both nurses and mothers compared the child to others and preferred to play with happy and well-fed babies. A malnourished child was not given the same treatment and no-one wanted to play with it.

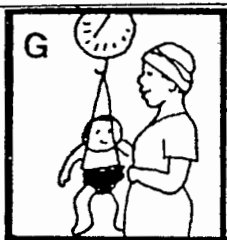
Health workers disagreed that their holding mothers responsible for having a malnourished child was a bad thing. They argued that mothers were in fact to blame. If mothers had followed their advice they would not have a malnourished child. Through discussion they acknowledged that their attitudes may be insensitive and that they should show love and respect for mothers but this did not absolve mothers from responsibility.

They extrapolated that because mothers with malnourished children are pointed out they feel bad, therefore, if they are not pointed out they would not feel bad. Hence, if food was given to everyone in the community the problem would be solved. Those who were malnourished could be encouraged to attend more often than those who were well-nourished. 'Food for all' was a sentiment strongly supported. The practicalities of this were not further discussed.

The final point made was around control that the nutrition clinics assumed. The nature of the nutrition clinics made the mother into a beggar and took over care of the child. They usurped the mother's role and undermined her responsibility.

Health workers felt that it was necessary for the clinic to assume this control. They argued that they encouraged people to stand on their own two feet through their education work, however, if people did not follow their advice they needed the "emergencies" of the nutrition clinics. They provided an interesting interpretation of a David Werner picture (Werner & Bower, 1982) which contrasted taking care of others versus helping others to take care of themselves or dependency versus self-reliance. A person who listened to their advice was an example of the independence and self-reliance objective, hand outs were needed for those who did not comply with advice. They felt it would be neglectful of them to "refuse" to help and were against what they perceived as "rationing" assistance.

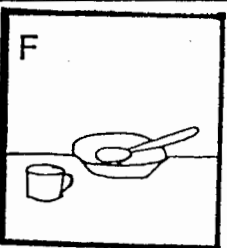
It was explained that due to the political upheaval in the area no attempt to consult the community had been possible. However, the principle was once more reiterated with enthusiasm. It was felt that by raising awareness of the community to the problem and embarking on combined action, it would emphasise that anyone can have this problem and would prevent mothers in the community being looked down upon. Everyone could be involved.



Do mothers go to the clinic for weighing? EWE



Do non-pilots visit mothers at home? EWE



Do mothers go to the nutrition clinics? HAYI

Kuteni? Why?



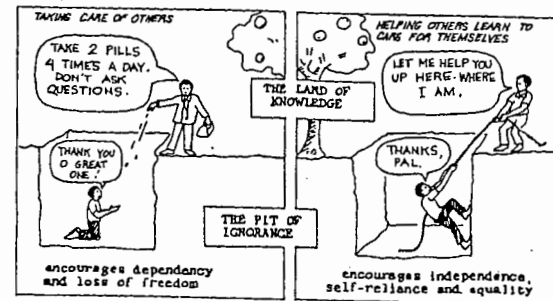
Don't want it, too far, bad food



Do mothers know about nutrition clinics? EWE

Photograph of mother & child

Embarrassed to have malnourished child



Taking over, control

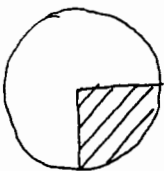


Blame

Kuteni? Why?



Only for the very poor Beggars



Malnutrition is a serious problem

Figure 5: A summary of the results as reported back to the health service. Each image with its caption was made into a poster on newsprint. They were put up on the wall sequentially as they were discussed.

CHAPTER 4: DISCUSSION

The study was designed as an exploratory one to investigate why growth monitoring had failed to improve nutritional status of children in Thornhill. It examined operational or logistic elements of growth monitoring and introduced a psychological perspective by focusing on the perceptions of those involved with the process: the mothers who were the target of the intervention, and the health workers (nurses and VHWS) who were responsible for implementing it. The study examined the extent to which their perceptions supported or undermined the underlying rationale and component aims of growth monitoring (making growth visible, facilitating nutrition intervention and facilitating mothers' participation in their childrens' care). This chapter organises the results around these three objectives of growth monitoring. It draws on psychological explanation of these phenomena in order to understand the problems in the implementation of growth monitoring in Thornhill with a view to focusing further psychological research and strengthening the implementation of interventions for child malnutrition.

DOES GROWTH MONITORING MAKE A CHILD'S GROWTH VISIBLE?

The underlying medical or screening objective of growth monitoring is to identify early growth faltering or to make a young child's growth visible (Gerein, 1988). This raises the question; visible to whom? On the one hand, it needs to be made visible to the health service whose task it is to intervene before serious forms of malnutrition develop. The ability of growth monitoring to

facilitate nutrition intervention via referral to a targeted food supplementation programme is discussed later. On the other hand, as growth monitoring is interwoven with the principle of mothers' participation in their children's care, which will be separately discussed in a later section, it aims to make the child's growth visible to the mother or care-giver. Therefore, an indicator of growth monitoring's success in making growth visible would be mothers' awareness of their children's growth status and widespread recognition and/or acknowledgement of poor growth by mothers whose children are not growing well.

The results of this study indicated that growth monitoring was unable to make growth sufficiently visible. Mothers with a malnourished child did not acknowledge their own child to be malnourished. The operational steps required for making a child's growth visible were investigated: good coverage of the community with regular weighing; accurate weight measurement and recording; correct interpretation by health workers of the growth cards; and adequate transferal of this understanding to mothers. Although a number of problems were identified there were also good indications that growth monitoring had the potential to achieve its aims. Each of these components is discussed. Evidence of stigma associated with malnutrition emerged to suggest this as an important factor in the failure of growth monitoring to make growth visible.

Coverage

In order for growth monitoring to be an effective screening strategy, good coverage of the community is required. The results showed that in Thornhill, 88% of care-givers of children under three years old, the target population for growth monitoring, could

produce a Road To Health Card for the survey. Extracting weights plotted and their dates, revealed that children were weighed often and regularly. Consistent with results from elsewhere, the number of weights plotted declined with age, whereas the risk of malnutrition increases at weaning (East African Medical Journal Editorial, 1987). Despite the reduction, the extent of weighing in this community was considerable. These indicators may be conservative as some care-givers were unable to find their cards, but reported having them. Unlike the experience of some other countries, for example, India (Gopalan & Chatterjee, 1985), in Thornhill, the foundation for growth monitoring is well in place.

Quality of weight measurement

The quality of weight measurement appears to be poor. A comparison of the child's weight as measured in the survey, and the most recent weight plotted on the Road To Health Card, revealed that only 22% of children identified by the survey as being below the third percentile weight for age would have been so identified by available and up to date Road To Health Cards (Kuhn & Zwarenstein, 1990b).

Observation at the well-baby clinic suggested some possible reasons for these inaccuracies. Children were not always weighed without their clothes, weight information was passed from weigher to nurse to another nurse before plotting, the spring scale used requires considerable patience to read correctly and was not consistently reset to zero between weighing different children, and the person doing the weighing had no training in its rationale or potential pitfalls. Later discussion uncovered a confusion about correct placement of dates which could contribute to under-identifying low

weight for age. Deficient weighing procedures have been identified as a source of inappropriate counselling for mothers (Davies & Williams, 1983) and would obviously confuse identification of growth faltering.

VHWS had complained, and reported mothers' concern, about the quality of weight measurement at the clinic. It had been suggested that VHWS do the weighing. This was largely motivated to reach those not attending the clinic. As this group appears to be small, the additional benefit does not support the additional load it places on the VHWS. VHWS may weigh more accurately as one of their roles is to explain the growth chart and they are orientated towards prevention. Technical problems of transportation and setting up scales may override this. There are also insufficient available scales at present. Further training and increased vigilance at the clinic appear to be more viable strategies to improve the quality of weight measurements.

Health worker knowledge

Health workers appeared to have a good understanding of the growth chart and demonstrated some ability to explain it. Both VHWS and nurses, when asked to role play with an example growth chart, could explain both the concept of the third percentile threshold and the concept of inadequate weight gain or growth faltering. They described the third percentile line as indicating "danger" and explained the notion of faltering as growing towards this "danger line." Other studies have questioned the extent to which health workers understand the card especially with respect to growth faltering (Gerein, 1988) but such a concern is misplaced in this context.

Health worker knowledge does not imply that they necessarily impart it. Although they reported in the role play explaining the card to mothers, in real situations this may not occur. At the well-baby clinic, interactions between the nurses and the mothers were brief and formal and no opportunity existed for in-depth explanations. It is impossible to ascertain whether any of the children on the day of observation were exhibiting a growth pattern of concern and the interactions may merely have reflected a routine of reassurance for well-nourished children. The nurses did not pause at all to find out if mothers understood. Perfunctory consultations, clearly inadequate for education, have been documented in Papua New Guinea (Cape, 1988) and are likely to be a feature of many over-extended health services such as South African rural services as anecdotally described by Hammond and Collins (1986a, 1986b).

In Thornhill, the education component is embodied in the VHW programme. Explanation of the growth chart is one of the VHWS' tasks. It was not feasible to accompany them on any home visits to observe their interactions with mothers. Mothers reported in the survey being visited regularly and a previous record review indicated that there was extensive contact between the VHWS and the community (Kuhn & Zwarenstein, 1990a). Hence there is a potentially effective channel for education. Some of the deficiencies in nutrition education provided by nurses may be offset by VHWS who have a specific role in educating the community through their personalised contact with the community through home visits.

Mothers' knowledge of the growth chart

Mothers displayed relatively (cf. Wagstaff & de Vries, 1986) good understanding of the growth chart which suggests that the health service had achieved its objective of imparting knowledge. The concept of weight below an expected standard was better understood than insufficient weight gain or growth faltering. This is inconsistent with the objective of growth monitoring to identify early signs of malnutrition (growth faltering), before the child becomes noticeably and clinically malnourished (Morley & Woodland, 1979).

While there remains space for intervention, this result supports the notion that growth charts are accessible to communities with limited formal education (Aden et al., 1989) as the education level of most women in Thornhill is low. VHWS were unanimous in affirming the appropriateness of the card for all, but some nurses expressed reservations about illiterate mothers' ability to understand it. VHWS' own limited formal education, their identification with the community and experience in explaining the card may encourage them to be less dismissive than nurses.

Lack of education may be a surmountable obstacle to understanding the growth chart. However, it may be perceived as a barrier, not only by some members of the health service, but also by the community themselves. The respondents who indicated that they could not understand the growth card, attributed this to being "uneducated."

This situation is comparable to debate around the influence of deprived environment on intellectual ability. Ginsburg (1972) criticises the emphasis on the impelling effect of impoverished

circumstances on children's academic difficulties as setting up a self-fulfilling prophecy of failure. He argues that educators expect poor children to fail and that it is children's internalisation of the expectation of failure, rather than real intellectual deficiencies, that leads to poor motivation and performance (Ginsburg, 1972). This does not imply that in this situation it is not more difficult for women without education to understand the growth chart, but equating association with inevitability sets up a cycle of defeat.

One of the initial hypotheses that mothers did not understand growth charts appears to have been refuted. This is not to say that the model of growth implied is consistent with lay constructions. Mothers may understand the card, but it may be differentiated from local perspectives and therefore carry no salience for integration into active use. In this study, mothers' constructions of growth were explored.

Mothers' constructions of growth

Incongruities between the language, conceptual frameworks and explanatory models of health service providers and consumers have been highlighted in the medical anthropological literature. Further, lack of information about each others' taken-for-granted world views exacerbates impaired communication (Creyghton, 1977). The need for an emic approach which develops health messages congruent with local conceptions has been emphasised (Launer & Habicht, 1989).

It has to be recognised that the growth chart itself is a "cultural construction" representing a codification of the perspectives of medical professionals on expected and appropriate child growth and

development (Pelto, 1987). Further, it is part of the "child survival revolution" and as Scheper-Hughes (1987) argues, the social construction of child survival as a medical problem is fairly recent (post 1950). The acknowledgement of growth charts as an etic tool for growth assessment has raised the criticism that it imposes a model of growth incompatible or foreign to indigenous constructions of growth (Cape, 1988).

As growth monitoring depends not only on the ability of the health service to respond appropriately to evidence of growth faltering, but on sustained behavioural response by caretakers, their perceptions of and level of concern for child growth is particularly important. This has generated interest in local cultural perspectives of growth to facilitate interaction between mother and health service (Pelto, 1987).

Anthropological studies of indigenous conceptions of growth have been done. In a study in Indonesia, Launer and Habicht (1989) found that infancy was perceived as a period of rapid change and vulnerability. Differentiation within this period was based on qualities of social and physical independence from the mother rather than on physiological growth itself. When mothers talked of "small" it implied the child was physically dependent on its mother and unable to move about (Launer & Habicht, 1989). Similarly, Jenkins et al. (1984) in Papua New Guinea found that growth was integrally linked with named stages of motor development, such as the child's ability to hold its head, sit alone, crawl, stand and run about. Poor growth and illness were also closely associated (Jenkins et al., 1984). Launer and Habicht (1989) draw attention to important similarities between mothers' conceptions and those of nutritional scientists. Both are concerned about the care and

survival of infants. Both acknowledge that the requirements for infants change with age and seek to give food in appropriate quantities and quality (Launer & Habicht, 1989).

From the results of this study, which provide only generalised indicators of this area and do not claim to have examined the issue in any anthropological detail, some similar findings emerged. The importance of developmental milestones in conceptualising good growth were presented, such as, being about to sit, walk and play. Indicators of the child's emotional state such as being "happy," "cheerful," and "playful" were mentioned. The absence of sickness and an appearance of wellness, "brightness," "freshness" or looking healthy were discussed. A child with a good appetite and appropriate maternal feeding practices were highlighted. This suggests that growth is perceived holistically and integrated with notions of overall mental and physical well-being and development. Health workers sometimes used the terms "health" and "growth" interchangeably.

One respondent mentioned that she put beads around the child's waist to determine whether it was growing well. While weighing children during the survey, although this was not systematically recorded, most of the children were observed to have beads around their waists. On enquiry, VHWS elaborated that this was a "traditional" practice incorporating protection of the child and allowing the mother to know that when they were loose, the child was not growing properly. That this was mentioned only once, suggests that mothers did not perceive it as an appropriate response to give the health service. However, it suggests the possibility of an entrenched interest in "monitoring" child growth in the community.

In terms of growth monitoring's objective of detecting slowing growth velocity, the indicators mentioned are unlikely to be successful. While the generalised mental and physical well-being indicators are linked to malnutrition, they are only likely to be manifest at later, more serious stages. The beads preserve the notion of monitoring but neglect the standardisation and reliability required. However, these constructions could be integrated into explanation about the growth chart and the importance of early detection of growth faltering. A nutrition clinic, Philani, in Site B, an African site and service area outside of Cape Town, uses the bead concept to explain growth monitoring in their education projects (Gill Frame, personal communication).

The above discussion is open to the criticism, leveled particularly at medical anthropology and cross-cultural psychology in their investigation of cultural or emic constructions of illness, of setting up a false dichotomy. The assumption that there exists independent and integrated systems of beliefs associated with particular groups of people labelled either "traditional" or "indigenous" and "Western" or "medical" and an emphasis on the salience of these constructions has been harshly denounced as reductionist and even racist (cf. Swartz & Foster, 1984).

The sensitivity of South African social scientists to this criticism has led many to reject the notion of different psychological frameworks between people assuming them to be untrue or their articulation politically unsound. There appears to be two poles: a discourse emphasising cultural difference and a discourse set on finding similarity (Kottler, 1990). It is important not to trivialise psychological difference as the positioning of people

requires that there exist subjective and psychological differences (Kottler, 1990) and to maintain acknowledgement for different systems of ideas. The danger is to locate these differences in an immutable cultural essence. Swartz and Foster (1984) describe the extent to which dominant views of black culture in South Africa romanticise culture as an organic, archaic essence. The "medical" and the "indigenous" viewpoint do not exist independently but interact and transform each other. They incorporate elements of each other and change and adapt. The issue is that certain perspectives carry more power than others and may subsume and negate each other. As Swartz and Foster (1984) argue, difficulties of communication are less a problem of differing perceptions but of differential power to apply the perceptions.

This is particularly important in this context. People can maintain different views simultaneously which exist for different occasions and circumstances. Mothers' mention of weight and being informed by the clinic as criteria to determine their child's growth status suggest that they do hold a place for the explicit growth monitoring model. They are more hesitant to discuss alternative criteria such as beads. It has to be acknowledged that the methods allowed little opportunity for uncovering conceptions contradictory to medical orthodoxy. This study, although it sees lay conceptions not as errors to be rectified but as valid opinions whose similarities with the medical model can be used, albeit opportunistically, to win people over to this model and better elaborate the model itself, is positioned to assume the primacy of the medical construction of growth. In terms of the practice of growth monitoring, further integration of lay constructions of

growth would contextualise and increase the acceptability and salience of growth monitoring.

Mothers' identification of child growth: Denial?

The results of the survey showed that a negligible number of women reported their own child as not growing well including those whose children's weight was below the third percentile weight for age, an accepted cut-off for malnutrition. Although most children were weighed regularly and many mothers could correctly interpret sample growth charts, this was insufficient to allow mothers to perceive their own child to be malnourished. Growth is not being made visible.

It is often assumed that when there is a discrepancy between the perceptions of the family and medical opinion, it is the family who is always wrong (Ridley, 1989). Clearly, this is a value-laden assumption. Although weight for age is not equivalent to growth faltering, having reached the third percentile weight for age suggests that the child's weight would have been faltering for some time and in only a minority of cases would not be cause for concern.

This lack of acknowledgement could be conceptualised as denial. Two major theoretical influences are important in the study of denial. Psychoanalytically, denial is conceptualised as pathological, defensive, rigid behaviour, an unconscious, compulsive distortion of reality. The term has also been widely used in terms of Kubler-Ross' stages of acceptance of dying in which it is seen as a temporary buffer to assist the individual to move to acceptance (Ridley, 1989). The concept is used similarly in health education models where the role of knowledge is

recognised as at best a necessary but not sufficient condition for behaviour change (Cummings, Becker, & Maile, 1980). In order to act on health information, the individual has to believe that this information applies to their own lives, to believe themselves to be susceptible or to overcome denial of personal risk (Janz & Becker, 1984).

It remains to be determined on what level the "denial" is operating in this case. It is impossible to ascertain the extent to which mothers do not acknowledge the possibility of malnutrition in their own children to themselves. However, there are strong indications that they are demonstrating deep reluctance to acknowledge it to others.

VHWs confirmed this saying that malnutrition was difficult for them to talk about. They felt compelled to discuss it given the gravity of the situation. They also reported mothers to be reluctant to discuss malnutrition. Mothers were described as not wanting to come to the clinic when they suspected that their child's weight may be down and, if the well-baby clinic had indicated their child's weight was falling, as not wanting to talk about it.

In investigation of family denial of the severity of head injury, Ridley (1989) argues that denial is not necessarily maladaptive if it does not impede problem solving behaviour. Using Lazarus' emphasis that it is the individual's cognitive appraisal of the demands of a situation and personal resources to deal with it that determine the meaning attributed to stress, denial may provide a positive orientation towards problems (Ridley, 1989). In this situation, denial is likely to be counter-productive, as

identification of malnutrition is the primary step for access to intervention.

Furthermore, Ridley (1989) proposes that the existence of a devalued status in association with a disability acts as a strong reinforcement for denial. Denial is a mechanism by which the individual attempts to resist acquiring a devalued status and preserves self-esteem (Ridley, 1989). This is one of the first indicators that having a malnourished child was perceived as a stigma.

A recent paper on traditional perceptions of marasmus in Pakistan highlighted in a more intense manner a similar reluctance to acknowledge marasmus. Using a picture of a child with marasmus, Mull (1991) found that mothers showed extreme discomfort and refused to talk about or look at the picture. Mothers' were reported to hide their children with marasmus for fear that no-one would talk to them. A woman ran away from a clinic when she saw a marasmus baby waiting for treatment. A mother with a marasmus child moved to the top of a hill to escape the pain of being rejected by neighbours. It emerged that people believed that marasmus was caused by a shadow being cast on the child or child's mother by an "unclean woman." As such it became located in the domain of "pollution-linked" conditions and was considered extremely contagious and the victims were feared and shunned. In this case, it appears that reluctance to acknowledge malnutrition is a function of mothers' fear of acquiring a devalued status hence malnutrition is associated not with notions of "contagion" as much as notions of stigma.

Stigma associated with child malnutrition

The concept of stigma is well-known in social psychological, sociological and anthropological literature and has been applied to a wide range of conditions in the health field. However, no direct reference could be found to its application to child malnutrition. Yet a number of the findings from this study are consistent with the concept. Stigma appears to be an illuminating and pertinent perspective through which to understand the difficulty growth monitoring has in this context of making growth visible.

In the classic work on stigma, Goffman (1963) defined stigma to refer to negative evaluations of personal attributes which included physical deformities, "blemishes of character" and social categorisations such as race. A stigmatised person has an attribute which is deeply discrediting. This dominates perception of and interaction with the person. Child malnutrition appeared to carry this negative evaluation. "Kwash" was used as a "swear word," nurses joked about it, VHWS used it as a sign which could taint their good example in the village.

Stigma is an intrinsically social phenomenon. It is linked to the process by which, in order to make the world knowable and predictable, experience is fitted into interpretative schema. Social information is simplified and organised into categories. A stigmatised person is responded to as a member of a devalued category not as an individual. The rules that focus our attention on some differences and neglect others are largely socially determined and maintained. Hence it is the failure to possess attributes viewed as important by a social group that is experienced as stigma. Stigma is shared or collective negative

evaluation. Individual biases do not carry the weight of socially designated evaluation of difference. People therefore only qualify as stigmatised within the context of a particular culture, historical time or economic, political or social situation (Ainlay, Becker, & Coleman, 1986).

Therefore, the experience of being stigmatised is located within the social response to the condition. Individuals internalise social conceptions and devaluation of their condition (Beiser et al., 1987) as they operate within the same social system which devalues them. The stigmatised are caught in a basic dilemma of self-contradiction. They are both other- and self-stigmatised (Gussow & Tracy, 1968). An immediate consequence of this is felt experience - embarrassment (Luken, 1987).

In this study, VHWS attributed various feelings to mothers with malnourished children: embarrassment, shame and fear. If the VHWS are accurate in this perception of mothers feelings, it suggests that malnutrition is carrying the devalued status that would be internalised in this way.

Fear of the ridicule and scorn of the community were reported by the health workers as the main reason for the mother not wanting to acknowledge malnutrition in her child. Fear of clinic censure was also reported. The need for a mother to conceal having a malnourished child would also be explained from this perspective.

Social response is the impetus for developing strategies for handling stigma (Becker, 1981) as the stigmatised are not simply passive recipients or internalisers of the collective definitional process as Scambler and Hopkins' (1990) investigation of reactions by those diagnosed with epilepsy indicate. Fear of enacted stigma

(i.e. actual discrimination or ridicule) leads individuals to conceal their condition from others. The non-disclosure approach is only viable so long as individuals are, in Goffman's terms, discreditable (stigma is not immediately apparent or visible) rather than discredited (Scrambler & Hopkins, 1990). This notion is consistent with Goffman's account that the management of social information about the self is the main interpersonal strategy used by the discreditable (Gussow & Tracy, 1968).

Further research is needed to explore the experience of mothers with malnourished children. One approach to such investigations, has been oral narratives of the experience of disability (Phillips, 1990). However, from this study, health worker accounts explore the social response pole of the stigma phenomenon in more depth.

Attribution of responsibility for malnutrition

The stigmatised are invariably blamed or held responsible in some way for their condition. The stigmatised person must bear the mark of moral responsibility even if volition or culpability is not openly assumed (Ainlay et al, 1986). Different conditions carry different degrees of blame and it is argued that stigma decreases the more a condition is believed to be beyond the individual's control (Albrecht, Walker, & Levy, 1982).

When VHWS presented their construction of the origin of malnutrition, their explanations focussed closely on proximal determinants of malnutrition and for a large part focussed on the omissions and actions of the mother. Responsibility for a child's malnutrition was firmly in the mothers' hands. A mother with a malnourished child was described either as not knowing enough to correctly feed her child or actively refusing to follow advice.

This was described as neglect. More distal determinants of malnutrition were recognised, particularly financial position and lack of caretaking ability because of the need to work, but even these determinants were expressed in a way which demanded that the mother do something to improve her circumstances.

Mothers' fear of the threat of overt blame was articulated as one of the reasons why health workers felt that mothers would not want to acknowledge that their child was malnourished. They described mothers as feeling embarrassed. She would have to admit to "breaking" the health promotion "rules." The health service was then in a position to reprimand or censure the mother.

In reporting back results of this study, it is interesting to reflect on health workers response to this. They asserted quite firmly and unashamedly that mothers were in fact to blame. They were prepared to acknowledge that their attitudes may be insensitive and were prepared to try and change them but the bottom line was that if mothers had followed their advice they would not be in this situation.

As primarily health educators, health workers are placed in an inherently contradictory position. On the one hand, they are trying to instil a sense of personal control in mothers over the child's health by giving practical advice and suggesting strategies to overcome difficulties. This makes sense and in a situation of impoverishment may generate a sense of self-efficacy and control. On the other hand, they are being rebuffed for holding mothers responsible when the condition of her child indicates that she has not taken their advice. They perceived this as inconsistent and a negation of their role.

The tendency within health education to show insensitivity to complex social and economic problems which affect the poor has been noted previously (Turner & Ingle, 1985). Health education with perfunctory acknowledgement of social factors, accounts for malnutrition with a simplistic theory of individual ignorance, wrongheadedness and stubbornness about food (Turner & Ingle, 1985). The structure of their work which focuses on individual children and provides a single factor theory of malnutrition creates an inherently victim-blaming response.

Both these approaches allow VHWS to have a manageable and practicable strategy to gain and instil some measure of control over a difficult situation. However, by doing this, it does not address malnutrition as a community problem but as a problem of neglectful or ignorant mothers. A more realistic analysis of the social and economic roots of poverty and malnutrition is needed to build a more empowering and community-orientated approach, but rhetoric alone will only generate passivity and helplessness.

Blame of a mother for having a malnourished child was not only attributed to the health service. The community was also reported to share this conception. Malnutrition implied a mother was unable to cope. Sometimes this failure was acknowledged to be financial, "not being able to afford to feed the child." Other times it was a failure to use existing resources such as the money sent to her or not knowing what to do. It implied incompetence.

Katz (1979) has drawn attention to the degree of threat implied in most stigmas. A "just-world" point of view has been put forward to explain the observation that those who have experienced suffering are often rejected and devalued and held responsible for their fate

(Lerner & Simmons, 1966). It is argued that people need to maintain the belief that the world is a safe and predictable place in which people get what they deserve (Furnham & Procter, 1989; Lerner & Simmons, 1966). Attributing responsibility to a person experiencing adversity or believing that they deserved their fate is reassuring and allows the observer to defend against their own feelings of vulnerability (Ainlay et al., 1986).

The overall impoverished level of the community may increase the salience of feelings of vulnerability to malnutrition. This makes the need to differentiate oneself by devaluation and blame more immediate.

It was the health workers who reported that the community blamed a mother with a malnourished child. It is difficult to ascertain whether members of the community do take this position or whether health workers are projecting their own blaming conceptions. Although the medical establishment has been centrally implicated in defining and reinforcing stigma, as in other examples of stigma, for example sexual abuse, numerous sectors of the community hold the individual responsible for their situation (Feild, 1978). This contributes to overall social devaluation which complicates the emotional response of the person (Levett, 1987). Moreover, the VHWs, although coopted into the health service, remain members of the community. Further research is needed into the community's views and the way they are operationalised.

Mothers' reports of the origin of poor growth implicated the mother for failing to feed her child adequately. This provides some evidence that the community holds similar views to the health workers about the origins of malnutrition. There also emerged

other beliefs which carried moral judgements such as not caring or loving her child. Lay beliefs relating malnutrition to breaking the intercourse taboo also emerged in mothers' explanations. Cassidy (1982) argues that malnutrition may be perceived by the community as a result of breaking social taboos such as sexual intercourse before the child is a certain age. Parents, therefore, are considered socially irresponsible and feel ashamed and embarrassed and hide their children rather than seek treatment. While such beliefs may underlie some of the rejection and stigma in this context, it appears that it extends more broadly.

Response of the community to a stigmatised condition is not purely negative. Analysis of sentiments about stigmatised groups has highlighted feelings of ambivalence: aversion and hostility on the one hand and sympathy and compassion on the other (Katz, 1979). In other words, while there may be a tendency to attribute blame to the less fortunate, irrespective of their role in precipitating the situation, there may be contrary norms of expected behaviour (reactive norms) which do not support overt rejection and may demand active support (Albrecht et al., 1982). These reactive norms, however, do not necessarily correspond with usual behaviour (Ainlay et al., 1986) but play an important role in personal reaction and reported reaction. This would be important in further investigation of community perception and response to malnutrition.

Health workers are also caught in this ambivalence and value conflict. They blame mothers for child malnutrition yet are required to respond in an affectively positive, constructive and supportive manner as health workers. Further, their response is complicated by the responsibility assigned to them for intervention. Hence malnutrition carries an added threat of

involving the health workers in mothers' dependency. This may serve as an impetus for stigmatisation (Katz, 1979). However, whatever the intra-individual basis of stigma, the most important issue is the social context in which stigma occurs.

Social context of stigma

VHWS felt that a mother with a malnourished child was made to feel different to the rest of the community, an outsider or "not one of us." Malnutrition was not a rare occurrence, approximately a quarter of the children in the village were malnourished, yet it was perceived as a characteristic which set the person apart from the rest of the community. The prevalence of stigmatic characteristics in a group may easily be misperceived given the tendency to conceal the stigma. However, stigma is not merely a function of rarity (deviation from the average) but of deviation from valued social norms. In order to comprehend the nature of stigma it must be examined in the context in which it exists.

Value of children and growth

The extent to which a condition becomes a stigma is integrally related to the attributes highly valued in a society and the extent to which deviance from these values threatens the social fabric. This notion was reinforced in a study of head injury which noted that there exists a hierarchy of stigma, with conditions entailing loss of control and rationality viewed least favourably in societies where a high value is accorded to rational and controlled behaviour and predictability (Ridley, 1989). There are a number of indications that child malnutrition is a threat to fundamental social values in this community.

From the interviews with the health workers it was apparent that children per se were highly valued in this community. Primarily, they were seen as a resource to the community in the future. Liddel, Kvalsvig, Shabalala, and Masilela (1989) in their review of the history of developmental psychology in South Africa, support this observation and mention that one of the striking themes in the developmental psychology literature is the degree to which children are valued in African communities.

Secondly, there was a consistent emphasis on the importance of good growth. Good growth in a child was equated with overall well-being and good development. It was considered central to cognitive development and job and financial success in later life. Growth appears to assume the status of a life-giving metaphor.

Health workers stated that mothers took great pride in their children's good growth, talking about it and showing evidence of it to others. The well-baby clinics were described as a "competition" where mothers with the heaviest children could "brag" about it. Moreover, VHWS defined their own success in terms of ensuring that children in the community grew well. It served to symbolise their efficacy and validate their existence.

The centrality and importance accorded both to children and to good growth imply that growth failure could threaten valued social notions around community survival which would be an important impetus for stigmatisation.

Poverty

In this study, it appeared that having a malnourished child implied that the mother was "very poor."

Anthropological studies have drawn attention to the degree of internal differentiation of wealth which exists within areas of over-arching impoverishment (Spiegel, 1984). This makes some people significantly more vulnerable to impoverishment than others and differentially affected by adverse conditions such as drought (Sharp & Spiegel, 1984). Hence, within a community which is impoverished overall, it is not unlikely that the particularly destitute are distinguished from the rest of the community.

Within the literature of stigma, it has been observed that contrary to expectation, the more evident a group's disadvantage, the less they will inspire sympathy and desire to help. Deprivation, poverty and weakness commonly evoke negative evaluations and contempt (Katz, 1979). Poverty itself is denigrated.

Attitudes towards the poor in Britain have found that people relate poverty to inefficient consumption of incomes rather than to the inequitable distribution of wealth in the first place (Turner & Ingle, 1985). Vulnerability of an entire community to impoverishment does not necessarily offset this, as commentary on the effect of migrant labour in Lesotho demonstrates (Showers, 1980). She notes that conflict occurs both between households and within households over the appropriate use of scarce resources as small differences in wealth assume increased importance. Use of resources in a way that is perceived of as inappropriate is subject to strong disapproval and jealousy (Showers, 1980).

Conflict models of stigma argue that it is those in a society with most power who have the ability to define and apply definitions of normality (Anspach, 1979). If women in the community with malnourished children tend to be those who are more disadvantaged

financially, the stigma of malnutrition may be linked to the increased ability of those with relatively greater economic power to impose their model of acceptability.

It appears that one stigma, that associated with malnutrition, is being layered on another, that of poverty.

There is an analogous situation with AIDS. AIDS has been socially defined as a disease of marginalised groups, especially gay men. AIDS becomes a symbol and social reactions and perceptions of the disease become inextricably linked to pre-existing stigma associated with the groups in which it is believed to be most prevalent (Herek & Glunt, 1988). Thus a person carries a multiple burden encompassing associated stigma of other devalued conditions. In the same way, the disgrace and shame associated with poverty becomes inextricably linked to having a malnourished child.

Just as stigma is not universal between societies, it is not necessarily consistent within a society. Luken (1987), using the example of old age, argues that it is an attribute with variable meaning in society, best understood by examining the specific social situations in which its meaning and relevance are determined. The old age stigma is not a consequence of age per se, rather it reflects how a person is perceived to be old in specific situations. Demanding situations, characterised by numerous obligations and constraints which do not permit adequate respite to tend to basic mental and physical needs, create a condition particularly conducive to stigmatisation (Luken, 1987). In this situation women are at the focus of the conflict around scarce resources as they are the ones remaining in rural areas (Showers, 1980). They are also in particularly impoverished circumstances

and therefore according to the situational perspective most likely to be stigmatised.

Images of childhood and motherhood

There seems to be two levels on which stigmatisation is operating. Malnutrition itself appears to carry elements of denigration but the focus is predominantly on the mother of a malnourished child.

Using the example of mental illness, Lefley (1989) argues that social barriers often extend to include the families or households of negatively valued persons. Stigma generalises to the families of those with a condition that is stigmatised. This is primarily because messages from the community and medical establishment attribute responsibility to the family for generating or precipitating the condition. This places the care-giver of the person, usually the mother, in a difficult position. She has to deal with stigmatisation and residual and potentially unjustified guilt at having "caused" the condition and carry the burden of treatment which may make heavy demands in terms of time, energy and money (Lefley, 1989).

In this situation, it appears to be less a case of the stigma of malnutrition generalising to the mother, but an emphasis on her responsibility for that condition. While malnutrition may carry its own devalued status, being a mother with a malnourished child is the most devalued of all.

Returning to the notion of stigma as deviation from valued social norms, dominant images of childhood as a passive and dependant period, the definition of women as mothers and attribution of

responsibility to mothers for household health are particularly important in understanding this view.

Historical and cross-cultural study of the family has recognised that the value and status accorded to childhood and other stages of life are not universal but social constructions subject to historical vicissitudes and changing cultural definitions (Hareven, 1985). The community, as much as social science and medical institutions, are influenced by dominant discourses which have sentimentalised childhood and created an image of children as passive and innocent (Levett, 1989). Childhood is perceived as a vulnerable and necessarily protected stage (Cassidy, 1987).

This image of childhood attributes tremendous power and significance to the care-giver of this period. It is almost always women who are accorded sole responsibility for child care. As a review of anthropological studies of women's status demonstrates, this is due to the symbolic elaboration of female reproduction and associated social consequences of child bearing rather than any biological or economic imperative (Mukhopadhyay & Higgins, 1988). Riley (1979, 1981) demonstrates the extent to which economic and ideological factors combine to create the slippage of family into mother-and-child as a mystified unit which underlay the philosophy of pro-natalism and familialism in post-war Britain. A woman's role becomes defined as a mother.

Consequently, it has been the fate of mothers to appear in strange and distorted forms (Scheper-Hughes, 1987). Motherhood is romanticised and as encoded in the "maternal sentiments" literature, mothers are assumed to be psychologically and

biologically predisposed to be loving, indulgent and self-sacrificing caretakers of their offspring (Cassidy, 1987).

Furthermore, in most societies, it is women who are accorded the responsibility of maintaining household health and treating illness. There is no intrinsic reason why they should fulfil this role but it is likely to be allocated to them as this is viewed as an extension of their reproductive role. Women are evaluated in terms of the impact of their behaviour on the health of the other members of the household primarily dependent children (Browner, 1989).

The dominant images of women, as mothers, set up as nurturers and protectors, psychologically and physically, of childhood innocence and vulnerability carry serious ramifications for women perceived not to fulfil this image. They are deeply denigrated as lacking maternal love or neglecting their children (Cassidy, 1987). VHWS often included in their description of mothers with malnourished children reference to morally unacceptable characteristics, such as, "drinking" and "neglect." Even if women with malnourished children do not display these characteristics, the archetypal "bad mother" taint may extend by implication.

These conceptions need to be examined from the point of view of the position of rural women in South Africa.

The historical processes by which men were drawn into capitalist production and women remained within the reserve subsistence economies has been widely discussed in marxist analysis with reference to the functionality of gender oppression for the development of apartheid-capitalism in South Africa. Less discussed is the extent to which gender divisions in pre-capitalist

societies had the capacity to subordinate women's labour in men's absence. A paradoxical consequence of this process was that for many of the women remaining in rural areas, the female position within the domestic sphere was strengthened, although this is not to say that the impoverishment and dependency of this sphere are not over-whelming (Bozzoli, 1983).

An ideology of a more self-sufficient female world (Showers, 1980) has received much attention in South African writing on the phenomenon of female-headed households (Preston-Whyte, 1978). Studies have examined women's reasons for staying single and highlighted their expressed rejection of dependence on men (Showers, 1980). However, while marriage may be rejected children remain highly valued. Analysis of the involvement of African women in popular resistance has also remarked on the extent to which the ideological mould in which women express their grievances exalts their place in the home as mothers (Bozzoli, 1983).

Van der Vliet (1984) argues that staying single is being used as a strategy against poverty. Remaining single is a way of controlling fertility and therefore, indirectly, economic position. Children figure very strongly in women's calculations. A similar situation is reported from the Cape Verde where men's emigration from rural areas demanded that women form families to engage in subsistence agriculture as the only means of survival available (Finan & Henderson, 1988).

Within this process, the value of children and women's role as mothers is not negated instead it is entrenched. Moreover, it is linked with economic survival. The ideology of pro-natalism and an

exultation of motherhood is consistent with social forms. "Failure" then as a mother is extremely serious.

In sum, the potential for growth monitoring to make growth visible exists despite some weak elements in the operational chain. The quality of weight measurement and plotting at well-baby clinics will need to be improved. Mothers' understanding of the growth chart, especially the concept of growth velocity, could be developed particularly through sensitive acknowledgement of the needs of women with little education and incorporation of lay concepts of growth. However, even if these issues were fully addressed, poor growth may still remain hidden as it carries social stigma.

DOES GROWTH MONITORING FACILITATE NUTRITION INTERVENTION?

The previous section discussed the difficulty growth monitoring had in reaching its screening objective of making growth visible. The underlying rationale for screening is that effective intervention is available for those identified. In Thornhill, food supplementation, and to some extent nutrition education, are the main interventions proposed for those identified with growth faltering.

This section discusses the nutrition interventions provided. These interventions appear to be poorly accepted and possible reasons for their failure are discussed and other alternatives explored. Secondly, the section discusses the prior question of the extent to which monitoring, as a distinct process, is able, conceptually and

operationally, to facilitate the implementation of these interventions were they to be strengthened.

Perceptions of the food supplementation programme

The food supplementation programme was poorly attended and appears to be poorly accepted by the community. Very few of those requiring supplementary feeding attended the programme although the programme did appear to be appropriately targeted. It was not serving those who did not require it.

Stigma

Attending the nutrition clinic appeared to be considered a disgrace for similar reasons to those which stigmatised a mother of a malnourished child discussed earlier. A critical factor in the failure of the food supplementation programme appears to be that by attending the nutrition clinic, the mother clearly identified herself as one with a malnourished child. Beaton and Ghassemi (1982) in their review of supplementary feeding programmes, note that feeding programmes which operate from a central venue may mark the participants with undesirable social stigma especially if they are selected on the basis of judged need.

Health workers attributed mothers' failure to attend to their fear of what their neighbours would say. Mothers were described as feeling embarrassed and afraid. Attending the nutrition clinic implied that the mother had failed to feed her child adequately. It identified her as someone who had not followed the health promotion guidelines. It singled her out from the rest of the community and it implied she was very poor. The nutrition clinics

were perceived as a service not orientated towards the whole community but only for the very poor or the negligent.

The process by which a service becomes stigmatised has happened in other areas. Advertising companies have identified the need for "multi-racial" advertising to avoid the perception that a product is targeted at the black community and therefore inferior. As the majority of the recipients of food are poor, the shame associated with malnutrition is projected onto the nutrition clinics.

Blame

Although health workers firmly insisted that mothers did not attend the food supplementation programme because they were afraid of their neighbours, fear of clinic reprimand underlay some of their explanations. Mothers had to "admit" to the clinic staff that they had not followed their instructions. The possibility of censure and blame from the health service was apparent. Health worker attitudes, although concerned, were mixed with censure. This is similar to the level of blame they appear to hold towards mothers with a malnourished child.

Control

Nutrition clinics were described as taking responsibility out of mothers' hands. The mother had to relinquish her right to care for her child and hand over this responsibility to the clinic.

Studies of power and control in rehabilitation institutions have highlighted the tension between medical control and personal autonomy in the context of disability (Goldin, 1990). Within the ideal model of contemporary medical practice, disease and disability are expected to follow a predictable course from

diagnosis, determination of aetiology, control by means of treatment and a favourable prognosis. Care-giving institutions exercise considerable control over their clients through their definition of the disorder, their criteria for treatment and through their policies which create and maintain psychological and social dependency (Goldin, 1990). The "sick role" specifically tolerates or condones the suspension of the patient's ordinary rights and obligations on the assumption that it is temporary (Murphy, Scheer, Murphy, & Mack, 1988). Following treatment, the individual is expected to return to an autonomous state. This transition from institutional control to autonomy is problematic in the case of chronic disorders or conditions intransigent to favourable prognosis. If there is no transition to a definitive state, either by the patient's re-entry into the dependent institutional control phase or failure to demonstrate behaviour professionals consider progress, their status remains undefined. Care-giving institutions are then reluctant to relinquish control (Goldin, 1990). They may deal with the situation in the way ambivalent relations are characteristically dealt with by setting up social distance either through avoidance or excessive involvement (Murphy et al., 1988).

In the case of malnutrition where amelioration through food supplementation is an inherently difficult process, this ambivalence is likely to hold. However, a second problem exists. Although much has been written about the "medicalisation" of social problems setting up blame and dependency, it is precisely the definition of malnutrition as a non-medical problem which creates much of the conflict. Malnutrition is defined in terms of mothers' behaviour. As such, the clinic is not only assuming control for

care of the patient but fundamentally assuming the mothers' role. "You cannot feed your baby. You take your baby to be fed by the other women." Given the emotionally laden concepts at stake in the definition of malnutrition, a mother having been identified as having a child with growth faltering is already defined as a failure. Assuming responsibility for her role as a mother serves to undermine her self-esteem further.

Poverty

The clinics were described as giving away food for free, a handout which made the mother into a beggar.

In the case of disability, charity organisations, although well-intentioned and with the possibility to do much good, have been identified as contributing to dependency and stigma. The asymmetry of giving and receiving sets up a structure of inequality that reduces the status of the recipients. The act of giving is not a symbol of oneness with the receiver but a symbol of separation and superiority (Murphy et al., 1988). As malnutrition is layered on the stigma of poverty, taking something for nothing, as in the case of receiving "hand-outs" from the nutrition clinic, would reinforce this power imbalance and undermine self-dignity and self-respect.

Studies in under-development and health have demonstrated the often deleterious effects of international aid in increasing dependency and undermining local organisational structures of under-developed countries (Navarro, 1979). The need for individuals, particularly in poverty stricken conditions, to be involved and in control of any, however beneficent, distribution of resources, has been increasingly recognised by those in welfare and charity organisations. This does not necessarily imply non-intervention

but does require sensitive consultation, support and community participation in the delivery of interventions. In this case, lack of participation is a serious contributor to the failure of the community to make use of the nutrition clinics and reinforces the community's perception that the nutrition clinics are inappropriately assuming control.

These perceptions of the nutrition clinics have much in common with studies of attitudes towards social welfare and social security recipients. Furnham (1985) identified the following dimensions within attitudes towards those on social security in Britain: dishonesty / idleness / prodigality referring to the undeserving nature of the recipients; difficulty / poverty referring to the economic deprivation of those attempting to cope on the amount of benefit provided; stigma / shame / self-esteem referring to the social consequences of being the recipients of charity. Social security recipients were considered to feel ashamed and were denigrated and seen as idle, dishonest and lacking effort in trying to obtain work (Furnham, 1985).

Attitudes towards social security recipients were found to be closely associated with attitudes towards poverty in general. Poverty is either attributed to individual factors (which place responsibility for poverty on the behaviour of poor people themselves), structural factors (which place responsibility on external societal and economic forces) and fatalistic influences (which place responsibility in luck or fate) (Furnham, 1982). People with an individualistic perspective on social and economic phenomena tend to blame the poor for their plight and as a result have negative attitudes towards them (Furnham & Gunter, 1984).

Therefore people holding individualistic explanations of poverty are more likely to hold negative attitudes towards people on social security. Furnham (1985) concludes that the acceptance of social welfare programmes among the unemployed, poor and handicapped may depend primarily on people's beliefs about the causes of unemployment and poverty. This may be important in this context as well.

Poor quality service

Health workers reported that mothers felt that the food supplementation programme was not good enough for them. Mothers were reported to dislike the food served and complained that the soup served caused vomiting and diarrhoea. It seems unlikely that the quality of the food would be a major determinant in uptake of the service. Beaton and Ghassemi (1982) reported that there was no evidence that the nature of the food served affected participation in any of the supplementary feeding schemes they reviewed. It is more likely the perception of a poor quality service was one way of alluding to the other aspects of rejection.

Mothers asserted that the food served was the same as they served at home. Hence there was no need to obtain it through the clinic. Within health promotion, it has been recognised that community beliefs in the efficacy and usefulness of biomedicine is an important part of its acceptance, both in early consultation of the health service and in compliance with treatment (Joseph et al., 1987). However, Nichter and Nordstrom (1989) in their investigation of the process of health seeking in Sri Lanka, show that choice of practitioner and treatment is a more complex process. Different treatments and practitioners are perceived as

appropriate for different conditions, individuals and circumstances. Medicine carries meaning and "answers" or is considered efficacious depending on the context (Nichter & Nordstrom, 1989).

In preventive services in Thornhill, medicine or procedures requiring expertise and skills such as weighing or immunisations may be acceptable to receive. This is demonstrated in the high well-baby clinic attendance. This may be perceived as the appropriate terrain for health workers. Food distribution may be perceived as encroaching on the territory of the home and is outside the clinic's appropriate sphere of influence.

Health workers reported that mothers felt that the nutrition clinics were "too far" and required too much time to attend. Beaton and Ghassemi (1982) identified physical distance, time required and cost of participation, such as, loss of potential income and interference with other activities, as major deterrents to participation in supplementary feeding schemes. Time allocation studies have drawn attention to the demands made on women by health technologies and practices being promoted within the context of PHC and child survival and development. Time costs are an important deterrent to sustained, effective implementation of these technologies. Low income, rural women have very little free or leisure time as they carry multiple responsibilities (Leslie, 1989). Although health workers felt that this difficulty had been overcome by placing an additional clinic within the village, the costs of daily attendance may outweigh the perceived benefits especially as the benefits are uncertain and additional disadvantages so apparent.

It was the health workers who identified the above dimensions as salient to the community's failure to make use of the supplementary food scheme. The perceptions of community members themselves remain unknown. Further research is needed to explore community perceptions of the nutrition clinics.

The health workers were aware of the problems in the food supplementation programme and yet were struggling to rectify them. Various other methods of food distribution had been discussed in Thornhill. These are discussed as possible solutions. There are also indications of health worker investment in the present system and hence a reluctance to change.

Alternative methods of food distribution

It was suggested that food be distributed through creches. It appeared that relinquishing control, for the health workers, and assuming responsibility, for the educare workers, raised conflict over each sector's area of expertise, credibility and jurisdiction. As health services in the Ciskei are not at present working with other development sectors such as education, agriculture and welfare, resentment and jealousy around "professional" or "sectoral" ownership are likely to inhibit collaboration.

Inter-sectoral or multi-sectoral development has become a key normative concept in the PHC approach based on recognition of the relation between health and development and theories about development itself (De Kadt, 1989). Synergistic effects on health through simultaneous development of programmes in several sectors (education, sanitation, agriculture and health) have been demonstrated in the dramatic mortality declines relative to economic position of countries such as Cuba, China and Kerala

State, India. However, the practice of collaboration and coordination pose considerable problems both organisationally and with respect to inter-sector jealousy (Boerma, 1987). While the concept carries intrinsic value and more integrated services will undoubtedly be beneficial in the long term, the difficulties of implementing it will need to receive more attention. Locating food distribution in the context of creches may be a strategy to overcome some of the stigma. However, the stability and coverage of this infrastructure and ways of reaching younger children not incorporated into this net will need to be investigated.

Another suggestion was that VHWS distribute food to the households they visit. VHWS were reluctant to take this on and were concerned about being accused of corruption and/or favoritism. This is not surprising given a situation of scarce resources and the history of corruption among the Bantustan elites. Clear and unambiguous controls and accountability would need to be instituted if this suggestion were implemented.

Take home food schemes have been criticised as inefficient as it is estimated that at best between 40-60% of the food reaches the target child (Beaton & Ghassemi, 1982). It is argued that "leakage" from take home food schemes may not necessarily be detrimental. The balance is either consumed by other household members or increases the purchasing power of the household which indirectly benefits the household in general and therefore the child (Beaton & Ghassemi, 1982).

The concern remains for inequitable distribution within the household of the additional resources. There may be social factors within the household which deprive the target child of food (Beaton

& Ghassemi, 1982). Studies of foster children have shown that they receive unequal quantities of food relative to other members of the household (Bledsoe, Ewbank, & Isiugo-Abanihe, 1988). Inequitable investment in male children in terms of supplementary feeding and consultation of the health service have been implicated in sex differentials in child morbidity and mortality in India (MacCormack, 1988). Thomas' (1981) study showed that malnourished children were often unwanted members of the family.

Health workers were pessimistic about the extent to which unprepared food would reach target children. While this may be a realistic concern given possible social inequities within households, it also suggests that health workers need to maintain tight control. This runs directly counter to the self-reliance rhetoric of PHC.

Health workers rejected outright the option of not providing food supplementation at all. The matron argued dismissively that the health service was doing their share and could not be held responsible for mothers' failure to attend. Malnutrition is defined as the health service's responsibility. They had to be seen to be doing something. It served a placatory function whether it was successful or not was irrelevant.

VHWs, on the other hand, appeared to define their own identity in terms of their effect on child health and therefore needed to intervene to affirm their own role. Knowing what to do or where to refer was essential. It gave them a sense of efficacy and control: power over difficult circumstances. They were more closely attuned to food supplementation not being well accepted but this only

shifted the nature of the problem onto how to motivate mothers to attend.

The moral imperative to intervene is described by Cassidy (1987) as an "activist" world view. She describes many involved in development work as holding a "frontier mentality" and an ideological altruistic imperative. She argues that although the desire to help is laudable, desire can become a need or compulsion, virtually definitional of the self. The value of intervention is assumed to be self-evident and perception of real community need is obscured. The community is perceived as the mirror image of the activist and amelioration becomes a task of replacing "harmful" practices with "healthy" ones, "ignorance" with "education" (Cassidy, 1987).

While Cassidy's (1987) rather scathing attack implies a radical non-intervention strategy which may be seen as abdicating responsibility, she does identify this ideology as an important contributor to change agent "burnout" or cynicism. If VHWS are to preserve their present apparent enthusiasm, commitment and zeal, a necessary requirement no doubt to sustain motivation under the circumstances, they are going to need a more realistic perception of their potential to intervene.

The importance of involving mothers more intimately in the distribution of food and including community consultation linked with political backing is undoubtedly one of the most important suggestions to have emerged. However, the complexity of political dynamics in the rural areas, in addition to the inherent difficulty involved in this process, makes one pessimistic about the outcome.

The first attempt to do this failed but there is renewed commitment in the village to follow through this strategy.

Nutrition education

Nutritional education was also identified as an intervention linked to growth monitoring. There is no formal way in which education is integrated in nurses' work and they are left to give individual "advice." VHWS have a specific role in educating the community via their personalised contact with the community in home visits.

The emphasis on improving knowledge has been widely criticised as at best ineffective in addressing malnutrition. Despite the recognition that the causes of malnutrition are known to be multi-factorial, with the primary determinant poverty, health education elevates a single factor, individual knowledge. As such, it blames the victim and distracts attention away from the root political causes. It assumes that malnutrition, like poverty discussed early, is a result of the inefficient use of resources within the home, rather than an inequitable distribution of those resources in the first place. Changing knowledge will not have an impact unless it is practical for people to put this knowledge into effect (Turner & Ingle, 1985). This is not to say that knowledge is irrelevant. Information can facilitate a more optimal use of resources in poverty stricken conditions.

However, the education that was reported by nurses and VHWS was of a highly generalised and non-specific nature. Nurses mentioned promoting agriculture and alluded to income generation efforts. However, these elements were not carried through in their advice nor had support from other development projects where they existed. This is a weakness of a lack of a multi-sectoral

approach. Some messages health workers were giving were blatantly inappropriate and clearly decontextualised, learned messages with no attempt at real application such as "plant vegetables." Nutrition education is not systematically or clearly used as an intervention in this context.

Does monitoring facilitate?

Key weakness in the intervention associated with growth monitoring have been identified. Whether the monitoring process per se could facilitate nutrition intervention still has to be determined.

Referral

The first area of concern is the extent to which mothers are referred to the nutrition clinics. It was impossible to assess the referral procedures in practice and the results are reliant on health workers' reports which are likely to be a more favourable account of procedures than what happened in practice. Even within these reports, the complexity of the referral and ambiguity of responsibility indicate weakness in the link from monitoring to intervention.

VHW and nurses' descriptions of their roles detailed chains of referral. VHWS, on detecting growth faltering, referred mothers to nurses, who referred them to the doctor who either referred them to the nutrition clinic or back to the nurses and VHWS. The mother's role was to follow these chains of referral and obviously the more steps required, the greater the opportunity to drop out. However, important links between growth faltering and illness were drawn, an often neglected component of growth monitoring (Gerein, 1988). The potential weakness of the complex referral chain could also reflect

a degree of comprehensiveness or integration of curative and preventive services in health service provision in the Ciskei. This would be an asset to the programme.

However, this also suggests an uncertainty about who took final responsibility for nutrition clinic referral. Neither VHWS nor nurses provided explanations for why mothers should attend. It was the referral procedure itself which was elaborately described and presented as if it was the intervention.

There was evidence to suggest that although the food supplementation programme was part of clinic protocol, it was marginalised and not integrated into clinic activities. No individual assumed overall responsibility for co-ordination and lowest level workers were on the front line of its operation. There was vagueness and ambiguity around whose responsibility the nutrition clinics were and how they operated. They appeared to be a low priority.

While rationalising skilled staff is obviously an important part of an efficient service, Beaton and Ghassemi (1982) note that supplementary feeding schemes cannot be seen and administered as technological interventions. They are likely to be successful only if managed by knowledgeable staff with sufficient motivation to encourage participation and sufficient time to carry out their duties. In Thornhill, no interaction between staff and mothers and children occurred at these sites. It could be that health workers themselves perceive the nutrition clinics to be a poor quality service and were reticent to refer into a service they perceived to be weak.

Monitoring as the intervention

Growth monitoring has been criticised as becoming reduced to a "formal weighing ritual" which focuses so much attention on measurement that interaction with mothers and attempts to follow up at risk children are neglected (Nabarro & Chinnock, 1988). The concept of a secular ritual is used by Nations and Rebhun (1988) to explain the process by which nurses embellish the simple technology of oral rehydration therapy. Through stylised, ceremonial and repetitious actions, nurses separate themselves from mothers, mystify the nature of the technology and thereby enshrine their, and medicine's, superior status (Nations & Rebhun, 1988).

The brief and formalised interactions between nurses and mothers at well-baby clinics appear to support the idea that weighing took on ritual characteristics which emphasised the superior status of the nurses. The process of the well-baby was regulated and controlled. Nurses sat, mothers stood. Interaction between mothers and nurses was cursory and nurses made little attempt to engage mothers. Studies of interactions between doctors and patients have noted that brief, highly structured and almost ceremonial interactions serve to increase separation between doctors and patients and hence to entrench unequal social status (Campbell-Heider & Pollock, 1987). As the nurses at the well-baby clinic are the primary practitioners, they may well assume a characteristic "doctor" role. While it is not necessarily possible to omit all elements of ritual, it is important that an intervention include a shared conception of reality divested of demonstrations of differential social status and relative worth (Nations and Rebhun, 1988). This does not appear to be the case in Thornhill.

However, there was no indication that this ritualised element allowed weighing to lose its screening objective and itself become intervention. Reports from health workers and mothers do not support the hypothesis that weighing is perceived as a solution to or sufficient to prevent malnutrition. Instead the central image of weighing is "seeing."

Mothers showed an interest in their child's weight per se. Weighing displayed weight and appeared to provide affirmation and reassurance and the opportunity to detect problems.

By focussing sustained attention on growth, growth monitoring may have spin-off benefits, through a Hawthorne effect, raising the priority of good nutrition or by acting as positive encouragement to mothers in their child care practices. Growth monitoring has an additional role of continuous display of the impact of intervention in order to support and sustain mothers' intervention efforts. Given the lack of staff involvement in and poor support of the nutrition clinics, it is unlikely that the feed-back on the effect of intervention which the growth chart could provide is being used to its best potential.

Health workers also described weighing in the context of being able to "see" growth. The scale played an interesting part in this. The scale was to overcome the fallibility of "eyes." Medicine has been criticised for the extent to which it increases its penetration by elaboration and extension of the "medical gaze" through technological appendages (Foucault, 1975). Medical techniques and ritual increase the power of medicine. Medical ideology sets itself up as seeing more accurately than an individual and overriding individual subjectivity which is

dismissed as biased and inadequate. Mothers were described as not knowing or misled about their child's growth. The scale provided a means of making visible an otherwise unnoticed or unacknowledged problem. Individual error can just as easily under-estimate weight, but health workers did not express this concern. Low weight was the problem which was hidden. They appeared to value the scale in its ability to overcome the reluctance to acknowledge malnutrition which was discussed as linked to stigma earlier.

The growth monitoring process, however, is operationally better supported than nutrition intervention. Growth monitoring is concretised in the Road to Health Card's growth chart and VHW records. It is institutionalised and integrated into the well-baby clinic. Food supplementation, on the other hand, is marginalised to peripheral workers outside of the clinic's main functioning and no accessible records kept. This suggests that although monitoring is not perceived to be the intervention, it is accorded greater priority and has a better profile than nutrition intervention.

Principle of targeting

The appropriateness of targeted food supplementation has been increasingly questioned in reviews (Gerein, 1988; Gerein & Ross, 1991). Health workers, without prompting, indicated immediately that if food supplementation was provided for every one in the community there would be no need to feel ashamed to attend. It certainly appears that targeting reinforces the stigmatic elements of malnutrition and the disgrace of attending the nutrition clinics. The feasibility and costs of a non-targeted food supplementation programme will, however, need to be investigated. In addition, although the targeted method appears to be a dismal

failure to reach at risk children, whether a more general programme would improve coverage of these children would need to be piloted and evaluated. These children are likely to be least integrated into the health service and development infrastructure and the most difficult to reach (Kuhn et al., 1990).

However, it could be argued that it is not only a targeted food supplementation programme but growth monitoring itself which is at fault. Growth monitoring, by definition, identifies individuals to target for intervention. Growth monitoring is, in fact, a structured and organised method of identifying and labelling a mother with a malnourished child. Hence it could also be argued that growth monitoring intrinsically feeds into the process of stigmatisation and rejection of nutrition intervention. This does not mean that identification is needed to maintain the stigma. Failure to identify only prevents turning, in Goffman's terms, the discreditable into the discredited. The problem lies less in the identification as much as in the individualisation. Growth monitoring defines the problem as located in individuals rather than structural factors and aims to solve the problem by reaching those individuals. It is clear that more community orientated approaches to malnutrition will need to be developed.

This is analogous to the criticism of the dominant intrapsychic model in psychology which locates psychopathology within an individual. Psychology has been criticised for defining psychopathology in individual terms rather than within the structure of society. It misplaces the focus onto the individual rather than drawing attention to the structural inequalities in society (Seedat, Cloete, & Shochet, 1988).

It is a truism to state that intervention for malnutrition will need to address the structural inequalities in society. However, this is not enough and short term options need to be developed that do not obscure the social origins of malnutrition or obstruct the process of organisation to address the social factors. (Fincham [1985] discusses a range of nutrition interventions in the South African context.)

If a non-targeted food supplementation programme is recommended, is there any need for monitoring growth? This is a complex question as the functions of growth monitoring extend beyond identification of children for intervention. Particularly, growth monitoring's role in facilitating mothers' participation in their children's care needs to be considered.

DOES GROWTH MONITORING FACILITATE MOTHERS' PARTICIPATION IN THEIR CHILDREN'S CARE?

Community participation is an essential and pivotal concept in the PHC approach articulated at the Alma-Ata conference and within the "Health for All" movement. It refers to the social process by which the community (specific groups of people with shared needs, living in a defined geographical area) are actively involved to identify their health needs and make and implement decisions about the appropriate means of improving their health. This may require establishing ways to force a shift in resources to achieve equity. Community participation insists that those who have a right to better health assume responsibility for improving their health and that those who can provide services recognise and support this

responsibility (Rifkin, 1986; Rifkin, Muller, & Bichmann, 1988; Tumwine, 1989).

Community participation as a political strategy for health promotion has failed in many countries, which have, although paid lip-service to the ideal, managed to achieve only symbolic participation. As a result there is increasing analysis of the complexity and difficulty of applying the concept in PHC (Brannstrom, Aden, Ibrahim, Persson, & Wall, 1989; Rifkin, 1986). Selective PHC and the GOBI-FFF approach, on the other hand, have de-emphasised the centrality of community participation in improving health and focussed instead on the application of simple, accessible, low cost technologies (Wisner, 1988). Growth monitoring is one of these selected technologies but maintains the potential to be part of the broader community-based, participatory approach of PHC.

In Thornhill, growth monitoring is implemented by the health service and community participation in the health service is limited. Health services, although not necessarily seen as partisan, are provided by the Ciskei Department of Health, not known for its democratic orientation. Local clinic management committees exist but are relatively inactive and are generally unrepresentative of the community.

VHWs are supposed to be facilitators and embodiments of community participation. VHWs are supposed to be chosen by the community and accountable to them (Walt, 1988). In Thornhill, VHWs were chosen in consultation with the local authorities, although the choice appears to have been heavily weighed by opinions of health service staff and many VHWs are directly related to the now replaced tribal

authorities. VHWS are accountable to the clinic and not to the community in any on-going or structured way. There was no community consultation in defining their tasks and their work is structured around the a priori defined needs and solutions of the GOBI-FFF approach.

The extent to which growth monitoring in Thornhill facilitates or is part of community participation in the broader social action or community development sense of the comprehensive PHC approach, can be said to be virtually nil. However, participation can also be considered from a more personal vantage point of the extent to which growth monitoring facilitates individual mothers' participation in their child's care. The participatory objective of growth monitoring operates through the home-based growth chart and education of mothers in order to make them less dependent on the health service and able to assume responsibility to ensure their children's good growth. This section examines the way in which education is perceived and the extent to which the mothers' role is perceived in a way which promotes autonomy and self-reliance.

Empowerment through education

In order to participate actively, individuals need to be well-informed and through participation they gain insight and skills. Education is a consequence and necessary process underlying a participatory approach (Brown, 1985). However, education is not necessarily the basis of empowerment and can easily assume a victim-blaming role, as in nutrition education, discussed earlier, which assumes that "ignorance" is the cause of malnutrition.

Therefore, the role of educators and the model of education applied needs to be examined.

The approach to education taken by Paulo Freire has been important in informing models of education. Through work with oppressed communities in South America, Freire introduced the concept of "conscientisation" which is a process by which adults are engaged in critically analysing the causes of their powerlessness and impoverishment. The model and techniques of education underlying this approach have been applied in the field of adult education and literacy. If education is going to play an empowering role, the learning process has to be democratised. Both teachers and learners share in a process of joint enquiry and commitment to constructive action. Teachers become facilitators. Learners take active responsibility for their learning. Learning is practical and based on real life problem-solving. Further, it aims to critically analyse the underlying causes of poverty (Brown, 1985; Walters, 1989).

The model of education applied by VHWS and nurses can be assessed on the basis of these characteristics.

VHWS described their approach to education as participative or information sharing. They could learn from mothers, mothers could learn from them and women in the community could learn from each other. However, VHWS defined the community as less knowledgeable than themselves. Mothers were ignorant and needed advice.

VHWS demonstrated a commitment to the community and to alleviating problems. They identified closely with the community and displayed a solidarity and closeness to the community. However, they were unwilling to acknowledge the autonomy of mothers to make decisions

on the basis of information. A key image of mothers in their descriptions was "laziness." This label was applied to those who had information but were uncooperative or unwilling to follow directives. Persistent failure to follow advice allowed for recourse to higher authorities to enforce compliance. There appeared to be a strong ethic of conformity to authority.

VHWS emphasised the need to understand mothers' problems in context. Their role was to assess the mother's situation, hear her problems and see her in the context of the household. However, while their advice giving was practical and orientated towards concrete suggestions this limited their ability to critically analyse structural issues. Focus on immediate day to day problems obscured discussion of overall social factors.

Hence VHWS' image of education contained a mix of elements from an empowerment model of education (an information sharing approach, close identification with and commitment to the community, an attempt to see problems in their context and orientated towards practical problem-solving) with authoritarian approaches (perceived community ignorance, emphasis on compliance with instruction and an emphasis on individual behaviour rather than social factors). Nurses' approach to education, on the other hand, appeared to contain even less of the empowerment model. Their approach to education is one of formalised, rule-driven instruction. They insisted on conformity to de-contextualised directives and reprimanded mothers who did not follow their advice. They appeared to make little attempt to understand mothers' views other than through the "kuteni" approach: why did you not do what I told you to do? They were reported to be authoritarian. However, the censure and blame was mixed with concern. Underlying their

apparent judgementalism appeared to real concern for the community. Although they blamed mothers for failing to follow their advice, they emphasised the individual's potential to make a difference to their own health. Nurses demanded individual responsibility, not in a self-reliant or autonomous way, but through obedience to clinic demands. In sum, there are aspects of health workers' perceptions of education which could form the basis of an empowerment approach, but this is undermined by the way in which they perceive the community and their own roles.

Self-reliance

The aim of the participatory process is to allow mothers to take active responsibility for their child's health or to promote self-reliance or autonomy. Self-reliance has much in common with the concept of self-care which has received increasing attention in the health promotion literature. Self-care is the process by which lay people assume responsibility for their own health and actively function for themselves or others to prevent, detect or treat disease and promote health (Shuval, Javetz, & Shye, 1989). Self-care is not only execution of activities to care for oneself but includes taking responsibility for decisions about one's own health (Van Agthoven & Plomp, 1989).

Hence, self-reliance implies a sense of personal control. Personal control consists of a person's beliefs about how well he or she can bring about good events and avoid bad events and underlies behaviour required for the promotion of health. Increased personal control has been associated with superior coping and adaptation and with positive mental and physical health. Belief in one's competence is closely tied to physical well-being, while belief

that one is helpless, is associated with morbidity and mortality (Peterson & Stunkard, 1989).

The effect of a diminished sense of personal control has received some discussion in the context of malnutrition and child health. In examining the influence of socio-economic factors on malnutrition, Griesel and Richter (1987) argue that poverty engenders a lowered sense of responsibility and self-confidence, is characterised by fatalistic, negative attitudes and resistance to learning which exacerbate the effects of the economic conditions themselves. One of the reasons suggested to explain the beneficial effects of maternal education on child survival in developing countries is the extent to which education promotes personal responsibility for and control over the welfare of children replacing the more resigned and fatalistic outlook of the uneducated mother (Cleland & van Ginneken, 1988). The material situation of women in Thornhill, of extreme social, economic and political powerlessness, does little to engender a sense of personal control. This poses an additional challenge to the health service to facilitate self-reliance in this context.

Health workers negotiate with clients their capacity for self-care through the way in which they construe of the social state of being sick. The relative power and authority of the participants shape the outcome of this negotiation (Van Agthoven & Plomp, 1989). Health workers are traditionally in an asymmetrical relationship with clients. They are viewed as the expert and authorised to make decisions with which the patient is expected to comply. Self-care implies certain shifts in the balance of authority and power in this relationship (Shuval et al., 1989).

The self-reliance objective of growth monitoring demands some shift in the social and professional values of the health service. In order to meet the self-reliance objective, medical practice has to make the patient the arbiter of the requirements for care and the quality of care. PHC dislodges health workers from a privileged position of knowledge and defines them in terms of their ability to meet patients' needs (Barnard, 1987). This increase in autonomy and independence from the formal health service may be perceived as threatening (Shuval et al., 1989) and hence resisted by health workers.

A structural feature of growth monitoring which promotes self-reliance is the home-based record card, the Road To Health Card. This card is to be kept by the mother, symbolising her centrality in caring for her child. It presents her child's growth in a manner potentially accessible to her so that she can initiate contact with the clinic and have immediate access to information about her child. Its role is to demystify medical records and place them in the hands of those to whom they belong. This structural feature of growth monitoring is very important but the way it is perceived and presented by the health service determines whether it facilitates or undermines this role.

The card was recognised by VHWs, nurses and mothers themselves to be providing information, displaying or "showing" the child's growth. Its use to the mother and her ownership of it was clearly acknowledged. Nurses argued that mothers should be motivated around understanding the card and VHWs itemised the card's ability to reassure the mother and facilitate action. The card allowed the mother to challenge the clinic and ensure that they were provided an appropriate service. It also gave mothers some independence

from the clinic. This suggests that the card did serve as a symbol of self-reliance and autonomy.

However, the card was defined by both health workers and mothers as useful to mothers precisely because it was required by the clinic. The card smoothed mothers' entry into and passage through the clinic. It facilitated prompt or any treatment at all. Mothers were instructed to bring it. It also facilitated access to health services in other areas or different health professionals. It was valued in its ability to provide information to health workers and therefore make their tasks and record keeping simpler.

The Road To Health Card, therefore, was valuable because it was required by others. The clinic required it, schools required it. Further, the analogy of the card being an identity document or "reference book" reinforced the notion that the card, although belonging to the mother, served someone else's purpose. The image of "reference books" in this context conjures up a rather authoritarian and bureaucratic image.

This dual function is not inherently negative. The card does have value both in facilitating self-reliance in mothers and in improving comprehensiveness and the quality of care by health workers. However, emphasising the latter role allows the card to become a policing device of the clinic. It entrenches the power of the clinic rather than the mother. Health workers instructed mothers to keep the card carefully, not for their own benefit, but to have it ever ready for health service. Some of the nurses expressed concern that mothers did not appreciate the card's value and tended to lose it. Mothers were reported to be afraid to

return to the clinic if they had lost their card because the nurses would "shout" at them.

A similar duality is observed in mothers' reports on their reasons for clinic attendance. Many mothers expressed a direct interest in weight. For others, weighing appeared to be a necessary correlate of receiving immunisations. Others accounted for their attendance merely as compliance with instruction. The high clinic attendance may be a result of passive compliance with the health service. Motivating and encouraging clinic attendance was isolated repeatedly by the nurses and the VHWS as an important part of their job.

As has been identified in other studies of health interventions, the self-reliance rhetoric can be used not to refer to real assumption of responsibility for the self but to refer to obedience to an institution's rules (Goldin, 1990). Participation is defined as compliance.

This also has important implications for the quality of the data. There are indications of a high level of acquiescence to the perceived authority of the health service in the community. The nurses who conducted the survey interviews were clearly identified with the health service. This suggests that the answers given by mothers in the survey would have been strongly influenced by what they perceived the health service wanted of them. The interviewers may not have been aware of nor been able to counter-act this tendency. The positive attitudes expressed by the mothers in the survey, while they do point to this information existing in the community, are probably an over-estimate or glowing account of their approach to the clinic.

This bias extends to the interviews conducted with health workers. In the interviews conducted with health workers, they appeared reluctant to criticise, and showed a high level of anxiety and lack of confidence in their views. The perceived power of the researcher, particularly the association with health service authority, may have influenced the respondents. Although, in this context, there was some opportunity to challenge their desire to please and alleviate their anxiety about evaluation.

A major limitation of the study is located in the relationship between the researcher and the "researched." Collusion between respondents and researcher may have reproduced the perceived medical orthodoxy rather than being able to challenge it.

Position of health workers

Health workers' image of education and their understanding of the purpose of the Road To Health Card does little to support the participatory objective of growth monitoring. In order to understand their approach, it is important to examine the position of health workers within the overall service hierarchy.

VHWS are situated at the lowest level of the health service. From previous research in the area, it was found that VHWS felt inadequate, powerless or "small" in relation to the nurses in the clinic (Kuhn & Hoogendoorn, 1991). Nichter's (1986) discussion of the health centre as a social system provides more insight into this process.

Health workers are keenly aware of each others' status which is in part determined by salary, specialised knowledge and access to sources of power and symbols of authority. When new categories of

workers are introduced, the delicate balance of power and status is disrupted. Health workers, among themselves, need to maintain their authority through restricting access to curative and palliative services which symbolise their status. A visible sharing of activities would demystify their role and claims to specialised knowledge (Nichter, 1986). It is thus hardly surprising that nurses are threatened and negate the role of VHWS.

However, in the community VHWS felt, by comparison, powerful and educated. Paradoxically, their association with the clinic and access to health knowledge allowed them to derive affirmation and status within the community. Perceiving the community as less knowledgeable than themselves reinforced their status and position as educators (Kuhn & Hoogendoorn, 1991).

The extent to which medicine maintains its symbolic, as opposed to operational, value by restricting access to the production and use of medical knowledge has received some discussion in the medical sociology literature. Medicine creates barriers to access to specialised knowledge in a multitude of ways such as its requirements of entry into medical schools and its esoteric vocabulary. Secrecy as a social form creates value and justifies rights, obligations and privileges. The power of knowledge carries an important corollary: access to knowledge becomes equated with innate or "natural" ability to use that knowledge, often reified in notions such as IQ. This denigrates those without knowledge, or attributes an inherent inability to incorporate the knowledge (Campbell-Heider & Pollock, 1987).

It is almost inevitable that VHWS undermine participative education ideals of PHC. They are precariously positioned close to the

community but as "bridges between the community and the health service" (Walt, 1988). However, they are in a relatively powerless position with respect to the health service. There is a strong need to maintain privileged access to knowledge. Although VHWS have received training in a model commensurate with the ideals of PHC, their relatively powerless position makes it difficult to put the ideals into practice.

The nurses, on the other hand, have been trained and socialised in a system which is deeply hierarchical and authoritarian. Nurses' training is orientated towards the delivery of individual health care, mostly curative. Health workers' position is clearly defined in terms of their duties in curative care and other technical, medical actions such as immunisation (Boerma, 1987). However, there remains ambiguity and conflict of status in the implementation of PHC.

Nichter (1987) describes the roles and values of health centre staff as, in general, antithetical to the egalitarian ideology of the PHC movement. Health workers are more responsive to health bureaucracy protocol and procedure than community medicine rhetoric (Nichter, 1986). A hierarchical and authoritarian health service is unlikely to support an approach to education which is inconsistent with its internal values. The health service, and the nursing profession in particular, emphasise protocol, conformity with directives and entrench symbols of authority. Growth monitoring is situated within this infrastructure.

Finally, the material conditions of health workers contribute to their motivation and morale. VHWS receive meagre remuneration. Nurses, although relatively advantaged compared to VHWS and

substantially more advantaged than the rest of the community, still have to face problems of bad working conditions, low salary and limited career opportunities. In addition, Ciskei policy of frequently and arbitrarily transferring nurses between areas, justified to provide services to remote rural areas, adds to their situation and is detrimental to building good relationships required for effective team work and implementation of PHC (Boerma, 1987).

As Nichter (1986) observes, PHC rhetoric aims high on Maslow's hierarchy of needs, better meeting the altruistic needs of planners than the basic needs and motivation of field staff. The position of health workers in the overall health service context is an important obstacle which prevents growth monitoring from achieving its participatory objectives. More research is needed into the position of health workers within the health system if PHC is to be successfully implemented.

Participation potential

To summarise the participation potential of growth monitoring in this context, community participation in growth monitoring is restricted to individual participation in specific instances of child care. There is little opportunity for community members to influence the delivery of health services or the structure of health care itself. Therefore, mothers' potential to exercise choice within this system is extremely limited.

In terms of mothers' individual participation, there is a high level of passive involvement. Most mothers attend the clinic, have their children weighed, and keep the Road To Health Card. Many can read the growth chart correctly and appear to believe that weighing

is important and that the card assists their understanding of a child's growth. Many reported that they had looked at the card at home and had discussed it with others. This indicates some level of autonomous participation. The food supplementation programme, however, had been unable to achieve even passive involvement.

Health workers largely perceived mothers' participation as compliance with health service demands. Although VHWS express solidarity with the community and some elements of an empowerment model of education, they perceived mothers as ignorant and emphasised passive obedience to instructions. Nurses' approach was more authoritarian. Both mothers and health workers identified a role of the home-based growth chart to promote self-reliance but its use to the health service assumed predominance. The way in which growth monitoring is perceived acknowledges its participatory role but the position of health workers in the overall health service infrastructure undermines the potential of growth monitoring to facilitate mothers' participation in their children's care.

At this point, the different components of the study come together. Health workers' construction of participation as compliance and failure encourage autonomous and self-reliant participation of mothers in their children's care serves to entrench the difficulty growth monitoring faced in making growth visible and facilitating nutrition intervention. Mothers' reluctance to acknowledge malnutrition for fear of taking on a devalued status, and the community rejection of the nutrition clinics as they marked mothers with an undesirable stigma and assumed control for the mother's role, are both reinforced by the exclusion of mothers from growth monitoring. If growth monitoring is to achieve its objectives,

more participation of mothers, and the community, will have to be incorporated.

Within the stigma literature, participation is identified as a key element in strategies to overcome social denigration. On the most active level, are the collective movements of stigmatised groups which have challenged definition of their status.

Collective re-definition of stigma has become an important component of many post-sixties social movements. These movements challenge the assumption that identities are imposed on powerless and passive individuals (Anspach, 1979). Anspach (1979) in her analysis of political activism among the disabled and former mental patients names the phenomenon identity politics. Through collective organisation, the stigmatised use political activism to both change public policy and alter self and social conceptions of their condition. This process is characteristic of a diverse range of movements including black consciousness, radical feminism and gay liberation (Anspach, 1979).

In many stigmatised conditions, individuals are handicapped in ways that make re-negotiation of the meaning of stigma by collective challenge impractical or unlikely (Goldin, 1990). However, the underlying principle of collective organisation built around self-reliance can be demonstrated on a less dramatic scale. Gussow and Tracy (1968), using the example of leprosy patients, showed that where the stigmatised lived together in a group, internal norms developed to counter-act the penetrating and discrediting views from without. Building relationships between women with malnourished children may be an important strategy to overcome stigma.

A further approach which has been suggested to overcome stigma is the formation of organisations which promote the interests of the stigmatised group. This helps to overcome stigma through processes of commitment and legitimation (Luken, 1987). While support and advocacy could be beneficial, sensitive organisation would be necessary to avoid associations of traditional charity groups who have often been, as identified by critical identity politics, contributors to, rather than alleviators of, stigma. However, if the community were more involved in the prevention of malnutrition its status as a stigmatised condition would be challenged. The suggestion to link food supplementation to political demands for food could be utilised as an important ideological tool to de-stigmatise the recipients.

More participation by mothers in the organisation of food supplementation would counteract the denigration implied in the clinic assuming control. Even if they played a relatively minor role in the actual implementation and logistical elements, control in the planning and management would begin to shift the locus of power.

As has been discussed previously, while this approach is sound in principle, its implementation raises enormous problems. Community participation is a slow and difficult process that cannot be directly orchestrated by planners. It is dangerous to invoke community participation simply as a means of gaining acceptance for or as a conduit for delivery of a package (Nabarro & Chinnock, 1988). This not only limits the potential of local organisation as a channel for health demands but may be resisted by the community themselves. Health is seldom perceived as the priority (Rifkin, 1986). Participation requires the right and responsibility to make

choices and have power over decisions (Rifkin et al., 1988). This implies the community's right to question whether the service should be provided at all.

The political context and power issues in the community need to be carefully considered. One of the most prevalent myths is that "the community" is a homogeneous block. Communities consist of various strata and interest groups and do not necessarily have any inherent reason for cooperating for the common good. In a situation of scarcity of resources, individual concerns are likely to override community goals. Moreover, community leaders do not always act in the interests of the community and may become involved to entrench their own position (Rifkin, 1986). Patterns of dominance within the community are likely to be replicated in the process. The sensitive political dynamics of rural areas will need to be considered in undertaking more community involvement. Mothers with malnourished children are likely to be very low on the social hierarchy. A way of including them will need to be considered.

Acceptance of community participation requires change in attitude. Health service provision alone is insufficient. Those who have a right to health care must learn to take responsibility for their health and those providing services must recognise and support that right (Rifkin, 1986). Both parties may be resistant to these changes in attitudes. Community members will often accept benefits but not as easily responsibilities in programmes. Health worker investments in the present system and internal conflicts were discussed earlier. The approach requires sustained commitment to carry it through. Whether there exists this commitment to participation as a principle in this community is uncertain.

Clearly, the road to participation is fraught with problems but that does not mean it should not be undertaken at all. Participation helps bridge the gap between non-intervention and imposed beneficence which disempowers and leads to the anomalous situation where the community refuses (albeit passively) to partake in an intervention potentially for their benefit. The difficulty of theorising the interaction between the individual and the social has been raised within the debates around individualist versus social conceptions within psychology. In the case of malnutrition there is an analogous problem. Growth failure is clearly a social problem founded in structural inequalities. Yet it occurs at the level of the individual child. It may be considered inherently conservative to focus on interventions for malnutrition which focus on individuals, however, intervention needs to be available to alleviate the effects of structural factors in the time before the fundamental causes of poverty are addressed. This focus should not obscure or distract attention away from organisation to address the social origins of poverty and malnutrition. Community participation in health interventions introduces an important added dimension into this dilemma. Community participation not only addresses some of the problems with implementing the intervention, but forms the basis of community organisation to address the fundamental causes of malnutrition itself.

CHAPTER 5: CONCLUSION

This study has been an exploratory one on a number of different levels. The underlying aim of the study was to investigate why growth monitoring had failed to improve nutritional status in Thornhill. It required the application of psychology to a problem not previously addressed in this way and explored the potential of psychology to provide insight into the complex intervention of growth monitoring. The study also explored the use of open-ended, qualitative methods in a context geographically remote and distanced by language and other social barriers. As such, the study perhaps raises more questions than it answers. Or rather, it has opened up a number of areas for further research and discussion. In conclusion, the nature of the research question and methods used will be discussed, followed by a summary of the key results and their implications and suggested avenues for further research.

Growth monitoring to prevent child malnutrition in under-developed areas, is widely promoted by a variety of international development agencies, particularly UNICEF. It is a complex intervention which straddles selective primary health care and comprehensive primary health care ideology. On the one hand, it is a screening strategy to monitor the growth of children to detect early signs of growth faltering. This is in order to select beneficiaries for targeted intervention, usually food supplementation. On the other hand, it draws on the participatory and empowerment aims of comprehensive primary health care, and aims to increase the participation of mothers in their children's care. Despite its high profile, growth monitoring has been increasingly questioned as a viable strategy to

improve nutritional status in under-developed areas. In Thornhill, where it was investigated for this study, it had failed to make an impact on the nutritional status of the community despite being systematically implemented by a health service with a demonstrated capacity for successful health interventions.

The question, therefore, has a strong applied angle. There is a need to identify areas of potential weakness and strength in the implementation of growth monitoring in order to develop more successful interventions for child malnutrition. The question is also firmly an inter-disciplinary one. Although PHC emphasises the social determinants and context of health and health care, and the antecedents and consequences of malnutrition have been a focus of psychological research, psychological research has not previously addressed interventions for child malnutrition in the context of PHC. The question therefore is exploring the potential of psychological theory and approaches to develop insight into the process of growth monitoring and how to strengthen this intervention. The study aimed to open up a neglected area of the application of psychology to address poverty-related illness and health in under-developed areas.

A psychological perspective was introduced by focusing on the perceptions of those involved with the process of growth monitoring: the mothers who were the target of the intervention, and the health workers (nurses and VHVs) who were responsible for implementing it. The study examined the extent to which their perceptions supported or undermined the underlying rationale and component aims of growth monitoring (making growth visible, facilitating nutrition intervention and facilitating mothers' participation in their childrens' care). A grounded theory

approach was adopted which aimed to derive conceptual categories from the perspectives and experience of the participants themselves as it was not possible at the outset to predict what the salient issues for these groups would be. A combination of exploratory interviews, informal observation and survey methods was used.

At this point it is necessary to return to the context of the study. The study was conducted in an impoverished rural area in the Ciskei. Most of the residents in the area cannot speak English and have little formal education. The context created a situation of wide social distance between the researcher and the researched. This made the application of exploratory methods difficult, especially as the time spent in the area was limited. In this sense, the study explored the possibility of using open-ended methods under conditions of distance.

Although it was possible to collect rich and detailed information, a major limitation of the study is located in the relationship between the researcher and the "researched." In the interviews conducted with health workers, they appeared reluctant to criticise, and showed a high level of anxiety and lack of confidence in their views. The perceived power of the researcher, particularly the association with health service authority, may have influenced the respondents. In a displaced way, this is further pronounced in the community survey in which the interviewers were nurses clearly identified with the health service. Collusion between respondents and researcher may have reproduced the perceived medical orthodoxy rather than being able to challenge it.

The results of the study showed that key systems for growth monitoring to be a successful intervention were in place. Most children had a growth chart, and were weighed often and regularly. Mothers showed interest in weighing and appeared to understand the purpose of growth monitoring. Health workers were able to understand and explain the growth chart. Many mothers had a construction of growth compatible with the model in the growth chart, and many could interpret the growth charts correctly. However, mothers with a malnourished child appeared to be reluctant to acknowledge that their own child was malnourished.

Reticence to acknowledge malnutrition, appeared to be a mechanism to resist acquiring a devalued status associated with having a malnourished child. Mothers were described as feeling embarrassed and afraid of the community, as having a malnourished child implied they were very poor and were unable to care for their child adequately. They were also afraid of health service censure and blame as health workers appeared to hold mothers personally responsible for malnutrition, attributing it to mothers' failure to follow their health promotion guidelines. The study suggested that stigma associated with having a malnourished child was an important factor which prevented growth monitoring reaching its objective of making growth visible.

The study also highlighted some elements of the operation of growth monitoring which could be strengthened. Mothers' understanding of the growth chart, especially the concept of growth velocity, could be further developed through sensitive acknowledgement of the needs of women with little education, and incorporation of lay concepts of growth. Growth appeared to be understood by mothers in a holistic manner and included notions of overall well-being and

development. Nutrition education provided also appears to be weak. Consultations between mothers and nurses at the well-baby clinic were perfunctory and brief. Nurses' health education messages were of a highly generalised nature and sometimes seemed inappropriate and decontextualised. Some of the deficiencies in nutrition education provided by nurses may be offset by VHWS who have a specific role in educating the community through their personalised contact with the community through home visits.

Growth monitoring had difficulty in facilitating nutrition intervention as the main intervention promoted, food supplementation, was poorly accepted by the community. Attending the nutrition clinic clearly marked a mother with the undesirable social stigma of having a malnourished child and associated blame of being very poor and neglectful about her child. It required that mothers "admit" to the clinic staff that they had not followed their instructions. Food supplementation was considered a hand-out which made the mother into a beggar. Nutrition clinics were described as taking responsibility for caring for the child out of mothers' hands. They usurped the mothers' role. Although weighing was not perceived as an intervention, it had a higher profile and was operationally better supported than food supplementation. Nutrition clinics appeared to be marginalised from the main functioning of the clinic and there seemed to be some uncertainty as to whose responsibility they were.

The social stigma of having a malnourished child which made mothers reluctant to acknowledge malnutrition and to attend the nutrition clinic is an important finding which has not been clearly elucidated in discussion of growth monitoring as an intervention before. Growth monitoring is precisely a structured and organised

method of identifying a child with growth faltering in order to target intervention. In this way, a psychological perspective contributes to understanding some of the problems with the implementation of growth monitoring. It emphasises the need to take into account the cognitive and emotional needs of those the intervention aims to assist.

These results rather than providing definitive answers have opened up the area for further research. A number of such areas emerge from this study. This study goes some way to describe health workers' perceptions of malnutrition and poverty. Health workers ascribed certain perceptions to the community and mothers of malnourished children. Further research is needed to investigate community attitudes towards malnutrition and poverty and particularly their perceptions of food supplementation and other forms of nutrition intervention. The experience of mothers with malnourished children needs to be described and their response to the health service and community perceptions of their situation needs to be investigated. It is also important to examine the way in which the attitudes of the community and health workers translate into practice and to describe the actual response of the community to a mother with a malnourished child.

This study has also suggested some possible means of re-organisation of the growth monitoring programme in Thornhill which may overcome some of these problems. A non-targeted food supplementation programme in which food is made widely available not on the basis of judged need but for the whole community may overcome the undesirable social stigma of the nutrition clinics. However, the logistics and costs of such a programme may be prohibitive. In addition, its ability to reach children most at

risk would need to be evaluated. Less stigmatised channels, such as creches, for food distribution could be explored and greater inter-sectoral cooperation i.e. more coordination between education, welfare, agricultural and income generating projects could be encouraged. Take-home food schemes, in which food is distributed directly to the care-giver for her to prepare at home, may be successful. Further training and support to develop a more sensitive approach to the problem by health workers may be beneficial. Further research is needed to pilot and evaluate the feasibility and effectiveness of these alternative methods of intervention.

The results of the study showed that health workers largely perceived mothers' participation in their children's care as compliance with health service demands. Although VHWS express solidarity with the community and some elements of an empowerment model of education, they perceived mothers as ignorant and emphasised passive obedience to instructions. Nurses' approach was more authoritarian. Both mothers and health workers identified a role of the home-based growth chart to promote self-reliance but its use to the health service assumed predominance.

At this point, the different components of the study come together. Health workers' construe participation as compliance. They fail to encourage autonomous and self-reliant participation of mothers in their children's care. This serves to entrench the difficulty growth monitoring faces in making growth visible and facilitating nutrition intervention. Mothers' reluctance to acknowledge malnutrition for fear of taking on a devalued status, and the community rejection of nutrition clinics as they marked mothers with an undesirable stigma and assumed control for the mother's

role, are both reinforced by the exclusion of mothers from growth monitoring.

This raises a number of areas for further research. In terms of health workers' perception of mothers' participation, it seemed that their relatively powerless position and location in an authoritarian structure made it difficult for them to support the participatory ideals of PHC. More research is needed into the difficulties faced by health workers in applying PHC concepts which are not necessarily commensurate with their position in the overall health service hierarchy. A second important area it raises for research is how to practically involve the community, mothers of young children and mothers of malnourished children particularly, in health intervention. In order to overcome the stigma and associated blame of having a malnourished child and the resentment felt towards the nutrition clinics, greater involvement of mothers in the process is needed. The community will need to be mobilised and facilitated to play a more active role in supporting and organising intervention around malnutrition. Ways of achieving such participation will need to be developed and the extent to which this is able to overcome these obstacles evaluated. Clearly, community participation cannot simply be orchestrated from outside. The community needs the motivation and ability to organise themselves from within. The process can only be supported from outside. In addition, a range of social improvements may be required before the necessary conditions are developed enough to interrupt the dependency chain.

Malnutrition and growth failure are clearly social problems which are founded in the structural inequalities of society. It may be considered inherently conservative to focus on interventions for

malnutrition which target individuals. However, malnutrition occurs at the level of an individual child and intervention needs to be available to alleviate the effects of structural factors in the time before the fundamental causes of poverty are addressed. This focus should not obscure or distract attention away from organisation to address the social origins of poverty and malnutrition. Community participation introduces an important additional dimension into this dilemma. Community participation not only addresses some of the problems with implementing the intervention, but forms the basis of community organisation to address the fundamental causes of malnutrition itself.

REFERENCES

- Abramson, J.H. (1974). **Survey methods in community medicine**. New York: Churchill Livingstone.
- Aden, A.S., Brannstrom, I., Mohamud, K.A., Persson, L.A., & Wall, S. (1990). The growth chart - a road to health chart? Maternal comprehension of the growth chart in two Somali villages. **Paediatric and Perinatal Epidemiology**, 4, 340-350.
- Ainlay, S.C., Becker, G., & Coleman, L.M. (Eds.). (1986). **The dilemma of difference: A multidisciplinary view of stigma**. New York: Plenum Press.
- Albrecht, G.L., Walker, V.G., & Levy, J.A. (1982). Social distance from the stigmatized: A test of two theories. **Social Science and Medicine**, 16, 1319-1327.
- Anderson, R.B.W. (1976). Perspectives on the role of the interpreter. In R.W. Brislin (Ed.), **Translation: Applications and research** (pp. 208-225). New York: Gardner Press.
- Anspach, R.R. (1979). From stigma to identity politics: Political activism among the physically disabled and former mental patients. **Social Science and Medicine**, 13A, 765-773.
- Barnard, D. (1987). The viability of the concept of a primary health care team: A view from the medical humanities. **Social Science and Medicine**, 25, 741-746.
- Beaton, G.H., & Ghassemi, H. (1982). Supplementary feeding programmes for young children in developing countries. **American Journal of Clinical Nutrition**, 35, 864-915.
- Becker, G. (1981). Coping with stigma: Lifelong adaptation of deaf people. **Social Science and Medicine**, 15B, 21-24.
- Beiser, M., Waxler-Morrison, N., Iacono, W.G., Lin, T.Y., Fleming, J.A.E., & Husted, J. (1987). A measure of the 'sick' label in psychiatric disorder and physical illness. **Social Science and Medicine**, 25, 251-261.
- Bledsoe, C.H., Ewbank, D.C., & Isiugo-Abanihe, U.C. (1988). The effect of child fostering on feeding practices and access to health services in rural Sierra Leone. **Social Science and Medicine**, 27, 627-636.
- Boerma, T. (1987). The viability of the concept of a primary health care team in developing countries. **Social Science and Medicine**, 25, 747-752.
- Bozzoli, B. (1983). Marxism, feminism and South African studies. **Journal of Southern African Studies**, 9, 139-171.

- Brannstrom, I., Aden, A.S., Ibrahim, M.M., Persson, L.A., & Wall, S. (1989, August). **Community participation in health programmes: Research methodologies and conceptual overview.** Paper presented at Fourth International Epidemiological Association African Regional Conference, Harare, Zimbabwe.
- Brislin, R.W. (1976). Introduction. In R.W. Brislin (Ed.), **Translation: Applications and research** (pp. 1-43). New York: Gardner Press.
- Briend, A., & Bari, A. (1989). Critical assessment of the use of growth monitoring for identifying high risk children in primary health care programmes. **British Medical Journal**, *298*, 1607-1611.
- Brown, L.D. (1985). People-centred development and participatory research. **Havard Educational Review**, *55*, 69-75.
- Browner, C.H. (1989). Women, households and health in Latin America. **Social Science and Medicine**, *28*, 461-473.
- Butler, J. (1989). **Child health surveillance in primary care: A critical review.** London: Her Majesty's Stationary Office.
- Cameron, N.A. (1984). The child health card - a cornerstone of preventive and promotive paediatrics. **South African Medical Journal**, *65*, 949-950.
- Cameron, N.A. (1986). Standards for human growth - their construction and use. **South African Medical Journal**, *70*, 422-425.
- Campbell-Heider, N., & Pollock, D. (1987). Barriers to physician-nurse collegiality: An anthropological perspective. **Social Science and Medicine**, *25*, 421-425.
- Cape, N. (1988). Growth charts: Help or hindrance? **Health Policy and Planning**, *3*, 167-170.
- Cassidy, C. M. (1982). Protein-energy malnutrition as a culture bound syndrome. **Culture, Medicine and Psychiatry**, *6*, 325-345.
- Cassidy, C. M. (1987). World-view conflict and toddler malnutrition: Change agent dilemmas. In N. Scheper-Hughes (Ed.), **Child Survival: Anthropological perspectives on the treatment and maltreatment of children** (pp. 293-324). Dordrecht: Reidel.
- Charmaz, K. (1990). 'Discovering' chronic illness: Using grounded theory. **Social Science and Medicine**, *30*, 1161-1172.
- Cleland, J.G., & van Ginneken, J.K. (1988). Maternal education and child survival in developing countries: The search for pathways of influence. **Social Science and Medicine**, *27*, 1357-1368.
- Creyghton, M. (1977). Communication between peasant and doctor in Tunisia. **Social Science and Medicine**, *11*, 319-324.

- Crisp, N.G., & Donald, P.R. (1987). The 'Road To Health' card and immunisation records. **South African Medical Journal**, 72, 331-33.
- Cummings, K.M., Becker, M.H., & Maile, M.C. (1980). Bringing the models together: An empirical approach to combining variables used to explain health actions. **Journal of Behavioral Medicine**, 3, 123-145.
- Davies, D.P., & Williams, T. (1983). Is weighing babies in clinics worthwhile? **British Medical Journal**, 286, 860-862.
- Dean, A.D., Dean, J.A., Burton, J.H., & Dicker, R.C. (1990). **Epi Info Version 5: A word processing, database, and statistics program for epidemiology on microcomputers**. Atlanta: Centers for Disease Control.
- De Kadt, E. (1989). Making health policy management intersectoral: Issues of information analysis and use in less developed countries. **Social Science and Medicine**, 29, 503-514.
- Dixon, R.A. (1986). Growth monitoring. **Lancet**, 18, 152.
- Donald, P.R., & Hesselning, P.B. (1984). The 'road to health' card in paediatric outpatient department. **South African Medical Journal**, 66, 596.
- Donald, P.R., & Hesselning, P.B. (1987). The 'road to health' card in paediatric outpatient department. **South African Medical Journal**, 72, 356.
- Donald, P.R., & Kibel, M.A. (1984). The child health card - a cornerstone of preventive and promotive paediatrics. **South African Medical Journal**, 65, 423 - 425.
- Drennan, G., Levett, A., & Swartz, L. (1991). Hidden dimensions of power and resistance in the translation process: A South African study. **Culture, Medicine and Psychiatry**, 15, 1-21.
- East African Medical Journal Editorial (1987). Growth monitoring - A way to help improve the growth of young children and reduce chronic child malnutrition that deserves more attention in East Africa. **East African Medical Journal**, 64, 793-794.
- Fagbule, D.O., Olaosebikan, A., & Parakoyi, D.B. (1990). Community awareness and utilization of growth charts in a semi-urban Nigerian community. **East African Medical Journal**, 67, 69-74.
- Feild, H.S. (1978) Attitudes towards rape: A comparative analysis of police, rapists, crisis counselors and citizens. **Journal of Personality and Social Psychology**, 36, 156-179.
- Fincham, R.J. (1985). **Food and nutrition in South Africa: Report of the Carnegie Working Group**. Post Conference Series No 1, Second Carnegie Inquiry into Poverty and Development in Southern Africa, Cape Town.

- Finan, T.J., & Henderson, H.K. (1988). The logic of Cape Verdean female-headed households: Social response to economic scarcity. *Urban Anthropology*, 17, 87-103.
- Foucault, M. (1975). *The birth of the clinic: An archaeology of medical perception*. New York: Vintage Books.
- Forsyth, S.J. (1982). Assessment of nutrition education: Urban mothers' understanding of weight for age graphs. *Papua New Guinea Medical Journal*, 25, 239-247.
- Forsyth, S. J. (1984). Nutrition education: Lack of success in teaching Papua New Guinea mothers to distinguish 'good' from 'not good' weight development charts. *Food and Nutrition Bulletin*, 6, 22-26.
- Furnham, A. (1982). Why are the poor always with us? Explanations for poverty in Britain. *British Journal of Social Psychology*, 21, 311-322.
- Furnham, A. (1985). The determinants of attitudes towards social security recipients. *British Journal of Social Psychology*, 24, 19-27.
- Furnham, A., & Gunter, B. (1984). Just world beliefs and attitudes towards the poor. *British Journal of Social Psychology*, 23, 265-269.
- Furnham, A. & Procter, E. (1989). Belief in a just world: review and critique of the individual difference literature. *British Journal of Social Psychology*, 28, 365-384.
- Geefhuysen, J., & Soetrisno, R. (1988). Nutritional status of poor preschool children in a defined area in Java - can weight monitoring influence nutrition? *International Journal of Epidemiology*, 17, 449-557.
- Gerein, N. (1988). Is growth monitoring worthwhile? *Health Policy and Planning*, 3, 181-194.
- Gerein, N.M., & Ross, D.A. (1991). Is growth monitoring worthwhile? An evaluation of its use in three child health programmes in Zaire. *Social Science and Medicine*, 32, 667-675.
- Ginsburg, H. (1972). *The myth of the deprived child: Poor children's intellect and education*. Englewood Cliffs: Prentice-Hall.
- Glik, D.C., Parker, K., Muligande, G., & Hategikamana, B. (1987). Integrating qualitative and quantitative survey techniques. *International Quarterly of Community Health Education*, 7, 181-200.
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Harmondsworth: Penguin.
- Goldin, C.S. (1990). Stigma, biomedical efficacy and institutional control. *Social Science and Medicine*, 30, 895-900.

- Gopaldas, T., Christian, P.S., Abbi, R.D., & Gujral, S. (1990). Does growth monitoring work as it ought to in countries of low literacy. *Journal of Tropical Paediatrics*, 36, 322-327.
- Gorstein, J., & Akre, J. (1988). The use of anthropometry to assess nutritional status. *World Health Statistics Quarterly*, 41, 48-58.
- Gopalan, C., & Chatterjee, M. (1985). *Use of growth charts for promoting child nutrition: A review of global experience.* (Special Publication Series No. 2). New Delhi: Nutrition Foundation of India.
- Grant, J.P. (1987). *The state of the world's children, 1987.* New York: Oxford University Press for UNICEF.
- Grant, K., & Stone, T. (1986). Maternal comprehension of a home based growth chart and its effect on growth. *Journal of Tropical Paediatrics*, 32, 255-257.
- Griesel, R.D., & Richter, L.M. (1987). Psycho-social studies of malnutrition in Southern Africa. *World Review of Nutrition and Diet*, 54, 71-104.
- Gussow, Z., & Tracy, G.S. (1968). Status, ideology, and adaptation to stigmatized illness: A study of leprosy. *Human Organization*, 27, 316-325
- Hammond, M., & Collins, R. (1986a). Maternal and child health services through the mother and the child's eyes. *Nursing RSA*, 1(7), 11-12.
- Hammond, M., & Collins, R. (1986b). Maternal and child health services: A nurse's perspective. *Nursing RSA*, 1(8), 14-16.
- Hareven, T. (1985). Historical changes in the family and the life course: Implications for child development. *Monographs for the Society for Research in Child Development*, 50, 8-23.
- Heggenhougen, H.K., & Shore, L. (1986). Cultural components of behavioural epidemiology: Implications for primary health care. *Social Science and Medicine*, 22, 1235-1245.
- Henry, F., Briend, A., & Cooper, E. (1989). Targeting nutritional interventions: Is there a role for growth monitoring? *Health Policy and Planning*, 4, 295-300.
- Herek, G.M., & Glunt, E. K. (1988). An epidemic of stigma: Public reactions to AIDS. *American Psychologist*, 43, 886-891.
- Holtzman, W.H., Evans, R.I., Kennedy, S., & Iscoe, I. (1987). Psychology and health: Contributions of psychology to the improvement of health and health care. *Bulletin of the World Health Organisation*, 65, 913-935.
- Hugo-Hamman, C.T., Kibel, M.A., Michie, C.A., & Yach D. (1987). Nutrition status of pre-school children in a Cape Town township. *South African Medical Journal*, 72, 353-355.

- Janz, N.K., & Becker, M.H. (1984). The health belief model: A decade later. **Health Education Quarterly**, *11*, 1-47.
- Jelliffe, E.F.P., & Jelliffe, D.B. (1987). Algorithms, growth monitoring and nutritional intervention. **Journal of Tropical Pediatrics**, *33*, 290-295.
- Jenkins, C. L., Orr-Ewing, A.K. & Heywood, P.F. (1984). Cultural aspects of early childhood growth and nutrition among the Amele of lowland Papua New Guinea. **Ecology of Food and Nutrition**, *14*, 261-275.
- Joseph, J.G., Montgomery, S.B., Emmons, C.A., Kessler, R.C., Ostrow, D.G., Wortman, C.B., O'Brien, K., Eller, M., & Eshleman, S. (1987). Magnitude and determinants of behavioral risk reduction: Longitudinal analysis of a cohort at risk for AIDS. **Psychology and Health**, *1*, 73-96.
- Karmali, J., & Madeley, R.J. (1986). Mothers' attitudes to a child health clinic in a deprived area of Nottingham. **Public Health**, *100*, 156-165.
- Katz, I. (1979). Some thoughts about the stigma notion. **Personality and Social Psychology Bulletin**, *5*, 447-460.
- Keusch, G.T., & Scrimshaw, N.S. (1986). Selective primary health care: Strategies for control of disease in the developing world. **Reviews of Infectious Diseases**, *8*, 273-287.
- Kottler, A. (1990). South Africa: Psychology's dilemma of multiple discourses. **Psychology in Society**, *13*, 27-36.
- Kuhn, L., & Zwarenstein, M. (1990a). Evaluation of a village health worker programme: The use of village health worker retained records. **International Journal of Epidemiology**, *19*, 11-18.
- Kuhn, L., & Zwarenstein, M. (1990b). Weight information on 'Road To Health' card inadequate for growth monitoring? **South African Medical Journal**, *78*, 495-496.
- Kuhn, L., Zwarenstein, M., Thomas, T., Yach, D., Hoogendoorn, L., Conradie, H., & Katzenellenbogen, J. (1990). Village health-workers and GOBI-FFF: An evaluation of a rural programme. **South African Medical Journal**, *77*, 471-475.
- Kuhn, L., & Hoogendoorn, L. (1991). **The use of participatory techniques to evaluate village health workers' perceptions of their role in a primary health care project in Hewu, South Africa.** Manuscript submitted for publication.
- Lakhani, A.D., Avery, A., Gordon, A., & Tait, N. (1984). Evaluation of a home based record booklet. **Archives of Diseases in Childhood**, *59*, 1076-1081.
- Lancet Editorial (1985). Growth monitoring: Intermediate technology or expensive luxury. **Lancet**, *ii*, 1337-1338.

- Launer, L.J., & Habicht, J.P. (1989). Concepts about infant health, growth and weaning: A comparison between nutritional scientists and Madurese mothers. **Social Science and Medicine**, **29**, 13-22.
- Lefley, H.P. (1989). Family burden and family stigma in major mental illness. **American Psychologist**, **44**, 556-560.
- Leslie, J. (1989). Women's time: A factor in the use of child survival technologies. **Health Policy and Planning**, **4**, 1-16.
- Lerner, M.J., & Simmons, C.H. (1966). Observers' reaction to the 'innocent victim': Compassion or rejection. **Journal of Personality and Social Psychology**, **4**, 203-210.
- Levett, A. (1987). Childhood sexual abuse: Event, fact or structure. **Psychology in Society**, **8**, 79-100.
- Levett, A. (1989). Psychological trauma and childhood. **Psychology in Society**, **12**, 19-32.
- Lozoff, B. (1989). Nutrition and behavior. **American Psychologist**, **44**, 231-236.
- Luken, P.C. (1987). Social identity in later life: a situational approach to understanding old age stigma. **International Journal of Aging and Human Development**, **25**, 177-193.
- Liddell, C., Kvalsvig, J., Shabalala, A., & Masilela, P. (1989). **Historical perspectives on childhood and developmental psychology: The case of South Africa**. Manuscript submitted for publication.
- MacCormack, C.P. (1988). Health and the social power of women. **Social Science and Medicine**, **26**, 677-683.
- Mathews, C. (1989). **Primary Health Care in the Western Cape: An evaluation**. Unpublished manuscript, Medical Research Council, Centre for Epidemiological Research in Southern Africa, Cape Town.
- Miles, M.B. & Huberman, A.M. (1984). **Qualitative data analysis: A sourcebook of new methods**. Beverly Hills: Sage.
- Morley, D. (1986). Growth monitoring. **Lancet**, **18**, 152.
- Morley, D. & Woodland, M. (1979). **See how they grow - Monitoring child growth for appropriate health care in developing countries**. London: Macmillan.
- Mull, D.S. (1991). Traditional perceptions of marasmus in Pakistan. **Social Science and Medicine**, **32**, 175-192.
- Murphy, R.F., Scheer, J. Murphy, Y., & Mack, R. (1988). Physical disability and social liminality: A study in the rituals of adversity. **Social Science and Medicine**, **26**, 235-242.
- Mukhopadhyay, C.C., & Higgins, P.J. (1988). Anthropological studies of women's status revisited: 1977-1987. **Annual Review of Anthropology**, **17**, 461-495.

- Nabarro, D., & Chinnock, P. (1988). Growth monitoring - Inappropriate promotion of an appropriate technology. **Social Science and Medicine**, 26, 941-948.
- National Centers for Health Statistics. (1976). **Growth Charts** (HRS 76-1126 25,3). Rockville: U.S. Public Health Service, Health Resources Administration.
- Nations, M.K., & Rebhun, L.A. (1988). Mystification of a simple solution: oral rehydration therapy in north east Brazil. **Social Science and Medicine**, 27, 25-38.
- Navarro, V. (Ed.). (1979). **Imperialism, health and medicine**. New York: Baywood.
- Nichter, M.A. (1986). The primary health care centre as a social system: PHC, social status and the issue of team-work in South Asia. **Social Science and Medicine**, 23, 347-355.
- Nichter, M., & Nordstrom, C. (1989). A question of medicine answering: Health commodification and the social relations of healing in Sri Lanka. **Culture, Medicine and Psychiatry**, 13, 367-390.
- Patton, M.Q. (1980). **Qualitative evaluation methods**. Beverly Hills: Sage.
- Pelto, G.H. (1987). Cultural issues in maternal and child health and nutrition. **Social Science and Medicine**, 25, 553-559.
- Peterson, C., & Stunkard, A.J. (1989). Personal control and health promotion. **Social Science and Medicine**, 28, 819-828.
- Phillips, M.J. (1990). Damaged goods: Oral narratives of the experience of disability in American culture. **Social Science and Medicine**, 30, 849-857.
- Pielemeier, N.R. (1985). Mothers' knowledge related to child health and nutrition in Ghana and Lesotho. **Journal of Tropical Paediatrics**, 31, 131-139.
- Preston-Whyte, E. (1978). Families without marriage: A Zulu case study. In J. Argyle & E. Preston-Whyte (Eds.), **Social system and tradition in Southern Africa** (pp. 55-85). Cape Town: Oxford University Press.
- Richter-Strydom, L.M., Griesel, R.D., & Glatthaar, I. (1985). Effects of a nutrition education programme on the psychological performance of malnourished children. **South African Medical Journal**, 68, 659-662.
- Ridley, B. (1989). Family response in head injury: denial...or hope for the future? **Social Science and Medicine**, 29, 555-561.
- Rifkin, S.B. (1986). Lessons from community participation in health programmes. **Health Policy and Planning**, 1, 240-249.

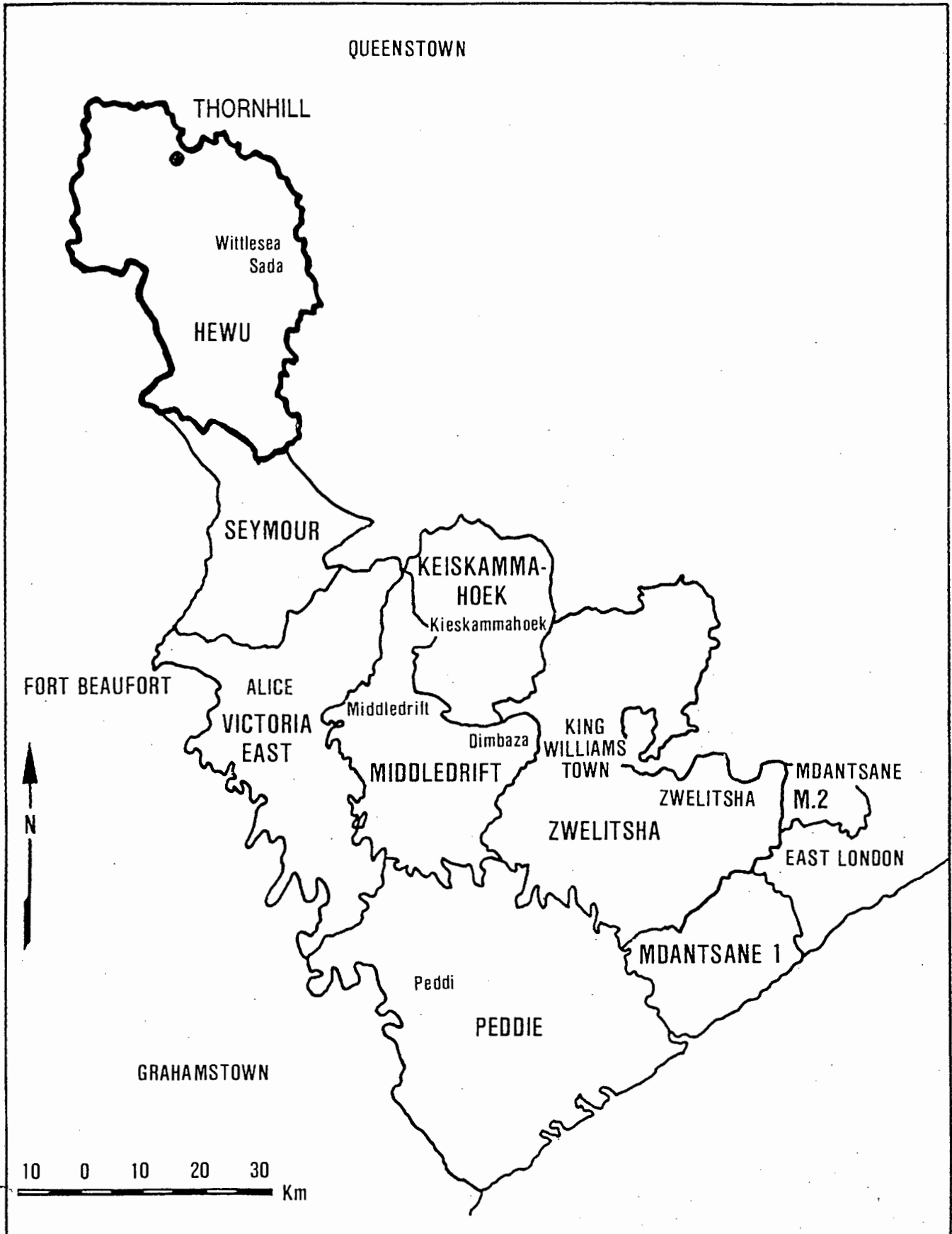
- Rifkin, S.B., Muller, F., & Bichmann, W. (1988). Primary health care: On measuring participation. **Social Science and Medicine**, 26, 931-940.
- Riley, D. (1979). War in the nursery. **Feminist Review**, 2, 82-108.
- Riley, D. (1981). 'The Free Mothers': Pronatalism and working women in industry at the end of the last war in Britain. **History Workshop**, 11, 59-120.
- SAS Institute Inc. (1985). **SAS Users Guide: Basics, Version 5 Edition**. Cary, NC: SAS Institute Inc.
- Scambler, G., & Hopkins, A. (1990). Generating a model of epileptic stigma. **Social Science and Medicine**, 30, 1187-1194.
- Scheper-Hughes, N. (1987). The cultural politics of child survival. In N. Scheper-Hughes (Ed.), **Child Survival: Anthropological perspectives on the treatment and maltreatment of children** (pp. 1-29). Dordrecht: Reidel.
- Seedat, M., Cloete, N., & Shochet, I. (1988). Community psychology: Panic or panacea. **Psychology in Society**, 11, 39-54.
- Serdula, M.K., Herman, D., Williamson, D.F., Binkin, N.J., Aphane, J.M., & Trowbridge, F. (1987). Validity of clinic-based surveillance for prevalence estimation of undernutrition. **Bulletin of the World Health Organisation**, 65, 529-533.
- Sharp, J., & Spiegel, A. (1984). **Vulnerability to impoverishment in South African rural areas: The erosion of kinship and neighbourhood as social resources**. Carnegie Conference Paper No. 52, Second Carnegie Inquiry into Poverty and Development in Southern Africa, Cape Town.
- Showers, K. (1980). A note on women, conflict and migrant labour. **South African Labour Bulletin**, X, 54-57.
- Shuval, J.T., Javetz, R., & Shye, D. (1989). Self-care in Israel: Physicians' views and perspectives. **Social Science and Medicine**, 29, 233-244.
- Social Science and Medicine Editorial (1988). The debate on selective or comprehensive primary health care. **Social Science and Medicine**, 26, 877-878.
- Southern African Labour and Development Research Unit (1983). **Health and health services in the Ciskei: Community health research report**. (Saldrú Working Paper No. 54). Cape Town: Author.
- Southern African Labour and Development Research Unit (1982). **Questionnaires are no short cut**. (Saldrú Working Paper No. 48). Cape Town: Author.

- Spiegel, A.D. (1984). **'Internal' migration and rural differentiation: A field report from the Matatiele/Qacha's Nek region.** Carnegie Conference Paper No. 51, Second Carnegie Inquiry into Poverty and Development in Southern Africa, Cape Town.
- Steere, J. (1984). **Ethics in clinical psychology.** Cape Town: Oxford University Press.
- Stein, R.E.K., & Jessop, D.J. (1988). Thoughts on interdisciplinary research. **Journal of Clinical Epidemiology, 41,** 813-815.
- Surplus People's Project. (1983). **Forced removals in South Africa. Volume 2.** Cape Town: University of Cape Town Press .
- Swartz, L., & Foster, D. (1984). Images of culture and mental illness: South African psychiatric approaches. **Social Dynamics, 10,** 17-25.
- Thomas, G.C. (1981). The social background of childhood nutrition in the Ciskei. **Social Science and Medicine, 15A,** 551-555.
- Triandis, H.C. & Brislin, R.W. (1984). Cross-cultural psychology. **American Psychologist, 39,** 1006-1016.
- Trowbridge, F.L., Newton, L., Huong, A., Staehling, N., & Valverde, V. (1980). Evaluation of nutrition surveillance indicators. **Bulletin of the Pan American Health Organisation, 14,** 238-243.
- Tulchinsky, T.H., Acker, C., El Malki, K., Socolar, R.S., & Reshef, A. (1985). Use of the growth charts as a simple epidemiological monitoring system of nutritional status in children. **Bulletin of the World Health Organisation, 63,** 1137-1140.
- Tumwine, J.K. (1989). Community participation as myth or reality: A personal experience from Zimbabwe. **Health Policy and Planning, 4,** 157-161.
- Turner, S.A., & Ingle, R.B. (1985). **New developments in nutrition education.** (Nutrition Education Series ED/84/WS/7). Paris: UNESCO Nutrition Education Programme.
- Turshen, M. (1986). Health and human rights in a South African Bantustan. **Social Science and Medicine, 22,** 887-892.
- Van Agthoven, W.M., & Plomp, H.N. (1989). The interpretation of self-care: A difference in outlook between clients and home-nurses. **Social Science and Medicine, 29,** 245-252.
- Van der Vliet, V. (1984). **Staying single: A strategy against poverty?** Carnegie Conference Paper No. 116, Second Carnegie Inquiry into Poverty and Development in Southern Africa, Cape Town.
- Wagstaff, L., & de Vries, G. (1986). Children's growth charts in theory and practice. **South African Medical Journal, 70,** 426-427.

- Walt, G. (1988). CHWs: Are national programmes in crisis? **Health Policy and Planning, 3**, 1-21.
- Walters, S. (1989). **Education for democratic participation**. Bellville: Centre for Adult and Continuing Education (CACE), University of the Western Cape.
- Warren, K.S. (1988). The evolution of selective primary health care. **Social Science and Medicine, 26**, 891-898.
- Werner, D., & Bower, B. (1982). **Helping health workers learn**. Palo Alto: Hesperian Foundation.
- Wisner, B. (1988). GOBI vs. PHC? Some dangers of selective primary health care. **Social Science and Medicine, 26**, 963-969.
- Woelk, G.B., Moyo, I.M. & Mehlomakhulu, M.N. (1986). Knowledge of weight-for-age growth curves and maternal and childhood immunisation of mothers attending children's clinics in Harare. **Central African Journal of Medicine, 32**, 71-78.
- Yach, D., Hoogendoorn, L., & von Schirnding, Y.E.R. (1987). Village health workers are able to teach mothers how to safely prepare sugar/salt solutions. **Paediatric and Perinatal Epidemiology, 1**, 153-161.
- Yach, D., Katzenellenbogen, J., & Conradie, H. (1987). Ciskei infant mortality study: Hewu district. **South African Journal of Science, 83**, 416-421.

APPENDICES

Appendix I: Map of Eastern Cape showing Ciskei and Thornhill.



Appendix II: Road To Health Card used in the survey to measure mothers' knowledge of how to read the growth chart. In practice, these cards are issued to all mothers at the clinic.

REASONS FOR SPECIAL CARE

● UKUBA UMNTWANA WAKHO UYAHAMBISA — MENZELE LO MXUBE



● ILITHA ENYE YAMANZI ABILISIWEYO NACOCEKILEYO



● 5 IITISPUNI ZESWEKILE
● ½ YETISPUNI YETUWA

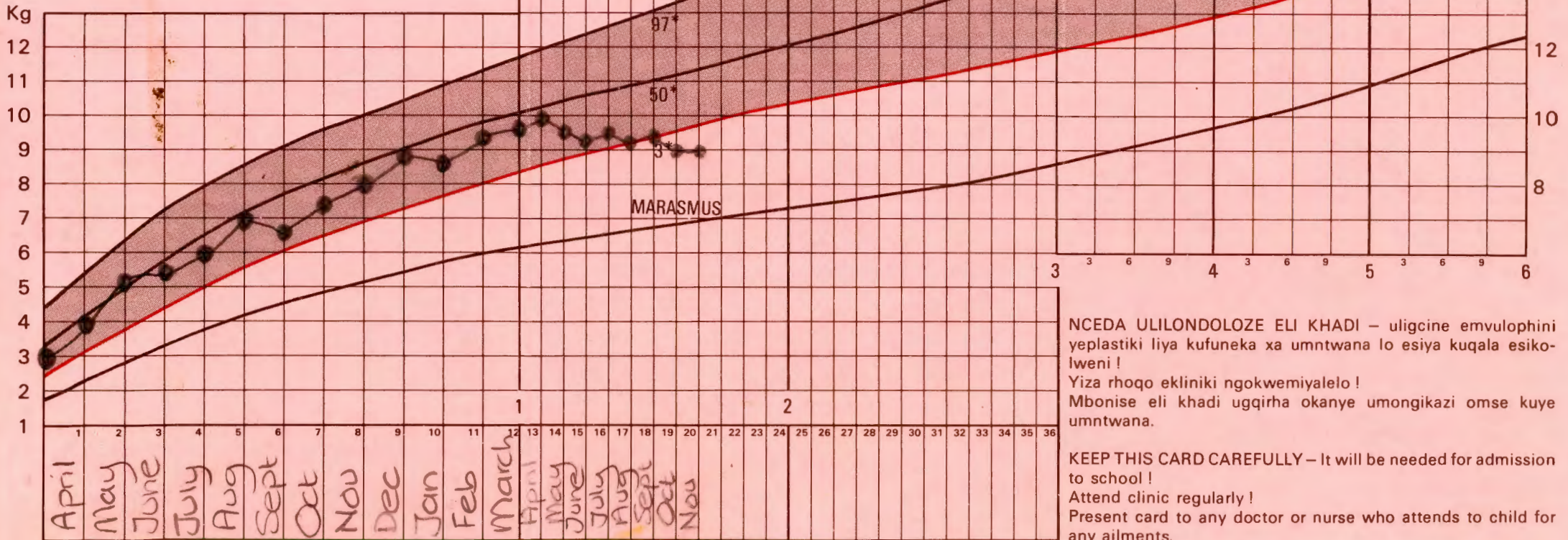
● NGOKUKHAWULEZA :

● MNIKE UMNTWANA ASELE
● KANGANGOKO

● SUKUYEKA UKUMNIKA UBISI

● MSE UMNTWANA EKLINIKI NGOKUKHAWULEZA

CARD B:
—



NCEDA ULILONDOLOZE ELI KHADI — uligcine emvulophini yeplastiki liya kufuneka xa umntwana lo esiya kuqala esikolweni!
Yiza rhoqo ekliniki ngokwemiyalelo!
Mbonise eli khadi ugqirha okanye umongikazi omse kuye umntwana.

KEEP THIS CARD CAREFULLY — It will be needed for admission to school!
Attend clinic regularly!
Present card to any doctor or nurse who attends to child for any ailments.

Appendix III: Record card kept by village health workers for each child they visit. Village health workers update the cards on each visit with respect to the GOBI-FFF indicators displayed on the card.

Umntwana

Umama

Idilesi

Umithe

Balisiwe Akabaliswanga



| UGONYO | Date |
|---------------|------|
| BCG 1st | |
| BCG 2nd | |
| BCG 3rd | |
| Polio 1st | |
| Polio 2nd | |
| Polio 3rd | |
| Polio Booster | |
| DWT 1st | |
| DWT 2nd | |
| DWT 3rd | |
| DWT Booster | |
| Measles 1 | |
| Measles 2 | |

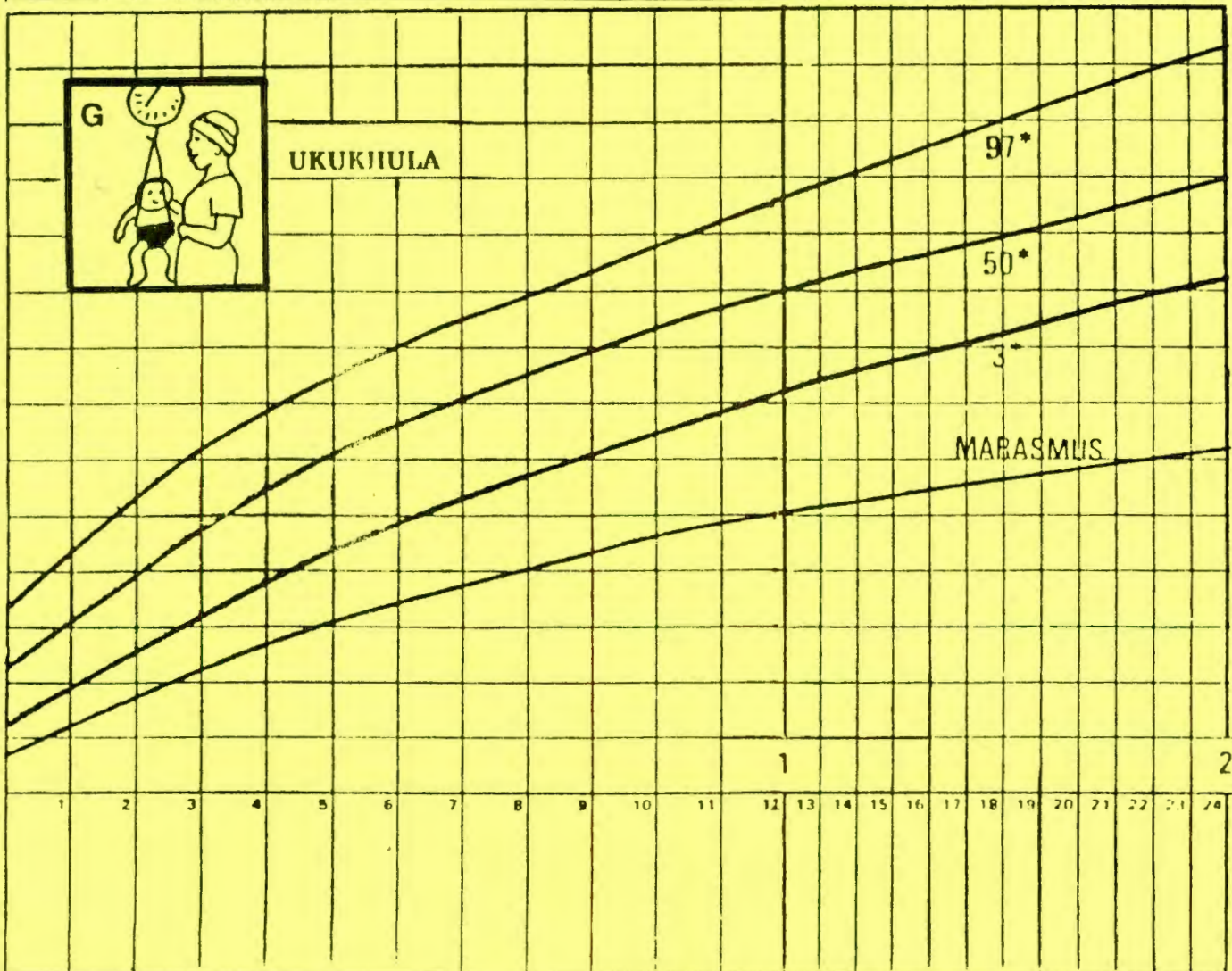
Ukuzalwa Kosana

Umhla wokuzalwa

Ubunzima kg

Inkwenkwe Ntombazana

Ekhaya Ekliniki Esibedlela



Appendix IV: Questionnaire administered by nurses in the survey of mothers of children under three years.



*****THORNHILL GOBI-FFF QUESTIONNAIRE 2 1989*****

This questionnaire is to be asked for every child under 3 years old who lives in the village

Date:

Interviewer:

Is the white household card available?

| | |
|--------|--|
| 1. Yes | |
| 2. No | |

Household envelope number:

| |
|---------|
| 1 |
| 5 1 0 4 |
| 10 |

| |
|----|
| 12 |
|----|

| |
|----|
| 17 |
|----|

1. Who is answering the questions for this child?

| | |
|----------------|--|
| 1. Mother | |
| 2. Grandmother | |
| 3. Other | |
| | |

| |
|----|
| 18 |
|----|

2. First name of child..... 30

3. Surname of child..... 42

4. First name of mother..... 54

5. Surname of mother..... 66

6. Sex of child

| | |
|---------|--|
| 1. Boy | |
| 2. Girl | |

| |
|----|
| 67 |
|----|

7. How old is the child?

.....yearsmonths

| | | |
|--|--|--|
| | | |
|--|--|--|

69

8. How old is the child's mother?years

| | | |
|--|--|--|
| | | |
|--|--|--|

71

9. Is this child a first born?

| | |
|---------------|--|
| 1. Yes | |
| 2. No | |
| 3. Don't know | |

| |
|---|
| 2 |
|---|

| |
|--|
| |
|--|

2

10. Who usually looks after this child?

| | |
|----------------|--|
| 1. Mother | |
| 2. Grandmother | |
| 3. Other | |

| |
|--|
| |
|--|

3

11. Was the child born in a:

| | |
|--------------------|--|
| 1. Clinic/hospital | |
| 2. Home | |
| 3. Other | |
| 4. Don't know | |

| |
|--|
| |
|--|

4

12. What is the highest standard this child's mother passed at school?

| | |
|-------------------|--|
| 1. None | |
| 2. Sub A or Sub B | |
| 3. Std | |
| 4. Don't know | |

| | | |
|--|--|--|
| | | |
|--|--|--|

6

13. Did the child have 3 or more runny stools per day, anytime from 2 weeks ago to now?

| | |
|---------------|--|
| 1. Yes | |
| 2. No | |
| 3. Don't know | |

7

14. Is this child still being breastfed?

| | |
|--------------------------|--|
| 1. Never breastfed | |
| 2. Breastfeeding stopped | |
| 3. Still being breastfed | |
| 4. Don't know | |

8

15. If breastfeeding has stopped, how old was the child when breastfeeding stopped?

.....(months)

10

16. Do you know how to make sugar-salt solution?

| | |
|--------|--|
| 1. Yes | |
| 2. No | |

11

IF YES,

| |
|--|
| How big is the container you mix it in? |
| How much salt do you use? |
| How much sugar do you use? |

12

13

14

17. What treatment did the child get, last time it had diarrhoea?

| | |
|----------------------------------|--|
| 1. Child has never had diarrhoea | |
| 2. Sugar/salt solution/Sorol | |
| 3. Other | |
| | |
| 4. Don't know | |

15

18. Is the child going to daily nutrition at the moment?

| | |
|---------------|--|
| 1. Yes | |
| 2. No | |
| 3. Don't know | |

16

19. Did the child have 3 or more runny stools anytime from yesterday to now?

| | |
|---------------|--|
| 1. Yes | |
| 2. No | |
| 3. Don't know | |

17

ASK ONLY IF THE MOTHER IS ANSWERING:

20. Is the child's mother using a method of family planning at present?

| | |
|---------------------------------------|--|
| 1. Yes | |
| 2. No | |
| 3. Rather not say | |
| 4. Mother not answering questionnaire | |

18

21. In the last month, has a village health worker visited you in your home?

| | |
|---------------|--|
| 1. Yes | |
| 2. No | |
| 3. Don't know | |

| | |
|--|----|
| | 19 |
|--|----|

22. Do you think that this child is growing well at the moment?

| | |
|-----------------------------------|--|
| 1. Yes, growing well | |
| 2. Sort of neither well nor badly | |
| 3. No, not growing well | |
| 4. Don't know | |

| | |
|--|----|
| | 20 |
|--|----|

How do you know for yourself whether this child is growing well or not?

.....

.....

.....

.....

.....

.....

| | | | | | |
|--|--|--|--|--|----|
| | | | | | 24 |
|--|--|--|--|--|----|

23. If this child is not growing well, what can you, yourself, or anyone else do about it?

.....

.....

.....

.....

.....

.....

| | | | | | |
|--|--|--|--|--|----|
| | | | | | 28 |
|--|--|--|--|--|----|

24. Why do you think that children have Road To Health Cards (pink clinic cards)? (Is the card of any use to the mother? Is the card of any use to the clinic? Ask for all reasons).

.....
.....
.....
.....
.....
.....

| | | | | |
|--|--|--|--|----|
| | | | | 32 |
|--|--|--|--|----|

25. What do you think makes a child stop growing?

.....
.....
.....
.....
.....

| | | | | |
|--|--|--|--|----|
| | | | | 36 |
|--|--|--|--|----|

26. Have you ever taken this child to the clinic, only to be weighed, even if he or she is not sick?

| | |
|---------------|--|
| 1. Yes | |
| 2. No | |
| 3. Don't know | |

| | |
|--|----|
| | 37 |
|--|----|

Why have you or have you not done so?

.....
.....
.....
.....

| | | | | |
|--|--|--|--|----|
| | | | | 41 |
|--|--|--|--|----|

27. Show Card A: This is a picture of a child's growth chart. Is this child growing well or not in the last few months?

| | |
|------------------------------------|--|
| 1. Yes, growing well | |
| 2. Sort of, neither well nor badly | |
| 3. No, not growing well | |
| 4. Don't know | |

Why do you think so?

.....

.....

.....

42

28. Show card B: This is the picture of another child's growth chart. Is this child growing well or not in the last few months?

| | |
|------------------------------------|--|
| 1. Yes, growing well | |
| 2. Sort of, neither well nor badly | |
| 3. No, not growing well | |
| 4. Don't know | |

Why do you think so?

.....

.....

.....

44

45

47

29. Does the child have a Road to Health Card?

| | |
|-----------------------|--|
| 1. Yes | |
| 2. No | |
| 3. Yes, but not shown | |

48

IF NO, or card not shown, what is the child's date of birth?

.....(Day/month/year)

54

Stop here if no clinic card

30. If yes (even if card not shown), have you ever looked at the pink clinic card or Road to Health Card at home?

| | |
|---------------|--|
| 1. Yes | |
| 2. No | |
| 3. Don't know | |
| 4. No card | |

55

31. If yes (even if card not shown), have you ever discussed the pink clinic card or Road to Health Card with anyone?

| | |
|---------------|--|
| 1. Yes | |
| 2. No | |
| 3. Don't know | |
| 4. No card | |

If yes, with whom?.....

56
 58

PLEASE TAKE THE CHILD WITH THE QUESTIONNAIRE AND THE CLINIC CARD TO BE WEIGHED

Child's weight 1.....

| | | | | |
|--|--|--|--|----|
| | | | | 62 |
|--|--|--|--|----|

Weigher 1

| | | |
|--|--|----|
| | | 64 |
|--|--|----|

Fill in from the card:

Date of birth
 Day Month Year

| | | | | | | | | |
|--|--|--|--|--|--|--|--|----|
| | | | | | | | | 70 |
|--|--|--|--|--|--|--|--|----|

Place where card comes from:.....

| | |
|--|----|
| | 71 |
|--|----|

3

| | | | | |
|---------------|--|--|--|----|
| BCG1 | | | | 7 |
| BCG2 | | | | 13 |
| BCG3 | | | | 19 |
| Polio1 | | | | 25 |
| Polio2 | | | | 31 |
| Polio3..... | | | | 37 |
| Polio4..... | | | | 43 |
| DWT1..... | | | | 49 |
| DWT2.. | | | | 55 |
| DWT3..... | | | | 61 |
| DWT4..... | | | | 67 |
| Measles1..... | | | | 73 |
| Measles2..... | | | | 79 |

NB!
 DD / MM / YY

4

No. of weights plotted.....

| | | |
|--|--|---|
| | | 3 |
|--|--|---|

Most recent weight (kg).....

| | | | | | |
|--|--|---|--|--|---|
| | | . | | | 7 |
|--|--|---|--|--|---|

Date of most recent weight

| | | | | | | |
|--|--|--|--|--|--|----|
| | | | | | | 13 |
|--|--|--|--|--|--|----|

Day Month Year

Placement:

| | |
|-------------------------|--|
| 1. Above 3rd percentile | |
| 2. Below 3rd percentile | |
| 3. On 3rd percentile | |

| | |
|--|----|
| | 14 |
|--|----|

Previous weight (kg).....

| | | | | | |
|--|--|---|--|--|----|
| | | . | | | 18 |
|--|--|---|--|--|----|

Date of previous weight

| | | | | | | |
|--|--|--|--|--|--|----|
| | | | | | | 24 |
|--|--|--|--|--|--|----|

Day Month Year

Placement:

| | |
|-------------------------|--|
| 1. Above 3rd percentile | |
| 2. Below 3rd percentile | |
| 3. On 3rd percentile | |

| | |
|--|----|
| | 25 |
|--|----|

Pattern of last 2 weights

| | |
|-----------------------------------|--|
| 1. Parallel or steeper than curve | |
| 2. Up but not steeper than curve | |
| 3. Constant or flat | |
| 4. Falling or down | |

| | |
|--|----|
| | 26 |
|--|----|

Child's weight 2

| | | | | | |
|--|--|---|--|--|----|
| | | . | | | 30 |
|--|--|---|--|--|----|

Weigher 2

| | |
|--|----|
| | 32 |
|--|----|