

AN INVESTIGATION INTO THE KNOWLEDGE MOTHERS HAVE ABOUT CHILDREN'S GROWTH CHARTS.

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Abstract

A study of the amount of knowledge mothers have regarding children's growth charts was carried out on mothers with children under the age of five years in Bophuthatswana during June and July 1989.

218 Mothers who attended the Well Baby Clinic were interviewed to assess their understanding and interpretation of the growth chart. Results were disappointing and recommendations are made.

INTRODUCTION

In South Africa, Child Health Cards incorporating weight (mass) for age charts have long been recognized as a cornerstone of preventive and promotive paediatrics. Different health authorities have different cards which may vary in size, colour and position of the horizontal axes. Nevertheless, they are all used for the same purpose of assessing the growth of children and before they can be used effectively, mothers should have knowledge of the significance of the health cards. Philpott (1986) and Brimblecombe and Barltrop (1978) state that in developing countries, well organized Under-Five clinics are a proven method of reducing childhood mortality and morbidity. The objective is to provide low-cost curative and preventive care to as large a portion of the population as possible.

The growth chart is essentially visual and provides the nurse with a useful instrument for educating the mother and the family. Furthermore, it promotes a clearer understanding of the nature of growth and development, and portrays clearly the consequences of an inadequate diet and of infectious diseases. In this way it contributes to a greater acceptance of responsibility for child care by the mother and to the concept of family self reliance in health matters, but only if the mother, herself, understands the message conveyed by the card.

Statement of the Problem

The Government of Bophuthatswana has provided the basic infrastructure for the delivery of primary health care. One wonders whether such services are properly utilized or not.

However, records reveal that most sick children who are brought to the clinics and hospitals are diagnosed as suffering from malnutrition, upper respiratory infection and gastro-enteritis. These problems directly indicate poor health in children, and are likely to affect the growth of the child. In this study, it was the researcher's intention to investigate the amount of knowledge mothers have regarding the growth chart.

The Objective of the Study

The study was designed to assess:

- * the mother's knowledge and understanding of the growth chart.
- * the value of growth charts in primary health care.

REVIEW OF LITERATURE

Morley (1973) was the first person to promote the concept of special health and weight charts in his book entitled Paediatric Priorities in the Developing World in which he showed that the growth charts can form the cornerstone of

preventive and curative paediatrics. He summarized these activities and aims as follows:

1. The supervision of the health of all children up to the age of five.
2. The prevention of communicable diseases with emphasis on malnutrition, measles, pertussis, tuberculosis, poliomyelitis and tetanus.
3. The provision of simple treatment for diarrhoea with or without dehydration, pneumonia and common skin disorders.

With the co-operation of experts and practitioners in different countries, the World Health Organisation (W.H.O.) co-ordinated an effort to promote the widespread use of the growth chart in primary health care. As a result of this work W.H.O. in 1978 published guidelines for the international use of child growth charts in primary health care, giving recommendations on growth standards, a prototype of a growth chart, and suggestions on how to use the charts in the health services.

Donald and Kibel (1984) have shown that this chart serves the following functions:

- to record the gain in mass
- to record immunizations
- to record neurological development
- to promote family planning
- to create a home based medical record.

Wagstaff and De Vries, in their study conducted in Soweto in 1972, found that such charts serve as a valuable link between fragmented health services and were also regarded as a diagnostic tool to recognise poor nutrition and the effects of ill health. An interesting bonus attached to the use of the growth chart was that mothers found, in the absence of other documentation such as birth certificates, that the chart could provide entry for the child to crèches and schools.

TABLE 1
FREQUENCY DISTRIBUTION OF MOTHERS' LEVEL OF EDUCATION (n=218)

School Level	Molopo	Ditsobotla	Thaba'Nchu	Total	%
Nil - Std 2	12	21	7	40	18
Std 3 - 10	61	64	51	176	81
Tertiary Education	0	0	2	2	1
Totals	73	85	60	218	100

TABLE 2
MOTHERS' KNOWLEDGE AND UNDERSTANDING OF GROWTH CHARTS (n=218)

Specific Understanding	Clinics			Total	%
	n=73	n=85	n=60		
Ability to describe nature of chart	61	75	50	186	85
Basic Knowledge of uses of chart	48	38	45	131	60
Ability to give 2 + reasons for attending clinic	25	27	14	66	30
Ability to rank correctly plotted curve on chart	29	32	20	81	37
Knowledge of necessity of bringing chart with each clinic attendance	71	85	60	216	99

METHODOLOGY

A descriptive study was undertaken in the Ditsobotla, Molopo and Thaba'Nchu regions in Bophuthatswana. Fourteen research assistants who were BNSc students in their third year of study, trained initially by the researcher, were placed in these three regions in the respective clinics.

The population comprised all the mothers who attended the Well Baby Clinics in the months of June and July 1989 at Montshiwa Clinic, Mmabatho, Itsoeng Polyclinic and Selosesina Clinic at Thaba'Nchu. A convenience sample of 218 mothers was interviewed in their own language about the understanding of the growth chart. Only mothers of the babies were interviewed although it was found that many babies were brought to the clinic by the child-minders. Eventually a total sample was achieved made up of 85 mothers from Ditsobotla, 73 mothers from Molopo and 60 mothers from Thaba'Nchu. Informed consent was obtained from the mothers prior to interviews being conducted.

The Instruments

- A structured interview schedule reflected demographic data such as levels of education of the mothers, as well as information about their understanding of the nature and use of growth charts for their

children. Information also was asked for about the mothers' understanding of the reasons for attending Well Baby Clinics and their familiarity with home management of diarrhoea with oral hydration solutions.

- Three fictitious growth charts plotted at monthly intervals were shown to the mothers who were asked to comment and rank them in order of well-being. Chart A. showed a steady rate of weight gain between 50th and 90th percentiles, Chart B showed a steady growth between the 10th and 50th percentiles and Chart C showed steady growth above 90th percentile with sudden weight loss then recorded.

Findings

All results were analysed by hand. Table 1 shows the mothers' levels of education and as Wagstaff (1986) had found, mothers who had less than 4 years of schooling (i.e., from nil to Standard 2) were not knowledgeable about the chart whatsoever, except for bringing it along to the clinic.

Points of interest and importance emerged. It was surprising to find that 99% of the mothers know that it was necessary to bring the card to the clinic, but only 30% of the mothers were able to give more than two reasons for attending the Under-Five clinic. The interpretation of charts by the mothers was rather disappointing. Of the

218 mothers, only 37% were able to give the correct ranking of the three cards.

Although the results show that nurses played a major role in persuading mothers to attend the Under-Five clinic, as well as instructing them to bring the card to the clinic or carry it along when visiting other regions, this appeared to be a passive role. There is little evidence that mothers were expected or wanted to initiate independent responses consequent on their own understanding of recorded growth and related factors. Generally mothers also accepted that their function was to care and carry the card as required by others.

DISCUSSION AND RECOMMENDATIONS

The growth chart offers a simple and inexpensive means of monitoring child health and nutritional status, and can be used by community health workers with very little supervision.

Ideally, all the purposes the chart serves should be fully exploited, and such information be transmitted to the clients. Most subjects interviewed in this study pointed out that nurses assigned a passive role to the mother regarding other uses of the card. More emphasis was put on actual clinic attendance of child with his card than on explaining the difficulty in assessing the child's progress and continuing care if the card did not accompany the child. Advice and assistance should be given to the mother as necessary.

It is recommended that during such visits to the clinic, clients are educated about simple measures of treating diarrhoea at home and the understanding and interpretation of the child's growth and weight gain as it is reflected on the card. This may be achieved through simple explanations to the mothers.

The findings of this study are revealing and would appear to justify Wagstaff's and De vries' suggestion that such local studies be carried out. Continuing health education on the functions of the growth chart is necessary and follow-up programmes should form part of the process. Such programmes should also include documentation.

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