

# Care Giver Determinants Of Utilization Of Growth Monitoring Clinic Among Children Aged 12-59 Months In Urban Kiambu County, Kenya

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*Abstract: This was a cross-sectional descriptive study to assess the utilization of growth monitoring clinic services and care givers determinants of utilization of growth monitoring clinic services among children aged 12-59 months in urban area, Kiambu County Kenya. Three hundred and eighty four (384) children aged 12- 59 months were sampled using simple random sampling method. The caregiver who brought each child to the health facility consented for participation and responded to the questionnaire. The results showed that majority of caregivers who brought children aged 12- 59 months to the health facilities were females aged 20-30 years. The respondents lacked awareness on rationale of utilization of growth monitoring clinic services among children aged 12-59 months. Results revealed utilization of clinic services declined as the children grew older. Also the results showed there was low utilization of growth monitoring services as only 20% respondents in Thika Sub-County said children aged attended clinic for growth monitoring services. Chi-square results were  $\chi^2=3.421$ ,  $df= 6$ ,  $p= 0.755$ . Further, results indicated care givers took children to the health facility to seek treatment for childhood illness among other health problems. Thus the major motivation for care givers to take children aged 12-59 months to the health facility was to seek treatment of illnesses and not to seek growth monitoring clinic services as expected.*

*Keywords: Determinants, growth monitoring, underweight, stunting, wasting, caregiver, 12-59 months old children.*

## I. INTRODUCTION

Growth monitoring is a progressive, regular measurement and recording/charting/plotting of weight, and sometimes height/length, determining the body size, normal growth, stunting, wasting and underweight / overweight, assessment of acquisition of skills and behavior based on WHO standards and provision of interventions according to need among children under five years of age (WHO, 2016).

Growth monitoring practice was introduced in Nigeria, West Africa in the 1950's (Morley and Margaret Woodlands, 1987). In the year 2002, 178(88%) countries of the world were practicing growth monitoring WHO 2004. Growth charts consists of a series of percentiles curves that illustrate the

distribution of selected body measurements to determine growth status of children under five years of age. Growth charts are used by pediatricians, nurses and parents to track the growth of infants and children (WHO 2016). The growth charts are used to determine whether the growth of a child is adequate and interventional purposes growth charts as a tool to form an overall clinical impression for the child being measured (CDC, 2016). This underlines the importance of utilization of growth monitoring services clinic services among children under five years old regularly.

## A. RESEARCH OBJECTIVE

The objective of this study was to assess the utilization and care giver determinants of utilization of growth monitoring clinic services among children 12-59 months in urban area, Kiambu County, Kenya.

## II. LITERATURE REVIEW

According to the latest Kenya National Population census, the mortality rate of children under five years of age in Kenya was high at 74 per 1000 live births (KNBS, 2010) Despite availability of growth monitoring clinic services in urban and rural areas, provision of trained personnel, provision of free growth monitoring clinic services and child health card in which to record health information about each child, community health workers to identify and refer undernourished children and clinic defaulters to the clinic for growth monitoring and interventions. In addition, 48% under five year old children were undernourished while 48% under five year old children did not utilize growth monitoring clinic services. Little information on utilization of growth monitoring clinic services among children aged 12-59 months existed, yet growth monitoring is a major practice for assessing and promoting the health of children under five years of age (KNBS 2010/2015).

Children are born without ability to take care for themselves. They depend entirely on the government provision and care givers to access growth monitoring and other health services that are usually provided in child well-fare clinic. This study assessed utilization and care giver determinants of utilization of growth monitoring clinic services among children aged 12- 59 months in an urban area in Thika Sub- County, Kiambu County, Kenya.

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Growth monitoring practice was introduced in Nigeria-West Africa by a British Pediatrician in 1950s (Morley and Margaret Woodland, 1987). In the year 2002 178(88%) countries of the world were practicing growth monitoring (WHO, 2004). Growth monitoring is practiced in many countries in all continents. In Africa it is practiced in Nigeria, Zimbabwe, South Africa, Tanzania, Uganda Ethiopia and Kenya among others (WHO, 2011).

Growth monitoring has a role in child health promotion because it provides information used to counsel care givers so that they can take action to improve child growth (Journal of Health Population and Nutrition, 2014).

There was decline in the ownership of growth monitoring child health record card in Kenya from 61% in 2006 / 2007 to 48% in 2009/2010 among under five years old children, a pointer that:

In total, 52% under five years of age were not utilizing growth monitoring clinic service in 2009/2010. Yet 48%

Kenyan children were undernourished- (35% had stunted growth, 7% were wasted 6% were underweight (KNBS, 2010). Malnutrition which is often associated with child morbidity and mortality is preventable by using growth monitoring clinic services. Despite availability of growth monitoring clinic services in urban and rural areas, provision of trained personnel and a 5 years child health record card in Kenya, 52% under five years old children did not utilize growth monitoring clinic services in 2009/2010. Little information on utilization of growth monitoring clinic services among children aged 12-59 months existed, yet this group of children has unique health needs and growth monitoring is a major practice for assessing and promoting the health of children under five years of age (KNBS, 2010; 2015). This study assessed the utilization and care giver determinants of utilization of growth monitoring clinic services among children aged 12-59 months in Kiambu County.

## III. RESEARCH METHODOLOGY

The research design was cross-sectional descriptive study. Dependent variables were utilization and growth monitoring clinic services. Independent variables were health facility, Socio demographic factors, care givers and health of the children. Study populations were children aged 12-59 months and care givers were the respondents. Sample Size was 384 determined according to Fisher *et al.*, 1998. Study area was Thika Sub- County to assess utilization and care giver determinants of utilization of growth monitoring clinic services among children aged 12- 59 months in the urban area in Thika Sub- County, Kiambu County, Kenya (fig 1). Primary data was collected using questionnaires and focus group discussions. Data was analyzed using Statistical Package for Social Sciences (SPSS).

Map Showing the Position of Thika in Kiambu and Kangundo in Machakos Counties in Kenya

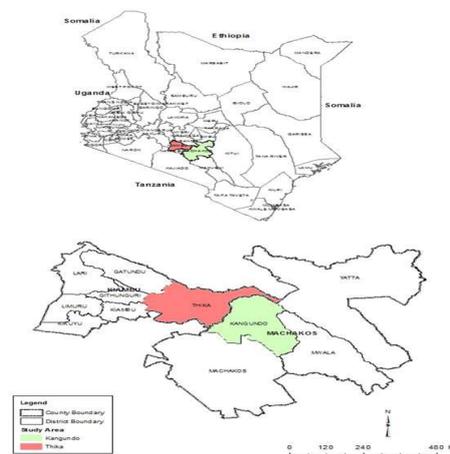


Figure 1: Map of the study area

## IV. RESULTS

### A. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF CHILDREN AGED 12-59 MONTHS IN THIKA AND SUB-COUNTY

Out of the 384(100%) children aged 12- 59 who used the clinic services, respondent indicated 189(49.2%) were males and 195(50.8) were females. Further, majority 243(63.3%) were aged 12- 35 months and the minority 141(36.7%) were aged 36- 59 months The respondents indicated that 361 (94%) children aged 12- 59 months were taken to the clinic by mothers and the minority 27(6%) were fathers, grandfathers, grandmothers and hired care givers. The respondents indicated 210(54.7%) children aged 12-59 months that used clinic services had their upkeep provided for by their while the remaining`174(45.3%) were provided for upkeep by the mothers or both father and father. The majority 371(96.6%) respondents who brought the children aged 12-59 months to the clinic were females and the minority 13(3.4%) were male (Table 1).

12- 35 and minority 141(36.7%) were aged 36- 59 months (Figure2).

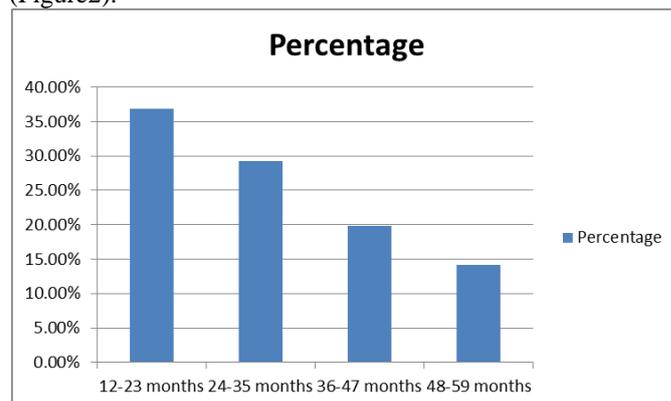


Figure 2: Age distribution of children aged 12-59 months who used clinic services during the study period in Thika Sub-County

C. CARE GIVERS DETERMINANTS OF UTILIZATION OF GROWTH MONITORING CLINIC SERVICES AMONG CHILDREN AGED 12-59 MONTHS

The 384(100%) people who brought the children aged 12=59 months to the health facility to seek healthcare were the caregivers who respondents to the questionnaires. They were asked to state their ages in complete years. Four (1%) stated they were aged < 20 years, 294 (76.4%) stated they were aged 21-30 years, 79 (20.6%) stated they were aged 31-40 years, 6 (1.6%) stated they were aged 41-50 years and only one (0.3%) were aged >50 years in Kiambu Sub-County (Figure 3).

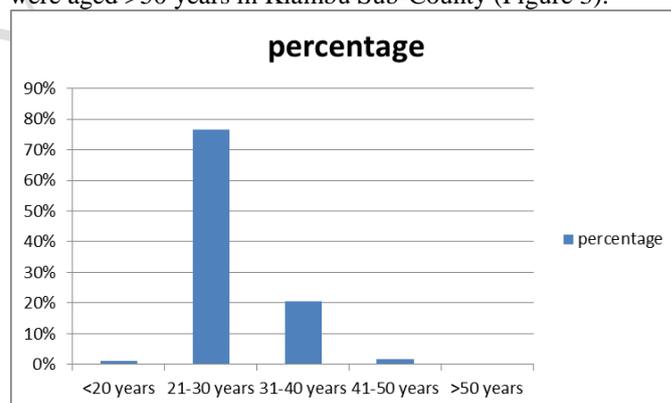


Figure 3: The age of care givers who brought children to the clinic in complete years

In Thika Sub-County respondents said they stopped taking children aged 12-59 months to clinic before they are five years old because; there was no need to attend clinic 193(50.3%), it was time consuming 47(12.2%), they felt bored taking children to the clinic 13(3.4%), gave no reason why they stopped taking the children to clinic 24(6.3%), child was fully immunized 46(20.9%) and ignored taking children aged 12-59 months to clinic 42(10.9%) (Table2).

Variables	Study location
<b>Sex of study population</b>	<b>Thika Sub- County (n=384)</b>
Male	189(49.2%)
Female	195(50.8%)
<b>TOTAL</b>	<b>384(100%)</b>
<b>Age of study population</b>	
12-23 months	134(34.9%)
24-35 months	109(28.4%)
36-47 months	78(20.3%)
48-59 months	63(16.4%)
<b>TOTAL</b>	<b>384(100%)</b>
<b>Relationship between the child and respondent</b>	
Mother	361(94.0%)
Father	17(4.4%)
Grandmother	4(1.0%)
Grandfathers	1(0.3%)
Hired Caregivers	1(0.3%)
<b>TOTAL</b>	<b>384(100%)</b>
<b>Provider for the upkeep of the child</b>	
Fathers	210(54.7%)
Mothers	127(33.1%)
Father and Mother	47(12.2%)
<b>TOTAL</b>	<b>384(100%)</b>
<b>Sex of those who took child to clinic</b>	
Females	371(96.6%)
Males	13(3.4%)
<b>TOTAL</b>	<b>384(100%)</b>

Table 1: Socio-demographic characteristics of children aged 12-59 months in Thika Sub-County

B. UTILIZATION OF GROWTH OF GROWTH MONITORING CLINIC SERVICE AMONG CHILDREN AGED 12- 59 MONTHS IN THIKA SUB-COUNTY

The respondents were asked to state the age of the children aged 12-59 months who utilized the clinic during the study period in complete months. The ages were verified from the children’s record cards. Majority 333(63.3%) were aged

Why caregivers stop taking children aged 12-59 months to clinic	Study location	
	Thika Sub-County	
	Frequency	Percent
No need to attend clinic	193	50.3
Have other commitments	19	4.9
It is time consuming	47	12.2
Feel bored of attending clinic	13	3.4
Had no reason for not attending clinic	24	6.3
Child is fully immunized	46	12.0
Ignored	42	10.9
<b>TOTAL</b>	<b>384</b>	<b>100</b>

Table 2: Why caregivers stop taking children aged 12- 59 months to clinic before they are five years old

In Thika Sub-County 384 respondents were asked to give the reasons why caregivers would stop taking children aged 12-59 months for growth monitoring clinic services before they attained 59 months of age. The responses were cross-tabulated with the caregivers/respondents levels of education which included primary 146, secondary 175, college 57, university 5 and no formal education 1. The results indicated that out 384 respondents a good number 189 caregivers/respondents did not give any reason for non-use of clinic services, 45 and 43 respondents indicated children were big, and they had not been sick respectively. Chi-square test for significance on education and use of growth monitoring services was  $\chi^2 = 32.549$ ,  $df = 2$ ,  $P = 0.253$ . The conclusion was that there was no relationship between the caregivers/respondents levels of education and the reasons why they would stop taking children aged 12-59 months to clinic before they attained 59 months of age in Thika Sub-County. Perhaps this was because of lack of awareness about the importance of use of growth monitoring clinic among children aged 12-59 months (Table 3).

The occupations of the caregivers were teachers 35, businessmen 125, domestic workers 153, and others 71. The responses were cross tabulated with the occupations of caregivers/respondents. The result indicated a good number were domestic workers 153 while 125 and 71 were business people respectively. Chi-square test for the significance of occupation and use of clinic services was  $\chi^2 = 17.818$ ,  $df = 3$ ,  $P = 0.037$ . The conclusion was that there was relationship between the caregivers/respondents occupation and the reasons why children aged 12-59 months should be taken to clinic in Thika Sub-County because a good number of caregivers/respondents in various occupations were aware children use clinic services for growth monitoring (Table 3).

The care givers/respondents indicated that majority 185(48.17%) children utilized the clinic services because they were coughing, 27(7.08%) because they had diarrhoea, 45(11.71%) because they had fever and 127(33.07) because they had other illnesses  $\chi^2 = 4.468$ ,  $df = 3$ ,  $p = 0.215$ . Thus majority 275(66.93% of children utilized the clinic because they suffered from the major childhood illnesses (Table 4).

Variable	Category	Used growth monitoring services	Did not use growth monitoring services	$\chi^2$ test results
Education	Primary	146(38.0%)	238(62.0%)	$\chi^2 = 32.549$ $df = 2$ $P = 0.253$
	Secondary	175(45.6%)	209(54.4%)	
	College/University /other	63(16.4)	321(83.6%)	
Occupation	Teacher	35 (9.1%)	349(90.9%)	$\chi^2 = 17.818$ $df = 3$ $P = 0.037$
	Business	125 (32.6%)	259(67.4%)	
	Domestic work	153 (39.8%)	231(60.2%)	
	Others	71 (18.5%)	313(81.5%)	

Table 3: Relationship between care givers determinants and use of growth monitoring clinic service in Thika Sub- County

Reason why children were taken to clinic on that day	Used clinic Services	Did not use Clinic services	$\chi^2$ Test results
Child is coughing	185(48.2%)	199(51.8%)	$\chi^2 = 4.468$ $df = 3$ $P = 0.215$
Child has diarrhea	27(7%)	357(93%)	
Child has fever	45(11.7%)	339(88.3%)	
Other illnesses	127(33.1%)	257(66.9%)	

Table 4: Relationship between why children were taken to clinic and use of clinic services on that day

## V. DISCUSSIONS

Socio- demographically, male and female children aged 12-59 months utilized the clinic services. Females were slightly more than males. This difference was acceptable because it was in line with recent census findings that females were more than males. Females were slightly more than 50% and males were slightly less than 50% of the total national population which matches with the study findings (KNBS, 2010). This finding suggests that the male and female children were taken to the health facility equitably to seek health services. However, the utilization of clinic services was low and it declined as age progressed. This findings supported the KDHS, 2008/2009 findings that utilization of growth monitoring clinic services was declining (KNBS, 2010). The finding suggested poor health seeking behavior for health promotion among children aged 12-59 months.

Regarding care givers determinants of utilization of growth monitoring clinic among children aged 12-59 months, majority of them were aged 20- 30 years and had reasonable formal education and fathers support with provision of upkeep. However, caregivers had low awareness about importance of growth monitoring clinic services and there was low utilization of growth monitoring clinic services among children aged 12-59 months. This finding was in agreement with Health Promotion Model that a people have personal experiences that affect their actions (Pender, 2011). Moreover, this study established that children aged 12- 59 months were brought to the health facilities to seek treatment for childhood illnesses that are preventable and not growth monitoring clinic services. This finding was in agreement with IMCI study

finding that children aged more than 12 months were more likely to seek IMCI than those aged below 12 months (MOH, 2012). This pointed out that children's illnesses were the main motivating factor for utilization of child health clinic services and not growth monitoring as expected. Thus perpetuating a culture of disease treatment rather than disease prevention and health promotion among children aged 12- 59 months.

#### A. CONCLUSION

There was low utilization of growth monitoring clinic services among children aged 12-59 months in Thika Su-County. Caregivers had low awareness on the importance and utilization of growth monitoring clinic services among children aged 12-59 months. This group of children utilized the clinic for treatment and not for growth monitoring as expected. Perhaps this could have been the cause of low utilization of clinic services.

#### B. RECOMMENDATION

Health care providers should give health education to care givers to create awareness and promote utilization of growth monitoring clinic services among children aged 12-59 months Health care providers should educate Care givers on seeking growth monitoring clinic services even when children aged 12-59 months are not sick.

#### C. FURTHER RESEARCH

Knowledge Attitude and Practice (KAP) study should be carried out among healthcare providers to plan evidence based training programme to empower them to promote utilization of growth monitoring clinic services among children aged 12-59 months.

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