

SECOND CARNEGIE INQUIRY INTO POVERTY
AND DEVELOPMENT IN SOUTHERN AFRICA

Philani nutrition centre:
An experiment in
nutrition intervention
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PHILANI NUTRITION CENTRE: AN EXPERIMENT IN NUTRITION INTERVENTION.

1 INTRODUCTION.

This paper gives a short history of nutrition work in Crossroads and it describes the organisation of Philani Nutrition Centre. The permanent nutrition workers' assessment of their work is given, and the attempt to introduce a participatory democracy in a situation where there are inequalities in skills and power is discussed. The traditional healers' perspective of nutrition and malnutrition are considered and the necessity of taking cognisance of these views is stressed.

The available information on the social, economic and medical background of 100 randomly selected children attending the centre has been analysed and some of the results of this investigation are discussed.

Malnutrition [1] affects mainly the very young child who needs twice as much protein and energy relative to its body weight as adults. The brain grows more in the first year of a child's life than in the period from one year to adulthood and there is strong experimental evidence supporting the hypotheses that early severe malnutrition is associated with poor intellectual development. [2] Malnutrition also has numerous negative effects on normal body functions. For example, it causes depression of immunity and thus increased susceptibility to infections[3].

The staff of Philani together with some medical students surveyed the community in 1982 and found that 5% of children under 5 years fell below 80% of expected weight for age. This is a low percentage compared to what has been found in other black urban and rural areas.[4] Despite this the centre admitted 500 new cases during 1983. Many of them severely malnourished and chronically ill.

2 BACKGROUND

Crossroads squatter community was established in 1975 and is situated on the Cape Flats 20 km from Cape Town city centre. It has approximately 2 500 registered shacks, a varying number of plastic shelters and a population estimated at 40 000.

Nutrition work in Crossroads started early in 1979 in the community hall. Experience at a pediatric mobile clinic in the community showed that many of the children who attended the clinic with recurrent infections and diarrhea were severely malnourished and in need of nutritional care and support. This care was given by a small team to a growing number of children during the years 1979-82.

The Empilisweni-SACLA Clinic, which was established in the community in 1980, also found it necessary to employ nutrition workers and in 1982 the Philani Nutrition Centre was founded by the merger of the original nutrition centre and the nutrition section of Empilisweni. The centre is housed in two buildings at the north-eastern corner of Crossroads squatter camp.

3 ORGANISATION

The centre is run by five nutrition teams. Each team consists of a trained nutrition worker from the community and a volunteer medical worker (a sister or a doctor) and is responsible for 80-120 malnourished children and their families. In addition to the primary care of the malnourished child, the emphasis of the work is on nutrition education.

The centre admits approximately 40 children a month, who are below 80% of expected weight for age and under 5 years. The children are referred to the centre from the Empilisweni-Sacla Clinic next door, day hospitals in the vicinity or hospitals in Cape Town. Many children who have been treated for kwashiorkor or marasmus in a hospital ward are referred back to us for follow up. Mothers from the community also come on their own to the centre. (See Fig.1)

On the day the mother and her child are admitted to the centre they are seen by the nutrition worker on duty. A full social, medical and nutrition history is taken. Every child is sent for a chest X-ray to exclude tuberculosis and the immunisation status is checked. We regard this visit as a very important contact where we hope confidence in the nutrition worker and the centre is established and the mother is motivated to continue attending the centre. The child is then visited at home by the nutrition worker for assessment of home circumstances.

The mother is given an appointment for a medical examination and at that clinic visit the child is fully assessed and a treatment plan is drawn up. Fourth and fifth year medical students participate in the work of the clinic by assisting with the assessment of new cases.

The severely malnourished children and mothers in need of special support

are referred to the Emergency Centre where children are observed and fed breakfast and lunch. The mothers participate in an educational program and help with the cooking. The emphasis is on learning by practical experience. The centre is trying to grow its own vegetables and the vegetable garden is also used for teaching purposes.

The progress of the child is assessed at weekly or two-weekly clinic visits. Support in the form of milk and Pronutro is given to destitute families and the centre has a relief fund for this purpose. (See Fig.1)

An instructor from the "Early Learning Centre" regularly attends the clinic and in discussions with the mothers stresses the importance of play and creative activities in the child's development.

4 PARTICIPATORY DEMOCRACY

The people working at Philani come from diverse socio-economic backgrounds with different levels of formal education. At the outset we were aware of the danger of persons with a higher education taking on most of the responsibility for administering and organising and thereby having more influence in the running of the centre. Thus the constitution was drawn up in an attempt to bring about equality in the decision-making process and to create a system of participatory democracy. Every person actively working at Philani has a place on the Committee which meets monthly and makes all important decisions. Furthermore there are two representatives of the mothers and two community members on the Committee.

There is a rotating chairmanship and shared secretarial and treasurer posts. Since the centre was established there has been a growing awareness of every individuals' right to influence decisions and the responsibility and work involved in this. There has also been a realisation that practical experience and insight into the community often is of more value than formal education in solving problems in the work situation.

This attempt at participatory democracy has in some instances created conflict and friction and we know from experience that there are persons who do not agree with the system and who can not work in this more cumbersome framework. We are sometimes criticised by organisations in contact with us for not having one person in charge who can make immediate decisions.

It is utopian to believe that one can have full equality even in a small organisation like Philani. There will be inequalities "in power" simply due to people's different personalities and ability to convince others by charm or logic. Nevertheless, we attempt to create a climate in which everyone's opinion and contribution is equally valued.

When discussing our system of participatory democracy, four of the five permanent nutrition workers felt that the committee members had equal power in influencing the work at the centre. One felt that the people with the higher formal education had more influence. Three felt that our attempts at participatory democracy worked. One felt that the structures were too loose without one person in charge enforcing what should be done. Another felt there was a reluctance to take on responsibility.

5 WORK ASSESSMENT

In an assessment of their work it became clear that home visits were difficult for the nutrition workers. They felt that they were imposing themselves on families and breaking the privacy of the home. At times the mother denied that her child was underweight and ill and tried to avoid the nutrition worker. It was also a common experience that uncooperative mothers often had the most severely malnourished children and it was difficult to do anything for the children without the cooperation of the mother. The time consuming effort of tracing families among plastic shelters and unnumbered shacks was another problem mentioned.

It was not always possible to give individual attention to mothers and children, because of the large numbers of children attending the Emergency Centre and because of the practical work of the Centre.

Unanimously the nutrition workers felt that the most positive aspect of their work was to discharge a healthy child who had made good progress in the centre. The communication with and the teaching of the mothers was mentioned as another positive part of the work and everyone felt encouraged when "old" mothers were found to be teaching "new" mothers and neighbours what they have learned.

In response to the question of how they think the clinic could be improved, a number of suggestions were put forward. Everyone felt that more room was needed to cope with growing numbers and that the vegetable garden could be improved.

There was a wish to concentrate more on preventative measures - reaching every pregnant and newly delivered mother in Crossroads for advice about and support with breastfeeding. The establishment of a breastfeeding clinic at the centre was suggested.

It was considered most important to improve the understanding of tuberculosis in the community and in that way improve compliance with treatment. A wish was expressed to establish better communication between

Philani and the "authorities" responsible for TB-treatment. The nutrition workers also expressed a determination to improve their own qualifications. This is a problem at present as there are no training facilities for black nurses in Western Cape. All the respondents strongly felt that black sisters could play a central role in improving health in the black communities.

6 TRADITIONAL HEALERS.

There is a deeply rooted belief and trust in traditional healers and we know that many of our mothers also make use of the service they offer.

From an investigation of the approach traditional healers adopt, it is clear that in many ways they have a similar understanding of the causes of malnutrition to ours. They blame poverty, breaking up of family life, underlying diseases, unawareness of the importance of a balanced diet, etc. They also add failing relationships within the family or with ancestors and other causes which they claim western doctors can not see. They encourage breast feeding and give mothers nutritional advice. They also treat with herbs and special mixtures and prescribe actions to correct failing relationships. Many of our children are on a much used and trusted medicine for cramps, called "kwaaiwind!". Babies are regularly given "kwaaiwind", often from the first week onwards in an attempt to prevent abdominal problems. We believe that this medicine can cause diarrhea but we also know that we will have no success if we ask the mother to stop using it. We compromise by recommending decreased dosages.

The traditional healer uses "bites" - small skin cuts which are then sucked to remove unclean objects from the body. Some claim to be good at making a diagnosis and others claim to have success with treatment. These are believed to be divine gifts.

We feel that children can only benefit if westerners' common attitude of suspicion and scepticism of the traditional healer is shelved and replaced by a wish to communicate in order to gain an understanding of the traditional way of healing.

7 SOCIAL BACKGROUND.

To obtain information on some aspects of the social, economic and medical background of our children, records of 100 children attending the Centre in January 1984 were randomly drawn. The details was then coded and analysed using the Statistical Package for Social Scientists (SPSS). [5] (See Fig.2)

As many as 38% of the children had mothers who were single, 59% had mothers who were married, 2% were staying with a guardian and 1% stayed with the father. It is our suspicion that this is a disproportionate number of children with single parents, although this could not be confirmed due to the non-availability of general statistics from the community. All but one of the single parent families had a female head of household.

Half of the mothers, i.e. about 85% of those married, were living with their husbands. Only about 5% of the unmarried mothers lived with the father of the child. In most of the cases where the mother was living with the father, he was employed. Only one quarter of the single mothers were employed or declared an income from the informal sector. Some others received support from family or friends. Nevertheless as many as 58% of the single mothers reported that they had no income whatsoever compared to 13,5% of the married mothers. As one would have suspected it thus seems as though the financial situation of the single parent families is more desperate than that of the two-parent families.

More than 60% of our families had three or less children, and 94% had six or less. On average they had 3,1 children. Of the children with no siblings, two-thirds came from a single-parent family. Four fifths of those who had three or more siblings had married mothers. (See Fig.3)

Of the one child families, more than 60% had no income, compared to only 20% of the families with more than one child. This is of course again a reflection of the difficult economic position of the single parent families.

One quarter of our admissions have recently come from the Transkei and our general impression is that they are our worst cases but also make the most rapid progress once food is available.

Of our families 42% had lost one or more children. As is to be expected, we found a statistical significant correlation between family size and dead siblings - the more children in a family the more dead siblings. There was also a significant correlation between marital status and dead siblings. Of those families with 2-4 dead children 80% of the mothers were married. This is of course due to the fact that a high percentage of single mothers have only one child. (See Fig.4)

We have information about family planning on 64 of the 100 surveyed mothers. (See Fig.5) Of these 64,

- 65% were on "Depo"progesterone injection
- 5% were on an oral contraception
- 9% were sterilised
- 5% were pregnant
- 16% were on no contraceptives

We have information about breastfeeding on 74 of the 100 children. Twelve of these were still being breastfed. (See Fig.6) Of the remaining 62 children:

- 20% had never been breastfed
- 24% had been breastfed for 6 months or less (of these two-thirds were breastfed for 3 months or less

21% for more than 6 months but less than 12 months

25% for more than 12 months but less than 18 months

10% for more than 18 months)

Only 5% of those who were breastfed longer than a year had more than two dead siblings, compared to 45% of those who were not breastfed at all. This difference is statistically highly significant and seems to give a very strong indication indeed that breastfeeding is an important factor in decreasing child mortality. For it may be reasonable to assume that those who were breastfeeding the child attending our clinic for longer than a year had also breastfed the previous children and that those who were not, had not breastfed the other children either.

TABLE 1: PERIOD CHILD WAS BREASTFED BY NUMBER OF DEAD SIBLINGS.
(Row percentages.)

Period (months)	Dead siblings:		
	0	1	2-4
0	36,4	18,2	45,5
1-12	66,7	20,8	12,5
12-32	80,0	15,0	5,0

The preceding conclusion needs to be modified in the light of the fact that as many as 55% of those who were not breastfed had four or more siblings compared to 10% of those breastfed for longer than a year. The group that had been breastfed had far fewer siblings and it is thus only to be expected that the mortality among their siblings would be lower. It is therefore not clear whether breastfeeding directly reduces the mortality rate in that children are better nourished, or indirectly because it reduces the birthrate.

TABLE 2: PERIOD CHILD WAS BREASTFED BY NUMBER OF SIBLINGS.
(Row percentages.)

Period (months)	Siblings:		
	0	2-3	4-8
0	10,2	27,3	54,5
0-12	20,8	33,3	45,8
12-32	30,0	60,0	10,0

There seems to be a negative correlation between breastfeeding and family planning. All of the mothers who did not breastfeed the child under treatment were on family planning. Of those who breastfed for less than twelve months, 84% was on family planning compared to only 47% of those who

breastfed their child for longer than a year. This difference is statistically highly significant, but is difficult to explain in the light of our finding that mothers who do not breastfeed have larger families. It may be that the mothers who breastfeed for longer periods, as custom demands, also observe abstinence as traditionally required during the breastfeeding period.

We have information on the immunisation status of 58 of the children. Of these 42 had their immunisations up to date on admission, 15 were incomplete and one had never been immunised. The remaining 42 children had no clinic cards which could mean that no vaccinations had been done. There was a tendency that children of married mothers had more often completed their immunisation than children of single mothers.

Of the 100 children in our survey 50 were on TB-treatment, 14 had no tuberculosis and 2 were being observed with a suspicion of TB but on no treatment. Of the remaining 34 we had no information. About half had recently been sent for X-rays but no reply was back at the time of the survey. Of the 50 children on treatment, 29 had been vaccinated with BCG.

Half of our children had been in the centre for 3 months or less, and 55% were 12 months or younger. On Admission 40% of the children had a recent history of diarrhea and 34% were complaining of a cough. Skin rashes, tonsillitis, otitis media, intestinal parasites and pneumonia were thereafter the most common medical problems.

To summarise:

A high proportion of our mothers were single and our figures show that more than half of these mothers had no economic support whatsoever. We also found that the average family size was small and that more than three quarters of our mothers practised family planning. Almost half of our families had lost one or more children. One fifth of our children had never been breastfed. In those families where the mother did not breastfeed there was a significantly higher child mortality compared to the families where the mother did breastfeed.

Half of our children were on TB-treatment which seems high despite the known close correlation between this disease and malnutrition. The great majority of these cases were discovered after the children had been referred to the Nutrition Centre. There is reason to be concerned by our finding that half of the children on TB-treatment had had BCG-vaccinations.

8 CONCLUSION

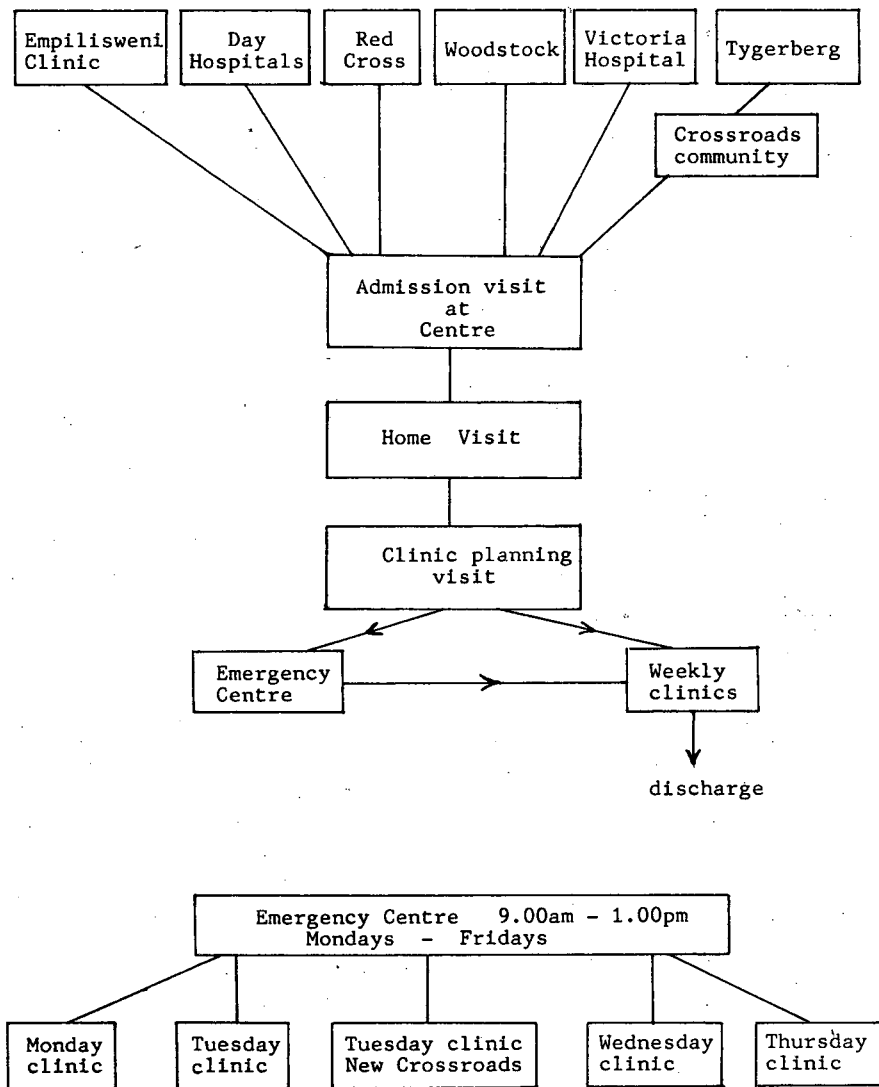
The work of the centre is undertaken in the belief that every child in South Africa should be given the opportunity to achieve its full mental and physical potential. Proper nutrition is an essential precondition in ensuring this.

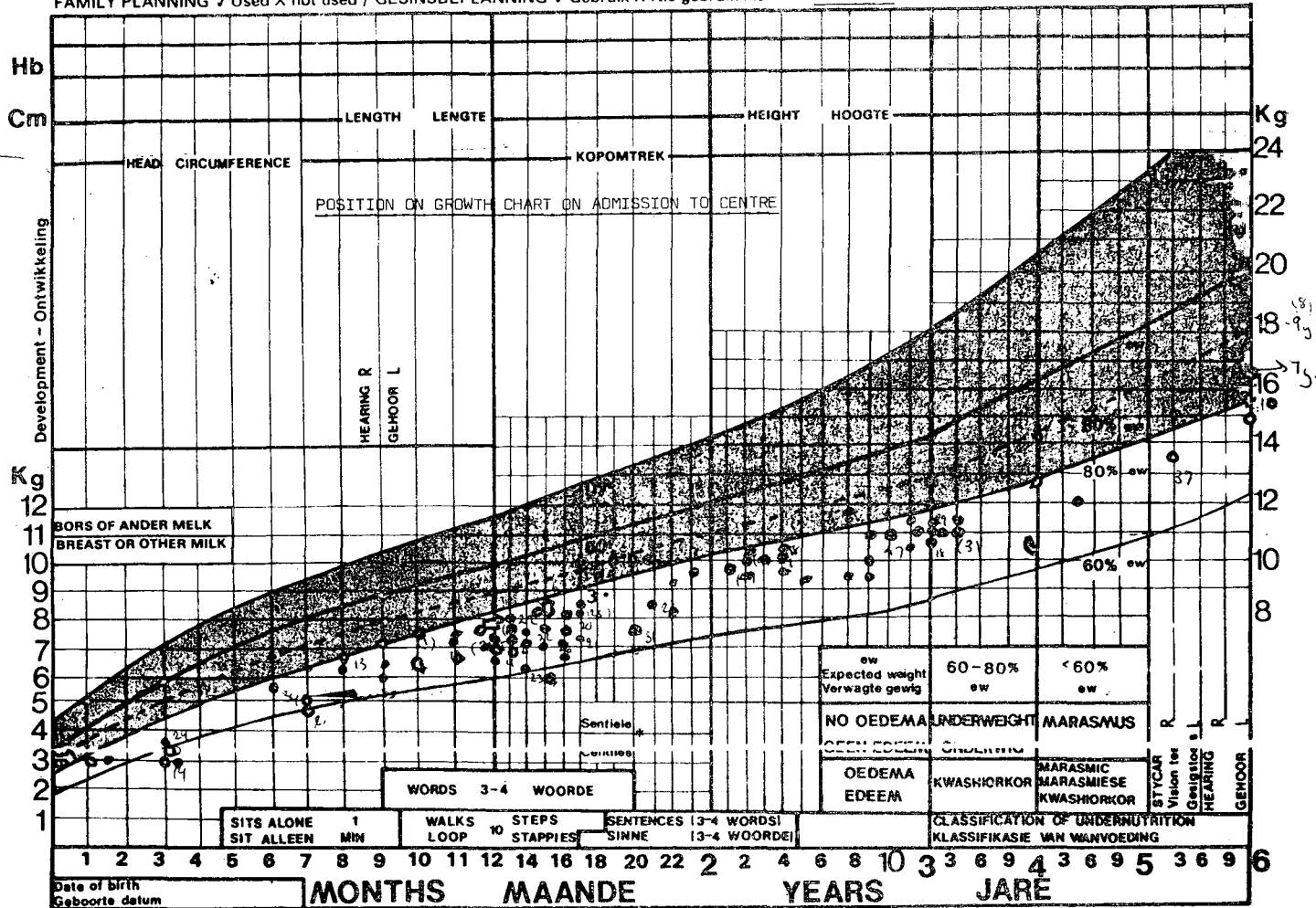
Philani Nutrition Centre was not established with the belief that this kind of organisation could solve the problem of malnutrition in South Africa. It is a response to an acute need expressed by the community and an attempt to prevent a comparatively small number of children from being permanently damaged and crippled by the effect of malnutrition. There is an awareness at the Centre that the solution to the problem of malnutrition in South Africa will have to be found on a structural level.

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March, 1984.

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1. In this paper malnutrition is defined as a deficient intake of protein and/or calories also known as Protein Calorie Malnutrition (PCM). Its manifestations include kwashiorkor, marasmus and marasmic-kwashiorkor.
 2. Protein Calorie Malnutrition in children and its Relation to Psychological Development and Behaviour. The American Physiological Society, Vol. 54, No.3, July 1974.
 3. Role of Nutrition in Immunologic Function, R.L. Gross and P.M. Newberne, American Physiological Society, 1980.
 4. The Problem of Malnutrition in South Africa. Correspondence S.A. Medical Journal, 13 June 1981.
 5. We wish to thank the Institute for Social Development, University of the Western Cape for help with the computer work and statistical analysis.

Figure 1 : ORGANISATION





BASED ON / GEBASSEER OP NCHS GROWTH CHARTS, 1976

Figure 3 : NUMBER OF CHILDREN OF FAMILY

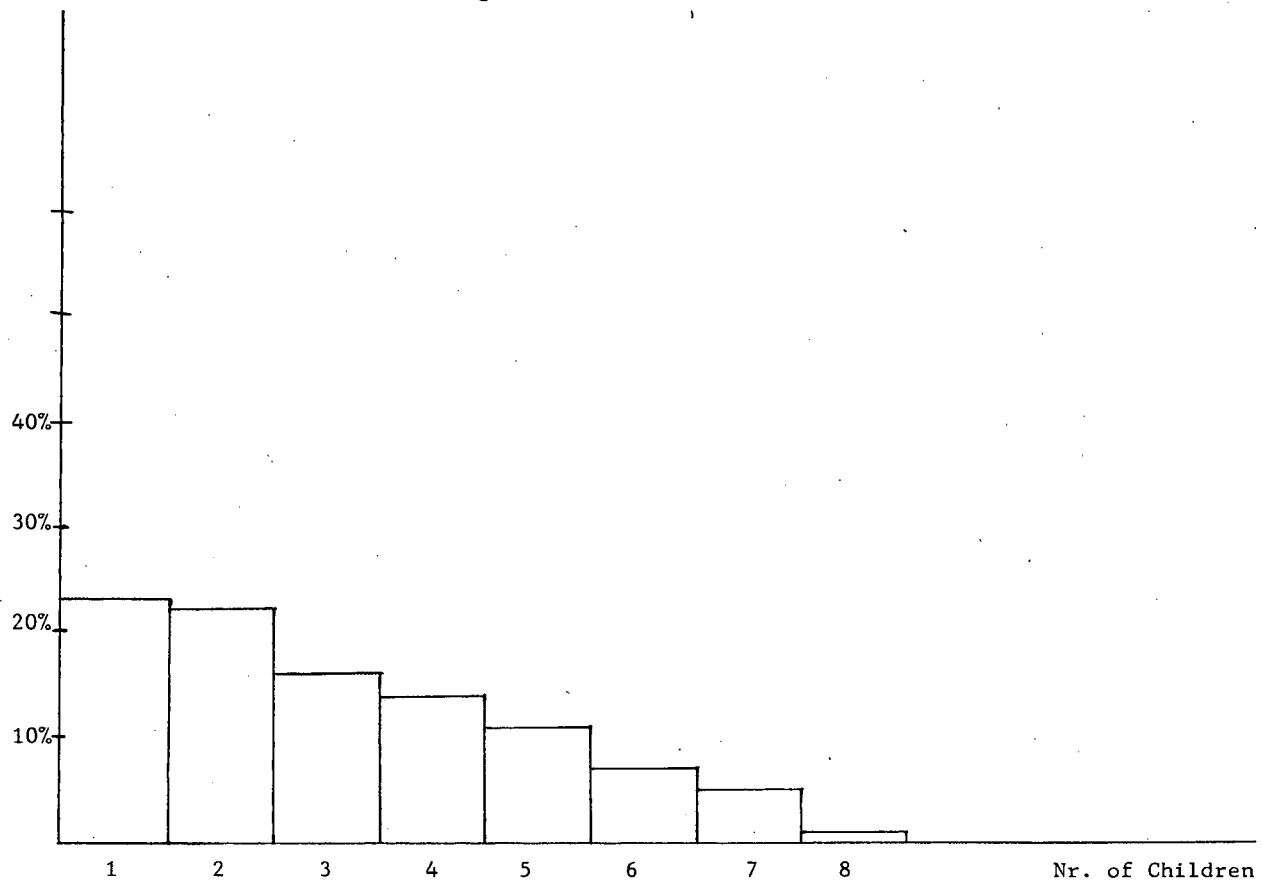


Figure 4 : DEAD CHILDREN / FAMILY

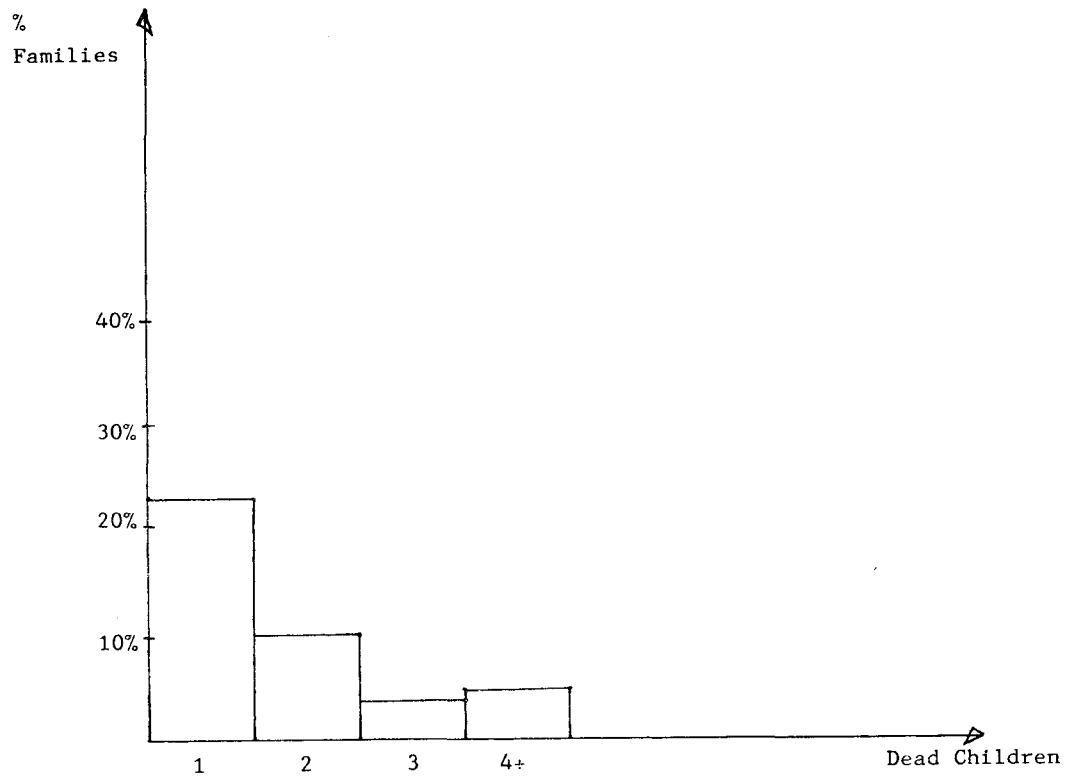


Figure 5 : FAMILY PLANNING

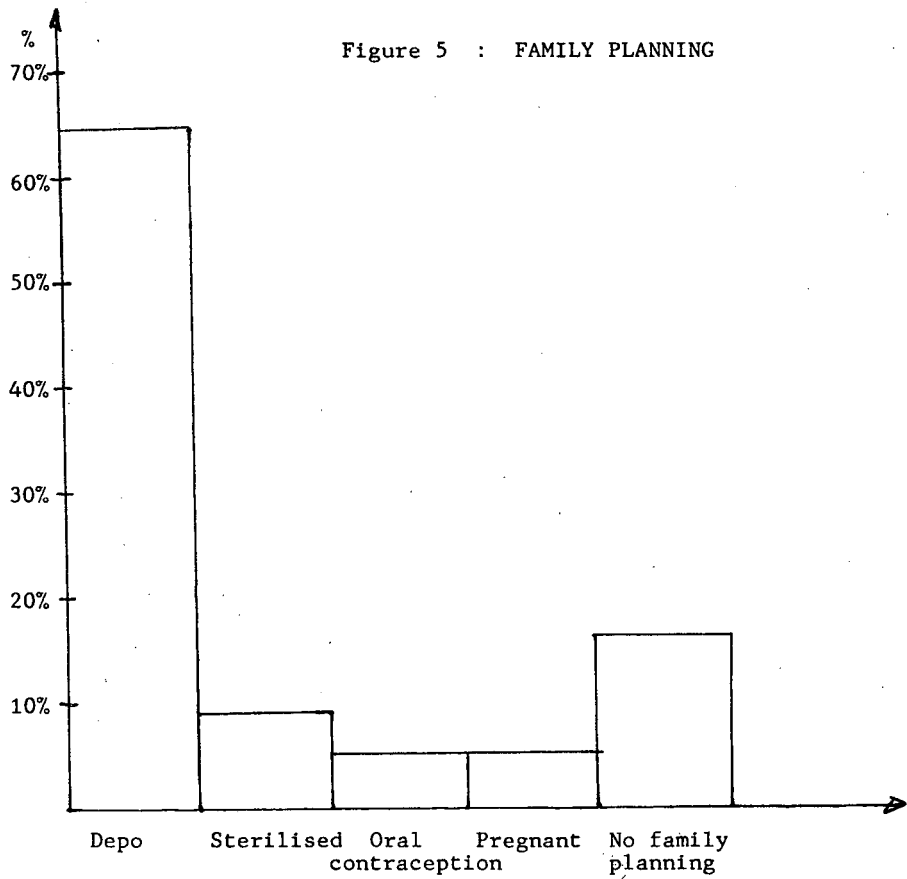
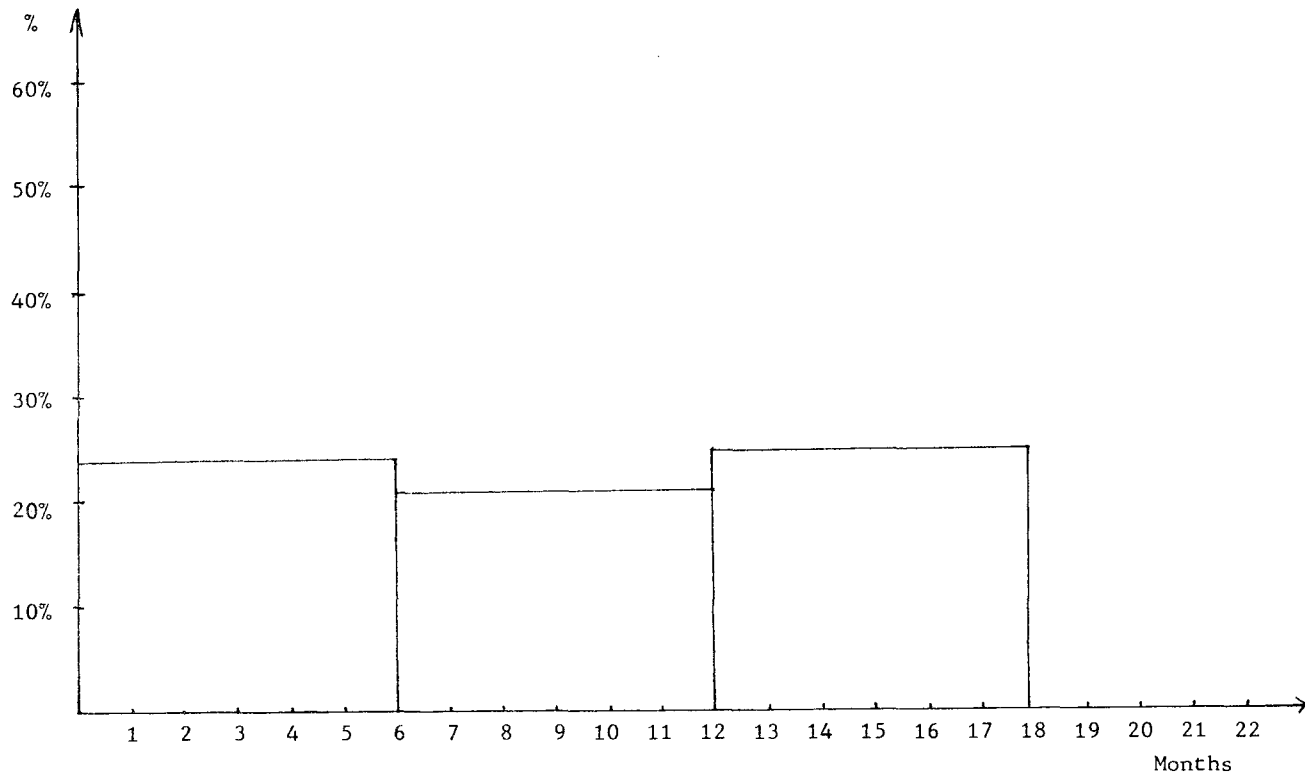


Figure 6 : BREASTFEEDING MONTHS / %



These papers constitute the preliminary findings of the Second Carnegie Inquiry into Poverty and Development in Southern Africa, and were prepared for presentation at a Conference at the University of Cape Town from 13-19 April, 1984.

The Second Carnegie Inquiry into Poverty and Development in Southern Africa was launched in April 1982, and is scheduled to run until June 1985.

Quoting (in context) from these preliminary papers with due acknowledgement is of course allowed, but for permission to reprint any material, or for further information about the Inquiry, please write to:

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