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Perception, attitude and willingness of under-five children caregivers to growth monitoring in Ibadan South-West Local Government Area, Oyo State, Nigeria

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Abstract

Objective: This study was carried out to explore perceptions of under-five caregivers on growth monitoring in Ibadan south-west local government in Nigeria.

Method: Descriptive cross-sectional design was used for the study which involved four-stage sampling techniques. The study was conducted among the 410 caregivers who consented to participate. Both qualitative and quantitative methods were used to collect the data. The questionnaire elicited information on socio-demographic characteristics, Knowledge, Attitude and Growth Monitoring perceptions were measured on a 16-point scale and categorized into "negative" (≤8) and positive (>8). Descriptive statistics using mean and standard deviation were generated while qualitative data was analysed using Atlas Ti version 7.

Result: Mean age of the Caregivers of Under-5 was 31.6±6.5 years, 46.8% had secondary education and 56.8% were traders. Majority (88.3%) had received information on Growth Monitoring and (66.6%) heard from the health workers. Almost all the respondents (90.0%) had positive perception towards Growth Monitoring (10.8±2.9). It was also suggested by the caregivers that their involvement is very crucial in monitoring the growth of their children.

Conclusion: The study showed that most of the caregivers had positive perceptions towards growth monitoring and advocated their active involvement if training programmes can be developed.

Keywords: *Children growth monitoring, Perceptions, Caregivers of under-five children*

Résumé

Objectif: Cette étude a été réalisée pour explorer les perceptions des donneurs de soin aux enfants moins de cinq ans sur la surveillance de la croissance au gouvernement local dusud-ouest Ibadan, Nigeria

Méthode: Une conception transversale descriptive a été utilisée pour l'étude qui a impliqué des techniques d'échantillonnage à quatre étapes. L'étude a été menée auprès de 410 donneurs de soin qui ont consenti à participer. Les méthodes qualitatives aussi que quantitatives ont été utilisés pour recueillir les données. Le questionnaire a suscité des informations sur les caractéristiques sociodémographiques, connaissances, les perceptions d'attitudes et suivi de la croissance ont été mesurées sur une échelle de 16 points et classés en 'négatif' (d"8) et positive (> 8). Les statistiques descriptives à l'aide de la moyenne et l'écart-type ont été produites alors que les données qualitatives ont été analysées à l'aide de l'Atlas Ti version 7.

Résultat: L'âge moyen des donneurs de soin aux enfants moins de 5 ans était de 31,6 ± 6,5 ans, 46,8% avaient l'éducation secondaire et 56,8% étaient des commerçantes. La majorité (88,3%) avait reçu des informations sur la surveillance de la croissance et (66,6%) ont entendu des agents de la santé. Presque tous les répondants (90,0%) avaient une perception positive vers la surveillance de la croissance (10,8 ± 2,9). Il a également été suggéré par les donneurs de soin que leur participation est très importante dans le suivi de la croissance de leurs enfants.

Conclusion: L'étude a montré que la plupart des donneurs de soin avaient des perceptions positives à l'égard dusuivi de la croissance et a préconisé leur participation active si les programmes de formation peuvent être développés.

Mots-clés: *Surveillance de la croissance des enfants, Perceptions, Donneurs de soin aux enfants moins de cinq ans*

Introduction

Malnutrition is a major health problem especially in developing countries. This can be caused by under-nutrition or over-nutrition. It also causes increased susceptibility to common diseases. The World Health Organization (WHO) defines Growth Monitoring as a

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nutritional intervention that measures and charts the weight of children aged 0-5 years and uses the information derived to counsel caregivers so they can take action to improve a child's growth [1-4]. It is a diagnostic tool for identifying a child with nutritional or health problems, thus enabling action to be taken before the child's nutritional status is seriously jeopardized. A community-based study in Ilesha, Nigeria by Morley in 1959 led to the design and development of a growth chart called "Road to Health Chart" which emphasised the usefulness of regular weighing of young children. The use of this chart has spread beyond Nigeria to other parts of Africa, Asia, Europe and the rest of the world.

In the early 1980s, growth monitoring was promoted as one of the major components of critical preventive care for young children {Growth Monitoring, Oral Rehydration, Breastfeeding, Immunization, Food Supplement, Family Planning and Female Education (GOBIFFF)} For two decades, the program was implemented in a variety of contexts as an element of the nutrition and health programs. However, this approach to implementation was criticized due to low service coverage and poor-service linkage with other health related activities [5, 13]. Despite this criticism, growth assessment was affirmed as the single most useful tool for defining health and nutritional status in children at both individual and population levels [1, 4, 8, 10]. Other authors [9,12] re-emphasized that monitoring child growth interventions helps to reduce infant and child mortality, because malnutrition is in part responsible for high rates of mortality of children aged less than five years, especially in developing countries. In light of these favorable dispositions, Growth monitoring was advocated globally as one of the key elements of child survival and primary health care strategy [11] which would add to boosting the achievement of the millennium development goals [15]. The implementation of growth monitoring has for several years been the prerogative of health workers especially the nurses and doctors. While this approach has worked effectively in the past, the inadequate number of the formal health care workforce coupled with low resource- support has degraded the capacity of the health system to conduct comprehensive and efficient growth monitoring services.

In light of this challenge, there is an urgent need to develop strategies that can significantly improve the monitoring of growth of under five children beyond the conventional approach by health workers. One strategy with the possibility of a demonstrated effect is the use of mothers and caregivers to monitor the growth of their children as well as record and report such activities to the health system. This is what the road to health chart does in detecting abnormalities that require urgent attention. It is very important in Nigeria where the current health system is facing a lot of problems especially at the Primary Health Care (PHC) level. The government, development agencies and research institutions have been recommending the use of innovative ways of enhancing health system performance including the involvement of people in service delivery. This current work is in this direction and is aimed at exploring the growth monitoring perceptions, attitude and extent to which mothers' and child caretakers are willing to monitor the growth of their children.

Materials and methods

A descriptive cross-sectional design was used for the study. Four hundred and ten caregivers were selected for the study. This involved four-stage sampling techniques which included:

First stage, the list of all the wards was compiled and the 12 wards in LGA were stratified into two main high and low populated categories. In the second stage, (random sampling) balloting was used to select 1 ward in each category. In the third stage, all communities in each ward were listed and proportionate sampling was used to determine the sample size in each community. The fourth stage involved random selection of the households by balloting followed by selection of a caregiver with an under-five child. Where the under-five children are more than one from a caregiver that was to be interviewed, balloting was used to select a caregiver.

A set of pre-tested questionnaire was administered in 12 selected communities under the wards. Semi-structured questionnaire which elicited information on socio-demographic characteristics, growth monitoring perceptions, knowledge and attitude was used to collect data from 410 caregivers. The instruments originally developed in English, were translated into Yoruba language and back translated into English to ensure accuracy of translation. The instrument was pretested prior to use, and interviewers were trained in standard interview techniques prior to data collection. Ethical approval for the study was provided by the Oyo State Ethical Review Committee. Written informed and voluntary consent were obtained from each study participant.

Table 1: Socio- demographic profile of the caregivers of under five and their children

Description	Response options	Frequency	Percentage
Age	Less than 20 years	8	2.0
	21-30 years	204	49.8
	31-40 years	153	37.3
	41-50 years	44	10.7
	50 years and above	1	0.2
Religion	Christianity	195	47.6
	Islam	215	52.4
Ethnicity	Yoruba	362	88.3
	Igbo	30	7.3
	Hausa	11	2.7
	Others (Borno, Ijaw, Edo, Ebira)	7	1.7
Educational Level	No formal Education	31	7.6
	Primary Education	69	16.8
	Secondary Education	214	52.2
	Tertiary Education	96	23.4
Occupation	Civil servant	18	4.4
	Trading	233	56.8
	Artisan	90	21.9
	Teaching	40	9.8
	Unemployed	27	6.6
	Nurse	2	0.5
Marital Status	Single	4	1.0
	Married	396	96.6
	Divorced	8	2.0
	Widow	2	0.5
Sex of the Child	Male	213	52.0
	Female	197	48.0
Age of the child	Less than 12 months	127	31.0
	12-23 months	87	21.2
	24-35 months	80	19.5
	36-47 months	60	14.6
	48-59 months	56	13.7
Place of birth	Hospital	299	72.9
	Mission Home/Church	52	12.7
	Home	43	10.5
	Traditional Birth Attendant Home	16	3.9
Number of children	1-2	206	50.2
	3-4	164	40.0
	5 and above	40	9.8
Weight at Birth	<2.5 kg	23	5.6
	>2.5kg and above	189	41.6

Data analysis

Data generated from the questionnaire were entered, cleaned, coded and analysed using Statistical Package for Social Sciences (SPSS Version 16).

The Caregivers' knowledge of growth monitoring measurement methods was measured on a 21-point scale. Knowledge scores were classified as "high" (>15), "average" (8-15) and "poor" (<8). Perceptions were measured on a 16-point scale and categorized into "positive" (<8) and negative (≤8). Attitude was measured on 11-point scale and categorized as positive (>6) and negative (≤6). Descriptive statistics using mean and standard deviation were generated. The qualitative data were analysed using Atlas Ti. version 7.

Results

The caregivers' mean age was 31.6±6.5 years. Majority 396 (96.6%) were married ; and 310 (75.6%) had secondary education and were largely from Yoruba ethnic group (88.3%). There was slightly more Muslims than Christians (47.6%) and more than half 233 (56.8%) were traders and had stayed mostly in Ibadan city (55.1%) all their lives. Most of their children (72.9%) were born in health facilities and 10.5%, 16 (3.9%), 52 (12.7%) were from Home, Traditional Birth Attendants Homes and Mission Home/Church respectively. 50.2% had a parity of 1 - 2 Children (table 1).

Knowledge about Growth Monitoring

Three hundred and sixty two 362 (88.3%) had information about growth monitoring while 48 (11.7%) had not heard about it with the mean knowledge score of 9.25±2.7. Sources of information were: 273 (75.4%) from health facility, 33 (9.1%) heard from radio and television, 26 (7.2%) books, while 17 (4.7%), 10 (2.8%), 3 (0.8%) from parent/family, friends and posters respectively. Fig. 1

Thirty-nine percent of the respondents were able to define growth monitoring as measuring of height and weight. Fifty-six respondent (13.7%) defined it as giving nutritious food to children while 14 (3.4%) agreed to measure height and weight to give nutritional intervention to children, 65 (15.9%). Others gave various definitions to growth monitoring (overall health of children, taking care of the baby, drug use, child's safety, proper caring and playing habit) and 115 (28.0%) gave no response Table 2

On the component of growth monitoring services: majority of the respondents 330 (80.5%) to immunization, oral rehydration therapy 211 (51.5%), breast feeding 355 (86.6%), complementary feeding 345 (84.1%), family planning 165 (40.2%) as part of the services that should be included in growth monitoring (table 3).

Majority of the respondents 325 (79.3%) agreed that the growth chart is a useful tool for the child's health and development, 73 (17.8%) disagreed while 12 (2.9%) did not know whether is useful or not. Also, 360 (87.8%) agreed that growth monitoring can help to detect malnutrition, while 38 (9.3%) disagreed and 12 (2.9%) did not know. Sixty-one percent (250) of the respondents also supported that the outcome of the weight of children could discourage the mother if less than the expected value for the age of the child, while 149 (36.3%) disagreed with the notion and 11 (2.7%) opted for don't know.

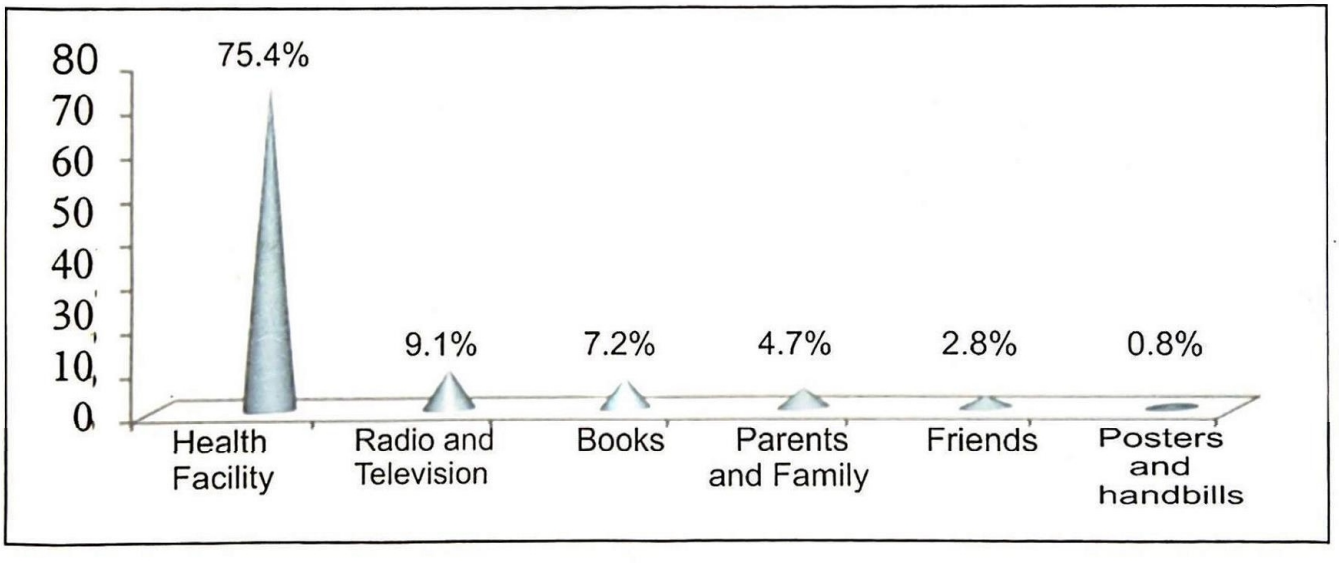

Fig. 1: Sources of Information of growth monitoring N=410

On the usefulness of the growth chart, 285 (69.5%) supported its usefulness, 112 (27.3%) did not support and 13 (3.2%). Slightly more than half of the respondents 232 (56.6%) disagreed that the growth chart is not meant for the health workers only, is for both the caregivers and health workers while 166 (40.5%) and 12 (2.9%) agreed and did not know respectively. Majority of the respondents 319 (77.8%) also agreed that both parents should be involved in monitoring the growth of their children, while 78 (19.0%) disagreed.

Table 2: Definitions of growth monitoring by the respondents N=410

	Frequency	Percentage
Measuring height and weight	160	39.0
Giving nutritious food to children	56	13.7
Measuring height and weight to give nutritious intervention to children when necessary.	14	3.4
Others*	65	15.9
Don't Know	115	28.0
Total	410	100

**Overall health of the children, Taking care of the baby in other to make them clean, Playing habit of the children, No idea, Drug use, Child's safety and proper caring.*

Table 3: Growth monitoring services components

Variables	Responses		
	Yes	No	Don't know
	Freq (%)	Freq (%)	Freq(%)
Immunization	330(80.5)	57(13.9)	23(5.6)
Oral Rehydration Therapy	211(51.5)	174(42.4)	25(6.1)
Breast feeding	355(86.6)	33(10.7)	22(5.3)
Complementary feeding	345(84.1)	44(10.7)	21(5.1)
Family Planning	165(40.2)	219(53.4)	26(6.3)

Majority 349 (85.1%) agreed, 46 (11.2%) disagreed that is a western practice and is not suitable for our culture. Majority of the respondents 290 (70.7%) disagreed on the issue of growth monitoring not beneficial to children while 107 (26.1%) agreed. Using growth monitoring to detect abnormality, 349 (85.1%) agreed, 46 (11.2%) disagreed while 15 (3.7%) did not know. Fifty-two percent (213) of the respondents disagreed that growth monitoring cannot be done by mothers who are not educated, while 180 (43.9%) agreed and 17 (4.1%) don't know.

Two-hundred and seventy eight respondents (67.8%) believed that growth faltering is best observed by mothers rather than measuring weight, while 120 (29.3%) disagreed and 12 (2.9%) didn't know. Few of the respondents 113 (27.6%) agreed that growth monitoring should be in done in primary health centers alone, while more than half 282 (68.8%) disagreed with that opinion. Understanding the basic component of growth monitoring, slightly more than half, 224 (54.6%) agreed that it is difficult; close to half of the respondents 174 (42.4%) disagreed while just the minority 12 (2.9%) don't know.

Also on the issue of putting appropriate marks on the growth monitoring chart, majority 318 (77.6%) agreed that it is difficult to mark, 79 (19.3%) and 13 (3.2%) don't know. Majority of the respondent 353 (86.1%) disagreed that growth monitoring can make children sick, 43 (10.5%) agreed while a minority 14 (3.4%) don't know. Two hundred and thirty five respondents (57.3) disagreed that growth monitoring cannot accurately predict the nutritional status of children, minority 162 (39.5%) agreed and just a few of the respondents 13 (3.2%) said they don't know. Table 4

This section discusses the attitudes of the caregiver towards monitoring the growth of their under-five children. In making growth monitoring compulsory, majority 374 (91.4%) of the caregivers agreed to that, 17 (4.1%) disagreed and 19 (4.6%) were not sure. Almost all the respondents 376 (91.7%) agreed, while 5 (1.2%), 29 (7.1%) disagreed and were not sure respectively. Slightly more than half 241 (58.8%) agreed that knowing the child's weight can create anxiety, 109 (26.6%) disagreed and 60 (14.6%) were not sure. Using weighing to help detect abnormality, 337 (82.2%)

Table 4: Perceptions of Caregivers on Growth Monitoring

Variables	Responses		
	Agree Freq(%)	Disagree Freq(%)	Don't know Freq(%)
The growth chart is a useful tool for monitoring child health and development	325(79.3)	73(17.8)	12(2.9)
Growth monitoring is useful to detect some basic childhood illnesses such as malnutrition	360(87.8)	38(9.3)	12(2.9)
The outcome of a child's weight can discourage the mother if the value is less than normal	250(61.0)	149(36.3)	11(2.7)
Growth chart can be a useful tool to the caregiver	285(69.5)	112(36.3)	13(3.2)
Only health workers should use growth chart for monitoring the health and development of the children as it is cumbersome	166(40.5)	232(56.6)	12(2.9)
Both parents should be involved in monitoring the child's growth	319(77.8)	78(19.0)	13(3.2)
Growth monitoring is a western practice, so it is not suitable to do same in our culture	46(11.2)	349(85.1)	15(3.6)
Growth monitoring is not beneficial to children	107(26.1)	290(70.7)	13(3.2)
It can also assist in detecting abnormal growth in children	349(85.1)	46(11.2)	15(3.7)
Growth monitoring cannot be done by mothers who are not educated	180(43.9)	213(52.0)	17(4.1)
Growth faltering is best observed by mothers rather than measuring the weight of the baby	278(67.8)	120(29.3)	12(2.90)
Growth monitoring should be done in primary health centers alone	113(27.6)	282(68.8)	15(3.7)
It is difficult for caregivers to understand the basic components of growth monitoring	224(54.6)	174(42.4)	12(2.9)
It is difficult to put appropriate marks on the growth monitoring chart	318(77.6)	79(19.3)	13(3.2)
Growth monitoring can make children sick	43(10.5)	353(86.1)	14(3.4)
Growth monitoring cannot accurately predict the nutritional status of children	162(39.5)	235(57.3)	13(3.2)

agreed, 28 (6.8%) disagreed and 45 (11.0%) were not sure. On the part of weighing scale not being reliable, 108 (26.3%) agreed, 232 (56.6%) disagreed while 70 (17.1%) were not sure. Limiting the growth monitoring to children less than a year old, almost all the respondents 373 (91.0%) disagreed, just a few of the respondents 26 (6.3%) agreed while 11 (2.7%) not sure.

Fifty-two percent (213) disagreed on the process being cumbersome while 132 (32.2%) agreed and 65 (15.9%) were not sure. Majority 336 (82.0%) disagreed on the issue of growth monitoring as a waste of time, 40 (9.8%) agreed and 34 (8.3%) were not sure. More than half of the respondents 233 (56.8%) disagreed to growth monitoring best used when the child is sick, 130 (31.7%) agreed while 47 (11.5%) not sure.

Majority 378 (92.2%) agreed that all children need growth monitoring, just a few of the respondents 26 (6.3%) disagreed with the statement and 6 (1.5%) said they were not sure. Forty nine (12%) also believe that it is only the children who are at risk of infection that need growth monitoring, while 315 (76.8%) disagreed and 46 (11.2%) were not sure (table 5).

The caregivers had a good attitude (98.3%) with respect to growth monitoring while 1.7% had a poor attitude. The overall mean for the attitudinal rating was 8.9±1.4

Discussion

The study revealed that most of the caregivers had information about growth monitoring majorly from the health facility which implies that other sources of information such as radio, television, posters and handbills can also serve as platform in creating awareness on growth monitoring. A good number of the caregivers also found it difficult in defining what growth monitoring is all about.

In this study, almost all the caregivers reported that growth charts are useful in monitoring the overall

Table 5: Attitudinal disposition of caregivers towards growth monitoring N=410

Variables	Responses		
	Agree Freq (%)	Disagree Freq(%)	Not sure Freq(%)
Growth monitoring should be made compulsory for all mothers and caregivers	374(91.4)	17(4.1)	19(4.6)
Growth monitoring is an acceptable method in child survival strategy	376(91.7)	5(1.2)	29(7.1)
Knowing the child's weight can create anxiety for the mother	241(58.8)	109(26.6)	60(14.6)
Frequent weighing of the child helps in detecting abnormality	337(82.2)	28(6.8)	45(11.1)
The weighing scale is not a reliable way of conducting growth monitoring	108(26.3)	232(56.6)	70(17.1)
Growth monitoring should be limited only to children less than one year	26(6.3	373(91.0)	11(2.7)
The cumbersome process makes it difficult to practice	132(32.2)	213(52.0)	65(15.9)
Measuring growth is a waste of time	40(9.8)	336(82.0)	34(8.3)
Growth monitoring is best used when the child is sick	130(31.7)	233(56.8)	47(11.5)
All children need growth monitoring	378(92.2)	26(6.3)	6(1.5)
Only children who are at risk of infection need growth monitoring	49(12.0)	315(76.8)	46(11.2)

health and development of children. This however was not in line with findings which emphasized that charts have not been shown to be beneficial in improving growth and reducing malnutrition which might be as a result of a poor understanding of what growth monitoring is all about by the caregivers [6]. This can be resolved by designing chart cards that can be easily understood by the caregivers and training programmes should also be conducted [6] for the caregivers.

Furthermore, the study reflected the caregivers to be actively involved in growth monitoring activities of their children, not limiting the activity to the health workers alone. This finding has provided health workers with windows of opportunity to keenly engaging child caregivers in growth monitoring. It is essential that health personnel and caregivers comprehend this by active involvement in growth monitoring to ensure it is used as a guide to appropriate curative actions; [3]. In the study carried out by Cash *et al* , it was shown that both parents were involved in home monitoring of their children. However, emphasis should be laid on making the growth chart as simple as possible for easy comprehension of the basic components and the charting of the lines. [7] Stating further on weight cards used in growth monitoring, it was suggested it should be simple, while those used in nutrition surveillance must be precise, with emphasis on nutritional status.

The study also reflected poor level of participation on the part of caregivers in growth monitoring process of their under five children which they emphasized have been centered round the health workers alone.

Conclusion

The Caregivers supported growth monitoring to identify childhood illnesses such as malnutrition. The caregivers also stated that mothers might become anxious about their children's weight and may feel guilty if the clinic detects poor weight gain or weight loss between visits. Another key finding in this study is that caregivers (both parent) should be involved in carrying out growth monitoring too, not limiting the activity to the health workers alone. This finding has provided health workers with windows of opportunity for actively engaging child caretakers in growth monitoring. It is essential that health personnel and caregivers comprehend this by active

involvement of both and ensure that growth monitoring becomes a guide to appropriate remedial actions. However, emphasis should be laid on making the growth chart as simple as possible for easy comprehension of the basic components and the charting of the lines stated that the weight cards used in growth monitoring should be simple, emphasizing growth, while those used in nutrition surveillance must be precise, with emphasis on nutritional status [7].

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