HIV-AIDS and Nutritional/ Health Status of Children in Kenya: the Case of Orphans in Nyanza Province.

Topic to be Studied

This paper examines the impact of the HIV-AIDS pandemic on the nutritional and health status of children orphaned as a result of the pandemic in the relatively high HIV-AIDS prevalence Nyanza Province of Kenya. According to the 2003 KDHS, Kenya has observed an upsurge in the number of orphans due to the higher deaths occasioned from HIV-AIDS related infections. Orphaned children were described as children under 15 who had lost either one or both of their natural parents. Nyanza Province registered the highest level of orphanhood with almost one in five (19%) children under 15 having lost one or both of their biological parents

Theoretical Focus

The mere fact of being an orphan places a child in a socially and economically disadvantaged and vulnerable position within the community and society at large, and this is more so in communities where poverty is rampant**.** In such situations, the inadequate supply of the basic needs such as food, primary healthcare and shelter does affect the children adversely. The general well being of children can be determined through a study of the growth patterns/positive changes in their height and weight. Inadequate supply of food more often than not leads to malnutrition thereby affecting the physical growth and mental development of children. The society not only suffers from the burden of high dependency occasioned by high levels of orphanhood but also suffers indirectly through impaired human growth and development arising from this condition.

Data and Research Methods

The study was done during the month of August 2004. Data was collected (through weighing and measuring of children using measuring scale and board) on height, weight and sex of children under five years from 514 households in which one or both parents had died of HIV-AIDS. The sample that was analysed comprised 363 under-fives whose data on weight for age was available and 324 under fives whose data on height for age was available. Three anthropometric indices were computed and expressed as standardized scores (z-scores) or standard deviation units from the median for the international reference population. Deviations of the indicators below –2 SD indicate that the children are moderately/severely affected while deviations below –3 SD indicate severe condition.

Expected Findings

Results of the preliminary analysis show that overall, 13.3% of the study children were wasted-"too thin for their height" (less than –2SD weight-for-height), and 36.3% were

stunted-“short for their age” (less than –2 SD height for age) and 19.1% were underweight-“composite index for the previous two indices” (less than –2 SD weight-for-age). Children between one and a half years and four years of age were the most affected. Female children in the study population were more affected by malnutrition than male children across all the three indices. The proportion of children affected by stunting was highest in comparison to those suffering from wasting and underweight. Malnutrition appears to have been a chronic area in the study area.

While the 2003 KDHS show that trends of the nutritional status indicators of children of this age category in Kenya and in the specific province (Nyanza) show remarkable declines in the three indices studied (when compared with previous surveys for 1998,2000 and 2003,(for KDHS prior to 2003, measures were restricted only to children born to women interviewed using the women’s questionnaire) the results of this survey show that the study area is a pocket of high risk for children in this age category, probably more so because of the fact that we are dealing with orphans here, while the 2003 KDHS targeted all children who were born in the five years preceding the survey i.e. orphans and non-orphans)

Orphans are children under fifteen years of age who have lost either one or both of their natural parents. The KDHS (2004) notes that Kenya has observed an upsurge in the number of orphans due to the higher deaths caused by HIV/AIDS related infections. It further notes that Nyanza Province has by far the highest level of orphan hood, with almost one in five children under fifteen having lost one or both of their biological parents. This component of the Dak Achana Program addresses the issue of orphans and other vulnerable children through its strategic objective 4 on the improvement in food security and nutritional status for orphaned and vulnerable children (OVC) through provision of food commodities.

Data was collected on height, weight, age and sex of the under-five years old children from 514 households. Out of this 4.9% of the data on weight-for-height was flagged off leaving data on a sample of 489 under fives. In addition, 29.4% and 37% of the data on weight-for-age and height-for age respectively, was also flagged off. The sample that was therefore analysed comprised of 363 under-fives whose data on weight-for-age was available and 324 under fives whose data on height-for-age was available. Flagging of such a large amount of data could be associated with the fact that the children were mainly under care takers who could not give the exact dates of births of the study children.

Three indices were computed that reflect different but interrelated aspects of nutritional status for the HIV-AIDS orphans that were measured and weighed in order for their pre-intervention nutritional status to be determined. The indices are described and summarized below.

Stunting

The first index is Height for Age (H-A), which is a measure of a child's linear growth and is an indicator of inadequate nutrition over time as such, shows the nutritional history of the child. A low height for age (stunting) reflects inadequate intake of food relative to the child's need over time (chronic malnutrition). A child who is below -3 SD from the median (or normalized mean) of the reference population is considered to be severely stunted, while a child between -2 and -3 SD of the reference median is considered to be moderately stunted (see Table 7.1)

Wasting

Weight for Height (W-H) is a measure of a child's body mass in relation to body length. It converts a Childs weight into a percentage of the standard weight expected for the height of the child (KDHS 2004). This indicator measures the current nutritional status of the child. A child who is below -2 SD from the reference median for W-H is considered to be too thin for his/her height or is wasted. Such a condition reflects acute malnutrition and shows that the child has not received adequate nutrition in the recent past, or just before the survey was done. For children below -3 SD, they are considered severely wasted and therefore have high risk of death. Wasting may vary by season, reflecting availability of food (Table 7.1)

Underweight

Weight for Age (W-A) is a combined index of nutritional state, putting together the two indices discussed above and reflecting the state of being underweight. It does not distinguish between wasting and stunting since a child can be underweight for his age because he is stunted, wasted or both. It is a useful tool for assessing nutritional progress and growth.

Results

Table 1 compares the indicators of the nutritional status of children less than 5 years from the study population. Overall 13.3 % of the study children were wasted (less than –2 SD weight-for-height), 19.1 % were underweight (less than –2 SD weight-for-age) and 36.3 % were stunted (less then –2 SD height-for age). Children between one and a half years and four years were the most affected (Table 1). It was also noted that the children who were less than one year of age were also affected by stunting which could depict poor care practices and lack of breast milk.

Female children in the study population were more affected by malnutrition than male children as shown by the three nutritional indices (Table 1). The proportion of children affected by stunting was quite high compared with the other indices. There is a clear indication that the malnutrition has been a chronic problem in the study area.

The analysis of the anthropometrics data collected from children above five years (n=219) showed that 29.6%, 14.4% and 34% of the children were underweight, wasted and stunted respectively. This could give an indication that there is a high risk of malnutrition in the study population but does not show the extent of the risk. This is because the weight and height of children of this age could be affected more by other factors apart from nutrition.

Table 1: Percentage of Children Under Five Years Classified as Malnourished.

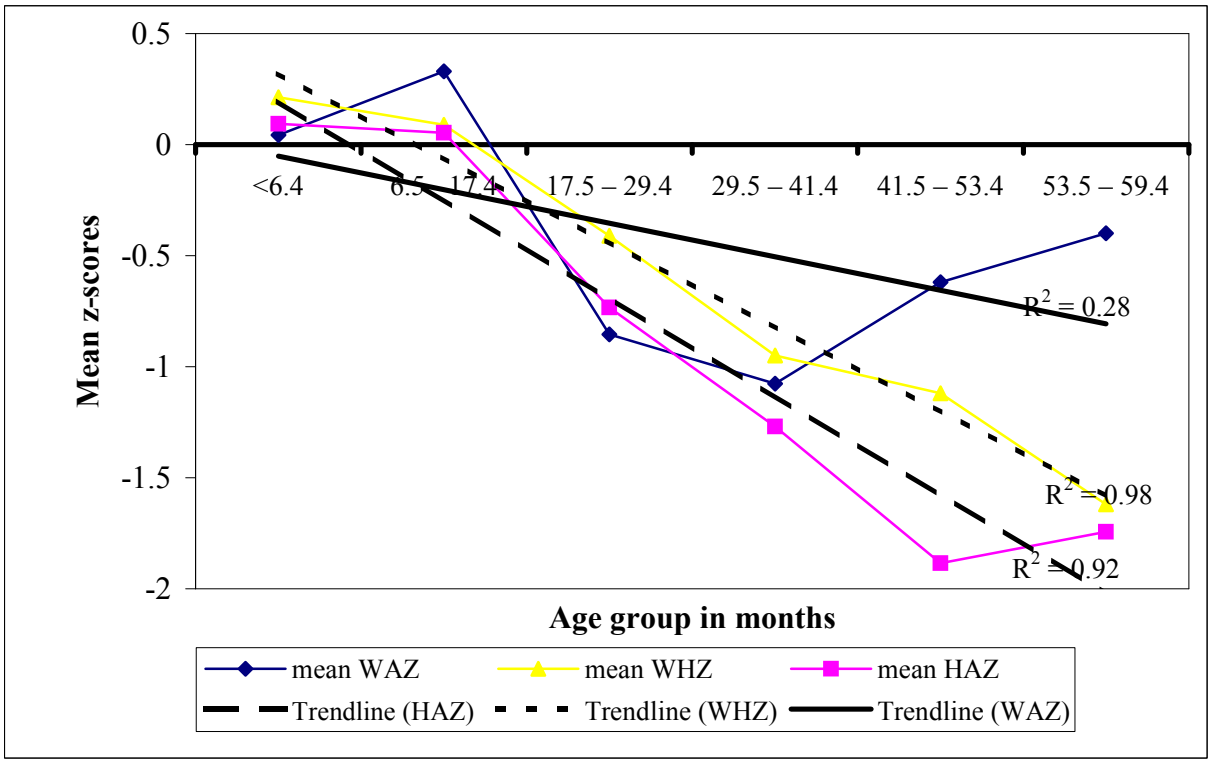
Background characteristic	**Weight-for-age**			**Weight-for-height**			**Height-for-age**		
	% Below –3SD	**% Below –2SD**	**n**	**% Below –3SD**	**% Below –2SD**	**n**	**% Below –3SD**	**% Below –2SD**	**N**
Age in months									
<6.4	0	11.6	40	0	4.8	42	16.7	26.2	42
6.5 - 17.4	2.5	12.5	40	3.6	7.3	55	2.3	30.2	38
17.5 – 29.4	2.5	12.5	43	4.5	13.6	66	7.9	36.8	43
29.5 – 41.4	3.6	20	55	2.3	10.3	87	12.2	40.8	49
41.5 – 53.4	6.0	13.3	83	7.7	19.7	117	17.5	39.7	63
53.4 – 59.4	1.0	10.0	100	15.8	38.8	120	14.9	39.1	87
Sex									
Males	0.5	9.8	184	1.1	6.1	262	7.7	27.9	183
Females	5.1	16.9	177	14.2	34.2	225	19.4	47.5	139

Mean z-scores

The mean weight-for-age (WAZ), height-for age (HAZ) and weight-for-height (WHZ) showed that the older children were more severely affected by malnutrition than the younger children (Figure 1). Children between one and a half to three and a half years were more wasted than the younger and the older children. Regression showed that the level of malnutrition was directly correlated with the age of the child. This was so for the three-anthropometrics indices (Figure 2).

The mean z-scores for all the indices showed a tendency to be negative after the age of one and a half years. This is an indication of population at risk of malnutrition.

Figure 1: Distribution of Trend by Age of Measures of Malnutrition for Children Under Five Years



Discussion

The special case of the vulnerability of orphans and the need to enhance their livelihoods is a challenging responsibility indeed. From the findings of this survey, the orphans appear to suffer from the various dimensions of chronic malnutrition with various levels of severity. Their conditions are an outcome of a combination of vulnerability factors such as inadequate nutritional intake as well as effects of childhood diseases and general neglect. Efforts to help this very vulnerable group should attempt to take a multi-faceted approach that attempts to address the various dimensions of the problem.

Given that malnutrition is chronic in the study area and especially among female children, it is recommended that provision of food commodities be directed to the study area with special attention to female orphans, as soon as possible in order to prevent the children from dying.

Children between one and a half and three and a half years have a higher risk of disease and death give that they were more wasted than fellow children who are younger or older. This means that food provisioning should also target the children by age in order to address the specific risks of this group of children.