

ASSESSMENT OF KNOWLEDGE AND SKILLS ABOUT GROWTH MONITORING AMONGST CHILD DEVELOPMENT PROJECT OFFICERS

U. Kapil
D. Paul
S. Manocha
A.K. Sood

ABSTRACT

Knowledge and skills about growth monitoring (GM) amongst Child Development Project Officers (CDPOs) were assessed by interview technique. Majority (94%) of subjects had correct knowledge that GM helps in early detection of growth retardation while about 83% felt that a flattened growth curve indicates no weight gain. The percentages of CDPOs who were able to interpret and read correctly about what ascending descending and flattened growth curves indicate were 83, 71 and 50% respectively. There is thus a need of in-service training of CDPOs in GM activities.

Key words: Growth monitoring, Growth chart, Anthropometry, Growth curve.

From the Human Nutrition Unit, All India Institute of Medical Sciences, New Delhi; National Institute of Public Cooperation and Child Development, New Delhi and Medical College, Rohtak.

Reprint requests: Dr. Umesh Kapil, Assistant Professor, Human Nutrition Unit, All India Institute of Medical Sciences, New Delhi 110 029.

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In the past five years, growth monitoring (GM) has become one of the most attractive nutritional and health tool in the array of primary health care activities. It is promoted as a major strategy to alleviate the problem of protein energy malnutrition (PEM) which is the major single contributor to death in less developed countries. Also, because GM is the only health activity conducted on a frequent and a regular basis, it is recognized as a carrier activity, allowing high coverages for other selective primary health care interventions(1). The concept of GM is frequently, misunderstood and is often confused with periodic nutritional assessment, *i.e.*, periodic weighing and classification by nutritional status categories(2).

Integrated Child Development Services (ICDS) Scheme is the largest nutrition programme in India, which aims at promotion of child's health and nutritional status. At present, the scheme is implemented in 1952 blocks of country, nearly 40% of the total population(3). Under the scheme, health, nutrition and education services are provided at village level through Anganwadi Centres, each of which is run by a local part-time female worker (Anganwadi worker), who is paid an honorarium, and a helper. Anganwadi worker (AWW) conducts growth monitoring activities of all children in the AW area (About 1,000 population). Each ICDS project incharge is Child Development Project Officer (CDPO) who is responsible for technical and administrative guidance. Each CDPO is assisted by 4-5 female supervisors.

The present study was conducted to (i) assess the knowledge and skills of CDPOs about GM, (ii) to identify areas in which their concepts are incorrect, (before launching an in-service orientation course

for them) and (iii) to initiate a realistic and action oriented training course for them.

Material and Methods

The study was conducted on 48 CDPOs attending an in service refresher training course in ICDS scheme. The CDPOs were collected in a class-room and were briefed about the objectives of the study. A pre-tested semi-structured open ended questionnaire was administered to each. Each question (40 questions in all) was read out and explained to ensure complete comprehension, and queries raised by subjects were clarified by the investigators.

Each CDPO was shown a set of six

growth charts with filled-in data to assess their skills. Subjects were asked to interpret the readings in each growth chart. The responses given were recorded and analyzed.

Results

All the CDPOs had undergone 4 months pre-placement training in which GM was taught to them in detail. All officers were graduate and working in the scheme for more than 4 years.

The knowledge about general guidelines of GM is shown in *Table I*. Majority (85%) of CDPOs had correct knowledge that severely malnourished children should

TABLE I—Knowledge About Guidelines of Growth Monitoring (n = 48)

Question	Correct response	
	No	(%)
Assessment of age is essential for GM	43	(90)
Optimally nourished children should also be weighed regularly	40	(83)
Severely malnourished children should be weighed every month	41	(85)
Children below three years should be weighed every month	40	(83)
Children above 3 years should be weighed every three months	32	(67)
Weight is most sensitive to acute PEM	43	(90)

TABLE II—Knowledge about Utility of Growth Monitoring

Question	Correct response	
	No	(%)
GM helps in early detection of growth retardation	45	(94)
Flattened GC indicates no weight gain	40	(83)
Flattened GC indicates 'at risk' children	20	(42)
Descending GC indicates decline in nutritional status	44	(92)
Growth retardation and illness episodes can be correlated in growth chart	41	(85)
GM helps in categorizing children in different grades of PEM	40	(83)

be weighed every month while 83% were aware that optimally nourished children should be weighed regularly.

Nearly all (94%) CDPOs reported correctly that GM helps in early detection of growth retardation (*Table II*). The percentage of subjects who had correct knowledge that flattened GC indicates 'at risk' children, descending GC indicates a decline in nutritional status and flattened GC indicates no weight gain was 42, 92 and 83%, respectively.

Knowledge about interrelationship between nutrition intake and growth is shown in *Table III*. Majority (92%) of CDPOs had correct knowledge that flattened GC indicates inadequate food intake over prolonged duration while 81% mentioned that adequate food is essential for ascending GC.

The ability of CDPOs in interpreting the growth chart data is depicted in *Table*

IV. Majority (88%) of CDPOs were able to read the child's nutritional status category. The percentage of subjects who were able to interpret correctly about ascending GC, descending GC, and flattened GC data was 83, 71 and 50%, respectively.

Discussion

The basic objective of growth monitoring is prevention of growth retardation through timely and early detection of growth faltering. Unfortunately, however, today there seems to be considerable confusion with regard to the basic objectives of GM. Though lip service is still being paid to early detection of growth faltering as being the objective, in actual practice this is apparently not being taken seriously(4).

The present study revealed that majority of CDPOs had correct knowledge about guidelines for GM activities (assessment of

TABLE III—Interrelationship Between Nutrition Intake and Growth

Question	Correct response	
	No	(%)
Adequate food is essential for ascending GC	39	(81)
Flattened GC indicates inadequate food intake over prolonged duration	44	(92)
Children taking inadequate food have flattened or descending GC	43	(90)
Descending GC children require extra food	40	(83)

TABLE IV—Accuracy in Interpretation of Growth Charts of Children

Nutritional grade or type of growth curve interpreted	Accurate interpretation	
	No.	(%)
Distribution of children in grade (Grade II)	42	(88)
Ascending GC indicate improvement in nutritional status	40	(83)
Descending GC indicate decline in nutritional status	34	(72)
Flattened GC indicate no weight gain	24	(50)
Ascending GC at every weighment indicates child is gaining weight	41	(85)
Flattened GC after attack of measles indicates growth faltering due to infection	13	(27)

age is essential for GM and optimally nourished children should also be weighed regularly). This may be due to detailed teaching about GM during their pre-placement training.

About 17 and 33% of CDPOs had incorrect knowledge about frequency of weighing the children below and above three years of age, respectively (*Table I*). This may be due to inadequate emphasis given on this aspect during their initial training. Non-participation of CDPOs in actual weighing activities may be another reason.

A gap existed between the knowledge and skill for interpretation of growth chart data amongst CDPOs. About 83 and 92% subjects had knowledge that flattened GC indicates no weight gain and descending GC indicates decline in nutritional status (*Table II*). But when the actual growth chart data was shown, only 72 and 50% were able to correctly interpret that descending GC indicates decline in nutritional status and flattened GC indicates no weight gain (*Table IV*). This may be due to more emphasis on theoretical aspects of GM than practical field training. Similar findings have been reported by earlier workers(5-8).

Majority of CDPOs had correct knowledge about inter-relationship between nutrition intake and growth. This may be due to adequate emphasis given on this aspect during their initial training and continued education lectures conducted by Medical Officers in the Sector and project level conferences in ICDS projects.

Some findings of present study are very encouraging. Majority of CDPOs had correct knowledge and skills about rationale of GM, and interpretation of growth chart data, respectively. However, their knowl-

edge about frequency of weighing of children was inadequate. The incorrect knowledge of leaders of ICDS project functionaries can prove detrimental to the subordinate staff. There is, therefore, need of in-service continuing education of CDPOs for updating their knowledge in growth monitoring activities.

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