The effectiveness of a broad based treatment programme in the treatment of malnutrition
by
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1. **INTRODUCTION**

Unconfirmed reports emanating from various KwaZulu hospitals suggest that 66% of all children admitted with a primary diagnosis of some form of malnutrition, within a period of time following discharge, relapse to the point of requiring readmission for the same diagnosis. Although accurate statistics were not available - admission records at Nkandla Hospital suggested a drop in the readmission rate of malnutrition cases in recent years from an average of 60% to 10%.

Discussions with health workers at Nkandla Hospital suggested that the malnutrition treatment programme had a very broad base and included intensive health and nutrition education for the guardians of the malnourished child. A further feature of the treatment programme was the training of the guardian in basic skills such as gardening and handcrafts with the aim of facilitating greater self sufficiency and the ability to generate additional income. In the course of this treatment programme it appeared that emphasis was placed on equipping the guardian with knowledge and skills to enable her to fulfil her role more effectively.

In order to establish to what degree the broad based treatment programme contributed to the declining readmission rate - a small exploratory study was undertaken to assess what had become of a sample of children since their discharge from hospital.

2. **MALNUTRITION AS A SOCIAL PROBLEM**

2.1 **The Definition of Malnutrition**

Malnutrition is a difficult concept to define. Klein, Irwin, Engle and Yarbrough (in Warren N. (Ed), 1977, p.92) point out that classifications are all inferential. Past malnutrition is inferred from the present physical growth, clinical signs, and biochemical factors which are used to differentiate between adequate nutrition at one end and malnutrition at the other end of the same continuum.
For the purposes of this research the term malnutrition is used broadly to describe kwashiorkor and marasmus (protein energy malnutrition) pellagra (vitamin B deficiency) rickets (vitamin D deficiency) as well as low-weight-for-age, in terms of weight-for-age charts prepared for international use by the World Health Organisation.

2.2 Incidence of Malnutrition

According to 1982 records at Nkandla Hospital the diagnosis of the children admitted could be broadly classified as follows:

<table>
<thead>
<tr>
<th>Classification of Diagnosis of Children Admitted to Nkandla Hospital</th>
<th>No. of Children</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malnutrition</td>
<td>96</td>
<td>3.86</td>
</tr>
<tr>
<td>Gastro-intestinal disorders</td>
<td>571</td>
<td>22.97</td>
</tr>
<tr>
<td>Respiratory disorders</td>
<td>1204</td>
<td>48.43</td>
</tr>
<tr>
<td>Other</td>
<td>615</td>
<td>24.74</td>
</tr>
<tr>
<td>Total</td>
<td>2486</td>
<td>100</td>
</tr>
</tbody>
</table>

Medical personnel believed the statistics to be misleading in that many children admitted with gastrointestinal, respiratory disorders or infectious diseases such as measles also required treatment for malnutrition. Thus the statistics based on admission figures for malnutrition are not a dependable reflection of the incidence of malnutrition in the Nkandla district.

In a survey/
In a survey of all children admitted to a hospital in Lebowa (Booth, 1982, p.12) 64.2% of children weighed below the third percentile for weight and 31.5% suffered from severe protein energy malnutrition. The survey reflected that only 8.6% were above the 50th percentile for weight. Thus the incidence of malnutrition appears to be more accurately reflected by assessing the nutritional status of all children rather than relying on hospital admission figures for children with a primary diagnosis of malnutrition.

2.3 Malnutrition as a Social Problem
The root causes of malnutrition are complex and interrelated. Increasingly attention has been focussed on the environmental and social factors that conduce the onset of malnutrition. Some of the factors highlighted by research workers have included.

1. Disruption of Family Life
Based on their personal experience of malnutrition in rural areas, Clarke (1982 in Wilson & Westcott p.48) and Thomas (1973 p.7-8) both cite the disruption of family life as a major factor in malnutrition. Both researchers noted very high proportions of malnourished children were born to single parents. The researchers also noted a strong correlation between desertion by the father and the occurrence of malnutrition. The disruption of family life appears most prevalent in families dependent on the migrant labour system for economic survival.

Factors such as influx control measures which force women migrant workers to leave their children in the care of aged parents in the rural areas has also been cited as an important contributory factor.
2. **Social Change**

Scottney (1979, p.2) highlights the fact that traditional societies appear not to be characterised by a high incidence of kwashiorkor. He further points out that in times of natural disasters such as recurrent epidemics of cattle diseases - all went hungry - children were not the chief victims. Scottney (1979, p. 2-3) suggests that the major social changes that contribute to the increase in the incidence of malnutrition in Kenya are:

1. The introduction of cash crop farming and ensuing shift towards greater consumerism.

2. The erosion of family and community authority.

3. Changes in the economy and the increasing landlessness of the rural people. Exploitation of traditional sources of food such as the forests is also cited as a contributory factor.

Campbell, Scedat and Daynes (1982, p.346) remarked that the rinderpest epidemic of 1897 which decimated the cattle population of KwaZulu forced a major change in the dietary pattern of Zulu people. Mothers were no longer able to wean their children on to "amasi" (sour milk) and substituted the traditional diet with maize meal porridge.

3. **The Underdevelopment of the Rural Areas**

The structured inequalities in the distribution of resources inherent in the policy of separate development has been a major contributory factor in the underdevelopment of the rural areas. White (in Wilson and Westcott, 1980, p. 3) demonstrated that the nutritional status of a sample of children at the so called "squatter camp" at Crossroads was better than that of a sample of children at Nqutu in KwaZulu.

His investigation/
His investigation lead him to believe that the community at Crossroads - in spite of their illegal status - enjoyed an overall better earning capacity and more opportunities for self employment than those in the sample drawn from the rural areas. The findings suggest that children benefitted directly from the improved economic level of their parents.

Booth (1982, p.913) also highlighted the need for an overall improvement in the socio-economic conditions of the rural people as the only effective means of combatting malnutrition.

2.4 The Consequences of Malnutrition

While it has been assumed that there is a causal relationship between malnutrition and deficient mental development; demonstrating the nature of the causal relationship has proved to be a difficult task. Klein et al. (in Warren, 1977, p.116) believed that the evidence gathered by means of a longitudinal quasi-experimental intervention study in rural Guatemala was the strongest ever to demonstrate a direct and causal link between early childhood malnutrition and deficient mental development. The research findings noted deficiencies in the development of certain cognitive skills in malnourished children although the authors admitted that they were unable to discern conclusively whether the effects of malnutrition persist into later childhood and adulthood. The implications of the findings suggest that malnutrition could contribute to the underachievement of children at school which in turn would contribute to diminished opportunities as work seekers in adulthood.

For these/
For these reasons any treatment programme that effectively reduces the incidence of malnutrition not only helps to solve a serious health problem but makes an important contribution to the future well being of the individual and society as a whole.

3. **THE TREATMENT PROGRAMME**

Nkandla Hospital has developed a very flexible policy with regard to the admission, treatment and discharge of children suffering from malnutrition. Medical personnel have no fixed admission or discharge criteria but evaluate each case individually. The social circumstances of the child and family are considered over and above the clinical condition of the child when decisions are to be made regarding the admission or discharge of a child suffering from malnutrition.

Children requiring inpatient treatment for malnutrition are admitted for a period of approximately four weeks. Whenever possible guardians of malnourished children are also accommodated at the hospital and exposed to health education and training in basic skills such as gardening and handcraft.

The health education and basic training in skills is very informally organised. Approximately two to three times a week the guardians of all children admitted to hospital are invited to attend talks and demonstrations which last approximately one hour. The talks and demonstrations are conducted by various health personnel including staff nurses, nursing sisters and a lady gardener who works at a nearby community development training centre.

The health education programme includes the following components:

3.1 Nutrition/
3.1 Nutrition Education
Talks are given on various topics including the constituents of a balanced diet, easy ways of supplementing the traditional diet with additional protein, and correct feeding for the different ages of children.

3.2 Gardening
Talks on vegetable gardening are also given and guardians are taken to a demonstration garden in the grounds of the hospital. They are also encouraged to learn gardening skills by actually working in the garden and gaining experience in preparing seed beds, transplanting seedlings and making compost.

3.3 Handcraft
Guardians are encouraged to learn handcraft skills which may enable them to supplement their income. While their children are admitted to hospital, guardians are given the opportunity to learn basic handcraft skills including basic sewing and knitting, crocheting and traditional craft skills such as mat making.

3.4 Family Planning
Guardians also attend talks on family planning and are given details of family planning services available at Nkandla Hospital.

3.5 Milk Scheme
Nkandla Hospital operates a milk scheme through its district clinics. Powdered milk is available to guardians attending clinics at a cost of approximately R1.00 per 500 gms as compared with the usual retail cost of approximately R3.50 per 500 gms in local shops. Guardians are informed about this milk scheme as part of the health education programme.
3.6 Mobile District Clinics

Nkandla Hospital has a mobile clinic service that visits 27 points at least once a month in the Nkandla district. The staff of the mobile service which remains at the hospital on Wednesdays are also engaged in the health education programme. Thus guardians have the opportunity of establishing contact with the health workers manning the clinic before their child is discharged from hospital.

3.7 Child Care

Other aspects of child care are also focussed on during the course of the health education programme. These range from talks on home accidents etc., to publicising Nkandla Hospital’s diagnosis and treatment centre for handicapped children.

Some of the Staff Nurses engaged in the health education programme were interviewed about the approaches used. Certain points were highlighted during the interview.

1. The health education programme is organised for all guardians with children admitted to hospital. The guardians of malnourished children are not singled out for any separate programme.

2. The Zulu phrase for malnutrition - "isifo sendlala" (literally the disease of starvation) has been noted to be a source of embarrassment and shame to the mothers. Thus the nursing staff who conduct health education programmes attempt to avoid use of the term. This is also the main reason why they feel it unwise to focus specifically on the guardians of malnourished children.

3. The guardians are not compelled to attend talks but rather an effort is made to encourage participation by making the health education sessions informative and enjoyable. The sessions usually commence with lively health education songs. This is followed by a talk and then discussions during which apparently there is very lively participation.
4. The health workers believe that essentially the sessions should be a positive experience for the guardians wherein new knowledge or a new skill is gained. They are aware of the guardian's extreme sensitivity about their child's illness and while they have no hesitation in rebuking women for not at least trying to start a small vegetable garden or learning a handcraft skill they endeavour never to blame a guardian for the child's illness.

5. A point made by the nursing personnel involved in the health education programme was that they were all local Nkandla people themselves. Thus they know the district well and the problems of the district. It was also pointed out that they all had vegetable gardens, kept poultry and endeavoured to set a good example in the community. From time to time they encourage guardians to visit their homes and see for themselves what can be achieved using simple resources.

Thus the treatment programme for malnutrition at "Nkandla Hospital is very broadly based and attempts to reach beyond merely treating the symptoms of malnutrition. Attention is focused on the home circumstances of the patient, expanding the skills and knowledge of the guardian and linking the guardian to available resources such as the milk scheme and district clinics. The nursing personnel, although having very limited formal training in adult and health education, endeavour to make the health education programme informal and educational.

An alternative treatment approach to malnutrition in the form of nutrition rehabilitation units has been integrated into the health services of the Transkei. The aim of these units is to demonstrate that malnutrition can be treated by correct nutrition rather than medicines.

Usually/
Usually the units are built along the lines of typical rural dwellings and emphasis is placed on utilizing familiar household items and practices. The treatment programme focusses on nutrition education and learning of gardening skills. An evaluation of the effectiveness of these nutrition rehabilitation units in the Transkei (in Wilson and Westcott, 1980, p.19) suggested that while nutrition rehabilitation units had been effective in bringing about some changes in home practices - death rates for sample and control groups were not significantly different.

A few hospitals in KwaZulu have endeavoured to emulate the nutrition rehabilitation approach. Although programmes have not been evaluated - it would appear that the results are disappointing. In a discussion with guardians of malnourished children at Manguzi Hospital in 1980, guardians pointed out to the writer that they objected to being singled out for a special programme which suggested they were incompetent in their mothering role. From their point of view, they paid the same fees as other patients and believed they were entitled to "proper treatment" including medicines and injections. The Nkandla Hospital approach of not singling out guardians of malnourished children for special nutrition programmes - but rather inviting all guardians to participate in the health education programme not only provides a partial solution to a sensitive problem but also may fulfil an important preventive function as more people benefit from the programme.

4. THE RESEARCH DESIGN AND TECHNIQUES USED

4.1 The Research Design

A small exploratory-descriptive research project was undertaken to assess the feasibility of evaluating the effectiveness of the malnutrition treatment programme. Case studies of the present health status of 10 children who had been previously admitted in 1982 with a diagnosis of malnutrition were undertaken.

4.2 Method/
4.2 Method
A questionnaire was compiled which included identifying details, family composition, economic status of the family, educational levels as well as probing health issues. Guardians were also asked to assess the helpfulness of the various components of the treatment programme.

4.3 Administering the questionnaire. The questionnaire was administered during the course of a home visit.

5. ANALYSIS OF RESPONSES AND INTERPRETATION OF DATA

5.1 Identifying Details and Family Composition
Assessing the exact composition of a rural family is a very difficult task because the term (Zulu - "umndeni") refers to the broad extended unit. The extended unit usually includes several nuclear families which may have varying degrees of economic and functional autonomy. With the ongoing dislocation of the rural family it is common to find relatives who oscillate between different family dwellings. For these reasons it becomes very difficult to determine the exact boundaries of a rural family.

5.1.1 Family Size
The survey of 10 families revealed approximately 107 family members suggesting an average family size of 10.7. Adults averaged 5.3 per family and children under the age of 16 years averaged 5.4 per family.

5.1.2 Marital Status of Guardians
All ten of the children had been born to single parents. Nine of the mothers had subsequently been deserted by the fathers of the children. Two of the children had been deserted by the mother and the father and were subsequently living with the grandmother. The one mother who claimed she was being supported by the father complained that the support was dwindling and amounted to no more than "something at Christmas only".
Disruption of family life has been noted as an important contributory factor in the etiology of malnutrition. (Clarke, 1980, in Wilson and Westcott, p.49, Thomas, 1987, p.7). The results of this investigation again highlighted a very high degree of disruption at family level associated with the occurrence of malnutrition.

5.2 Economic Status of the Family

5.2.1 Cash Income
Several major problems arise in assessing the cash income of a rural family. These emanate from the following factors.

1. The difficulties in defining the family unit.
2. Cash remittances from migrant workers tends to be irregular.
3. Frequently the remittances from the migrant workers are forwarded to the head of the family (usually the grandmother) who does not disclose the full amount to other family members.
4. Cash earned locally also tends to be inconsistent and irregular.
5. Pension beneficiaries generally do not make the full amount of the pension known to the rest of the family.

In an effort to ensure as accurate an assessment as possible - respondents were asked to try and recall specifically the cash incomes for October and November and these figures were then averaged. Respondents were also asked not to hesitate to point out their inability to accurately assess their cash income. Four respondents admitted they could not accurately assess their family cash income.

Table 2 reflects the sources of cash income of six of the respondents who believed their assessment was reliable.

TABLE 2/
TABLE 2  Respondent's Sources of Monthly Cash Income

<table>
<thead>
<tr>
<th>Source</th>
<th>Rand</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average monthly cash remittance from migrant worker</td>
<td>28.3</td>
<td>55.4</td>
</tr>
<tr>
<td>Average cash income earned locally from home industries or casual employment</td>
<td>9.5</td>
<td>18.6</td>
</tr>
<tr>
<td>Average income from pension and grants</td>
<td>13.3</td>
<td>26.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>R51.1</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Although the monthly per capita income of R4,76 represents an increase on the R3 cited by Clarke (in Wilson and Westcott, 1980, p.64) in a study in the neighbouring magisterial district of Nqutu in 1977 - bearing in mind the overall inflation rate of approximately 15% per annum - the figures represent a lower income in real terms.

5.2.2 Livestock Ownership and Farming Activities

In view of the fact that some rural families live on a subsistence basis it is important to assess to what extent a family is self sufficient from a food production point of view. Thus the the number of livestock owned, and the families vegetable gardening and farming activities were noted.

5.2.2.1 Ownership of Livestock

TABLE 3  Ownership of Livestock

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Number</th>
<th>Number of families</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Goats</td>
<td>4</td>
<td>1*</td>
</tr>
<tr>
<td>Sheep</td>
<td>3</td>
<td>1*</td>
</tr>
<tr>
<td>Chickens</td>
<td>2</td>
<td>1*</td>
</tr>
<tr>
<td>No livestock</td>
<td>-</td>
<td>6</td>
</tr>
</tbody>
</table>

* Animals owned in conjunction with cattle.
Table 3 suggests that respondents owned little in the way of livestock thus making them very dependent on bought fordstuffs.

Of the ten families, five had lost a total of 34 chickens as a result of a Newcastle Disease epidemic that had swept through the area in November 1983. Thus an important source of protein has been lost to families for the time being.

5.2.2.2 Vegetable Gardening

Table 4 reflects the number of respondents who had endeavoured to grow their own vegetables.

<table>
<thead>
<tr>
<th></th>
<th>No. of Families</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grows own vegetables</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Garden destroyed by drought</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>No vegetable garden</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Reasons for not having a vegetable garden included not having the land or the distance from a source of water.

5.2.2.3 Farming activities

The number of land allotments per family for cultivation was assessed. 2 of the families had no land, 7 had 1 or two fields and 1 had four fields. However, all the respondents were expecting a poor yield because of the drought.

The low cash income and minimal subsistent activities suggest that abject poverty characterise the home backgrounds of malnutrition cases. The fact that a primary poverty datum line was assessed in 1973 to be R87,02 in the neighbouring magisterial district of Nqutu (Clarke and Ngobese, 1975, p.93) suggests that the families of the malnourished cases do not have the resources to adequately provide for their children.

5.3 Education/
5.3 Education Level of the Respondents

Table 5 shows the level of education of guardians.

<table>
<thead>
<tr>
<th>Education Level</th>
<th>No. of Guardians</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>Sub A - B</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Std 1 - 2</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Std 3 - 4</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Std 5 - 6</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The table thus suggests that the guardians have an overall low level of education. The low level of formal education makes it difficult for guardians to find employment other than unskilled casual employment.

5.4 Decision Making Pertaining to Child Care

Table 6 reflects the person responsible for making decisions pertaining to the care of the children.

<table>
<thead>
<tr>
<th>Person Making Decisions</th>
<th>Number</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother makes decisions</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Mother refers decisions to grandmother</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Grandmother totally responsible for child</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The response suggests that grandmothers play a very important role in child care in the rural families. The implications for health education programmes are important as inevitably the grandmothers - particularly in an undereducated state are likely to be conservative and resistant to change.
5.5 Health Issues

5.5.1 The diagnosis of the children admitted suggested that kwashiorkor is the form of malnutrition most commonly encountered.

5.5.2 In the sample investigated two children had died, eight in the opinion of the guardians did not require readmission and two had required readmission. The fairly low readmission rate could not be attributed to negative factors such as a high death rate or guardians seeking treatment elsewhere.

5.5.3 The present condition of the child was also noted. Six of the children appeared in good health, three appeared to be relapsing and no information was available for one. However, the term "good health" is based on reports from the guardian and the overall physical appearance of the child. A physical examination by a health worker would be necessary for a more accurate assessment.

A number (30%) were noted to be relapsing and further enquiries suggested that the following were contributory factors:

1. Overwhelming poverty with no dependable source of income.
2. A degree of ignorance in that the mother failed to recognise a grossly distended stomach as a sign of ill health.
3. A frail aged grandmother who was partially blind and failed to notice the child in her care had developed symptoms of pellagra.

Table 7/
5.6 Treatment Focus

5.6.1 Helpfulness of Different Aspects of Treatment

Respondents were asked to assess the helpfulness of the different aspects of the treatment plan.

<table>
<thead>
<tr>
<th></th>
<th>Helpful</th>
<th>Not Helpful</th>
<th>Not discussed in Treatment programme</th>
<th>Not Applicable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition &amp; Education</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Gardening</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Handcraft</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Milk Scheme</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>District Clinic</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>General Child Care</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Helpfulness of Health personnel</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Family Planning</td>
<td>7</td>
<td>1</td>
<td>2</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>60</strong></td>
<td><strong>2</strong></td>
<td><strong>16</strong></td>
<td><strong>2</strong></td>
<td><strong>80</strong></td>
</tr>
</tbody>
</table>

Percentage of Total

- 75%
- 2.5%
- 20
- 2.5
- 100

The results suggest that guardians had found most aspects of the treatment programme helpful. Two respondents had found the handcraft training unhelpful because they did not have the resources to buy the basic materials. Two respondents who were grandmothers had not been exposed to the broad treatment plan as they had not been accommodated at the hospital during the course of the child's admission.

5.6.2 Changes effected on Discharge from Hospital

Respondents were asked to outline ways in which the knowledge and skills gained during the treatment programme had been translated in practical terms in the home situation.
Table 8 shows changes made by the respondents since their child's discharge from hospital. They were asked to substantiate their replies.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Not Applicable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Nutrition</td>
<td>6</td>
<td>4</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Attended Family</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Started Garden</td>
<td>5</td>
<td>5</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Started Handcraft</td>
<td>6</td>
<td>4</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Uses Milk Scheme</td>
<td>5</td>
<td>5</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Attends District</td>
<td>7</td>
<td>3</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>clinics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeks Advice</td>
<td>2</td>
<td>8</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>35</td>
<td>35</td>
<td>2</td>
<td>70</td>
</tr>
</tbody>
</table>

% of Total: 50, 47.1, 2.9, 100

Table 8 suggests that 50% of the respondents had made a determined effort to effect some change in the home environment. Respondents were asked to substantiate their replies.

1. Nutrition
   Most respondents explained that they had increased the use of milk in their diet. A couple mentioned that when money was available they included eggs or "amasi" (sourmilk) in their diet. Of the respondents who had not improved their diet two said that they did not have enough money to improve the diet. Two others had not received nutrition education.

2. Family/
2. **Family Planning**

Four of the respondents had subsequently made use of the family planning services at the hospital. Four respondents remained unmotivated. The question was considered as inapplicable to the two grandmothers in the sample.

3. **Gardening**

Of the five respondents who had started a vegetable garden - two conceded that the drought had caused them to give up. Of the five respondents who had not started a garden two were aged, one was disabled and two had no money to purchase seeds or tools.

4. **Handcrafts**

Of the six respondents who had endeavoured to generate a little additional income by doing handcraft - two were making grass mats and four were making woolen goods. Those making woolen goods found wool to be very expensive and all had difficulty in marketing the finished product. Of the four respondents who had not persevered with handcraft - two were aged, one was disabled and one had no money to buy basic materials.

5. **Milk Scheme**

Of the five respondents who did not make use of the milk scheme - three had access to a supply of fresh milk and two had no money to buy milk.

6. **District Clinic**

Of the three respondents who had not taken the child back to the clinic - one was aged and partially blind and unable to reach the clinic, two appeared not to understand the concept of a well baby clinic.

7. **Sought/
7. **Sought Advice from Health Worker**

Of the two respondents who had returned to seek advice from health workers - one who is partially disabled and has no cash income approached the social worker in October for advice. He explained he could not assist her in any way. The other respondent asked if the health workers could assist her find a job. They explained they could not. Of the eight respondents who had never sought any further advice from health workers - four claimed they were essentially afraid of health workers.

Asked to elaborate they explained they feared "appearing stupid" and being "scolded" for their "stupidity". Two of the respondents were aged and would have difficulty getting to health workers. Two respondents had not actually been responsible for the child at the time of the child's admission and therefore had not been exposed to the broader treatment programme.

It is interesting to note that "fear of the health workers" was noted by Frankish (in Wilson and Westcott, 1986, p. 20) in his evaluation of nutrition rehabilitation units in the Transkei as an obstacle to effective communication between guardian and health worker about problems encountered by the guardian.

5.6.3 **Other Ways in which Health Workers can Help Guardians**

A final question put to the respondents was "In what ways can health workers help you to improve the health of your child?"

Table 9 reflects the results.
TABLE 9  Ways in which Health Workers can help Mother Improve the Health of their Child.

<table>
<thead>
<tr>
<th>Response</th>
<th>Number</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide money and/or food</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Visit homes</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Help secure maintenance</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Ask Grandmother</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Situation hopeless</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>No idea</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

Respondents who believed health workers should "provide money or food" did not believe that this was actually a feasible suggestion but mentioned it because they believed it to be the major obstacle to improving their child's health. One respondent explained that having health workers visit her at home was a good experience because then "we can really talk and I would not be afraid." One respondent felt that the question should be directed to the grandmother "who has more understanding of these things". One respondent (and two of the respondents who suggested "food and money" made the same point) pointed out that the situation was utterly hopeless and that she had despaired of finding any solutions. The respondent elaborated further by admitting to being overwhelmed by depression and despair particularly as a result of being deserted by the father of the children. Three of the respondents had no idea of how they could be helped.

6. SUMMARY OF THE RESULTS AND RECOMMENDATIONS

6.1 Summary of Results
Although the research project amounted to an exploratory investigation with a small sample - certain salient findings are worth highlighting.

1. The Degree/
1. The Degree of Disruption at Family Level
All the children in the sample had been born to single parents. Nine of the guardians had been deserted by the fathers of the children. Two of the children had been deserted by both their fathers and the mothers.

Reflecting on her experiences of malnutrition as a medical officer in a rural area of the Giskei - Thomas (1973,p.6) warns that single parenthood (in the context of poverty stricken rural areas) is "a self-fertilising catastrophe. Initially its nuisance value and the demands it makes on a community fans resentment, which is an extremely damaging attitude in terms of humane and generous behaviour. As a result of resentful and brutal "care" these children acquire brutal values. They (and very soon their children) snowball human depravity and misery." Thus the present situation reflected in the findings does not augur well for the future stability of rural populations.

2. The Overall Poverty of the Families
All the families in the sample appeared to be contending with overwhelming poverty. This factor was also reflected in the living circumstances of most of the respondents as a major obstacle in their attempts to care adequately for their children. Efforts to generate additional income by doing handicrafts were thwarted by high costs of basic materials and an inability to market finished products.
6.2 Assessing the Effectiveness of the Programme

The present well being of the child was used as an outcome indicator of the effectiveness of the treatment programme. Other factors were identified as possibly having a bearing on the improved well being of the child included:

1. A substantial improvement in the economic circumstances of the family.
2. An improvement in the availability of the resources that contribute to a nutritious diet, for example ownership of cattle, poultry keeping et cetera.
3. The proximity of the home to the clinic.

These factors were investigated and in respect of the cash income and availability of resources the results suggest that abject poverty characterised all of the families. With respect to the proximity of the home to a mobile clinic – most of the homes were within walking distance of a mobile clinic visiting point. However, it was noted that one of the children who was relapsing was in the care of a frail aged grandmother who could not walk to the mobile clinics visiting point.

In spite of the poverty experienced by the families – it appeared that a determined effort had been made by most of the guardians to improve the diet of their children. Foodstuffs that guardians had tried to incorporate into the diet were milk, eggs and vegetables. Fish and meat were never mentioned possibly because they were beyond the means of the families interviewed.

The results of the exploratory investigation suggest that aspects of the treatment programme are very helpful to guardians and assist them to prevent relapses. Aspects of the treatment programme that seem to have been particularly helpful are:
1. the additional knowledge gained with regard to nutrition and child care.
2. the practical skills gained in gardening and to some extent handwork.
3. linking guardians with services and resources such as the milk scheme and mobile clinic.

From this point of view it seems that the broader based treatment plan does both facilitate and promote greater patient compliance which in turn contributes to the declining readmission rate.

The fact that the guardians voluntarily attend the health education sessions and participate enthusiastically in the discussions, suggest that a number of the health workers involved in the programme have developed effective communications skills and that the programme meets a need.

A number of respondents (40%) expressed their fear of health workers and particularly of being "scolded" for their "stupidity". The low self image the rural poor which has been noted in other studies (Foster, 1962, p.48) is an important obstacle to effective communication in health education. The remarks made by the respondents suggest that a certain uneasiness and discomfort characterises their interaction with health workers. It is also worth noting that those respondents who had discussed problems with the health or social worker had not benefitted any tangible way.

6.3 Recommendations/
6.3 Recommendations

The widespread incidence of malnutrition will only be checked by the introduction of national strategies at social policy and planning level that make provision for:

1. the acceleration of the development of the rural areas with special reference to agriculture, water development, increased job opportunities, improved educational and health facilities and the overall improvements of physical and organisational infrastructure.

2. the phasing out of the migrant labour system and the stabilising of both urban and rural populations thereby facilitating the reconstruction of family life.

The results of this exploratory investigation suggest that in the short term - to a limited extent - a broad based treatment plan can help to strengthen the guardian's capacity to prevent her child from relapsing into a malnourished state. The effectiveness of Nkandla Hospital treatment programme could perhaps be further enhanced by:

1. Organising In-Service Training

Organising in-service training for health workers in order to equip them with basic skills in interviewing and counselling. Emphasis should be placed on approaches that are geared to the particular needs and problems of socially devalued populations. Lewis and Lewis (1977, p. 81) highlight the importance of systematically increasing self-valueing in such populations by placing the "stigma" of problem behaviour as only part of the individual's total being. Also important in this process is ending self devalueing that has its origins in externally placed limitations. Sensitising health workers to the role they can play in aiding this process may be an important method of helping health workers - dispel the fear and unease on the part of guardians in their interaction with health workers.

2. Focussing/
2. Focussing on Family Systems

As Pilisuk, Chandler and D'Onofri (1983, p. 47) point out, all too often a family may not see an individual's problem (for example - a malnourished child) as a symptom of a family problem. Thus it becomes important to relocate the problem in the family as a system. This exploratory study demonstrated strikingly the complexities in family functioning in rural areas, in that grandmothers had a significant role in the decision making pertaining to children and that there is a very high degree of desertion and non support on the part of biological fathers. Under such circumstances, it becomes even more important to focus on the broader family system and to strengthen the capacity of other family members to help promote the health of the child.

Such an approach only becomes feasible in practical service delivery terms by training and utilising community based health workers that have been trained in community counselling approaches.

3. Establishing Neighbourhood Support Networks

Pilisuk et al. (1983, p.45) suggest that contemporary society leaves numbers of individuals without any continuing social support structure and that this factor contributes to the mental and physical breakdown of health. The poverty and gross family organisation that characterises rural areas such as Nkandla undoubtedly contributes to a breakdown in supportive relationships. Several respondents talked about their feelings of despair and helplessness. Establishing neighbourhood support groups which provides for supportive, caring, effective and satisfying interpersonal environments may also strengthen the guardian's ability to cope with the situation.

At a broader level. - the findings of the exploratory investigation as well as the findings of other studies suggest that a strategy needs to be devised for dealing with the issue of desertion and non support of children by their parents. Guardians are generally afraid of taking such drastic steps as seeking legal aid in securing maintenance from fathers and in some cases mother of children.
The KwaZulu Government's Department of Health and Welfare does not have the resources to make Maintenance Grants available to all the guardians who need them. Although this situation arises as an inevitable consequence of the disregard for family life inculcated by the migrant labour system - it cannot be allowed to continue unabated. The enforcement of punitive measures are not likely to serve any useful purpose. National awareness campaigns directed through church, political and local community groupings need to focus attention on how very serious the problem is and how it contributes to the retardation of development and social reconstruction of rural areas.

7. CONCLUSION

The findings of the exploratory investigation suggest that the decline in the readmission rate at Nkandla Hospital in recent years can be largely attributed to effectiveness of their broad based treatment programme. However, the fact that some of the guardians in the investigation were so poverty stricken that they could not effectively utilize the knowledge and skills gained in the treatment programme, highlights the need for long term strategies at national social policy and planning level to combat the abject poverty in the rural areas. Until such time as the necessary changes in policy are made malnutrition treatment programmes can only hope to attain a limited degree of success.
8. BIBLIOGRAPHY AND ACKNOWLEDGEMENTS.

8.1 Bibliography

Books


Periodicals


Other Sources


8.2 Acknowledgements

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