Assessment of Factors for Malnutrition among under Five Children in Kibaha District. A Case of Misugusugu Ward

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Abstract: This paper is a result of a study, which was conducted in Misugusugu ward to assess the factors for malnutrition among under five children. A total of 96 children were systematically selected from a list of households in the ward. Data were collected from mothers, fathers and guardians using both structured and self-administering questionnaire. Data were analyzed using SPSS-version 20. The prevalence of stunted and wasted children were 8.3% and 53.1% respectively. A few of the children (6.2%) had a MUAC less than 15cm while 23.5% had between 12.5cm and 15cm (Acute malnutrition) and 70.4% had MUAC above 125cm. The results are significantly associated to marital status and acute malnutrition ($\chi^2 = 17.73, P < 0.001$). Other socio demographic factors are not significantly associated with acute and chronic malnutrition for children under five ($P > 0.05$). Also there was significantly association between prenatal clinic attendance and prevalence acute malnutrition ($\chi^2 = 6.45, P < 0.004$), as well as post-natal clinic attendance of mothers ($\chi^2 = 11.4, P < 0.003$).

Other issues emerged during FGD were low income, and gender stereotype on decision making on household expenditure associated with lack of freedom of choice among women to buy food to feed their children. Also traditional belief supported by taboo on food of choice for pregnant mother and children. It was recommended to all stakeholders to increase efforts on awareness creation on the importance and means to achieve a healthy society.

1. INTRODUCTION

Malnutrition is a universal problem that affects millions of people, especially children (UNICEF, 2017). More than 150 million children of under five years age in the world are underweight and 200 million are stunted [16]. In addition, one out of four babies born in developing countries have intrauterine growth retardation and are at risk of mental impairment [2, 11, 14]. Child malnutrition is one of the measures of health status that the World Health Organization (WHO) recommends for equity in health [14]. The term malnutrition generally refers to both under nutrition and over nutrition. Stunting, wasting, and underweight are among those anthropometric indicators that are commonly used to measure malnutrition in under five children [11, 12, 14, & 17]. Worldwide malnutrition is causing the deaths of 3.5 million children under 5 years old per year whereby in Tanzania is one of public health problem [17, 11, 14].

The first 1000 days of child’s life, counted from the start of pregnancy to the child’s 2 year birthday is critical to prevent malnutrition [15]. Failure to intervene in this period may result not only into increased child morbidity and mortality, but also harmful and irreversible consequences later in adult life [3, 10, 11, 5, 15]. The major nutritional problems facing Tanzanian children are severe and acute malnutrition, vitamin A deficiency, iron deficiency anemia, and iodine deficiency disorders [11, 5]. Statistics from Tanzania shows that 12% of under five children suffer from wasting, 47% in this age group were stunted and 21% were underweight a sign of acute form of malnutrition [7, 11]. Age disaggregated data from National Bureau of Statistics (NBS) shows that 55% of children aged 18–23 months were wasted at the same time 21% in the same age group were underweight [11]. Similarly 11% of children 6-8 months were stunted [5]. Further evidence shows that other forms of malnutrition exist. For instance, anemia affect 59% of children aged 6-59 months and 41% of women of reproductive age [11, 5]. The prevalence of micronutrients deficiencies in Tanzania is little known, although using Household Dietary Diversity Score (HDDS) as a proxy indicator, it was established that most diets of children are undiversified, with less consumption of meat, animal products, veggies and fruits [11]. Hence it is very likely that zinc, vitamins B1 and B2 deficiencies are problems of public health. According to the report by the Ministry of Health and Social Welfare (MoHSW), 37.5% of the
Tanzanian population is at risk of inadequate zinc intake. The Millennium Development Goals (MDGs) state as the first goal to halve between 2000 and 2015, the proportion of people who suffer from hunger. A magnitude of malnutrition has been shown through various studies that children and women are the primary victims of malnutrition [7, 12]. The number of death among children under five years is increasing due to malnutrition [9, 8, 12]. The study conducted by [7], reveal that, malnutrition is still a problem in Kibaha district, age disaggregated data show that the prevalence of severe and acute malnutrition was higher in children at critical age for optimal growth, the malnutrition under five mortality rate was 112/1000 live birth, and malnutrition prevalence in children under five years of age was 44% stunting and 16% underweight [7]. The major nutritional problems facing children of Kibaha are severe and acute malnutrition, vitamin A deficiency, iron deficiency anemia, and iodine deficiency disorders. Moreover, 42 percent of children in this age group were stunted, meaning that they are chronically malnourished; while 16 percent were underweight. Although various studies were conducted on the factors for malnutrition under five in many parts of developing countries including Tanzania [11,12, 16], little is known on the malnutrition situation in Kibaha urban district.

It is in such concerns that this study made an assessment of the factors for malnutrition on under five years children in Kibaha urban district.

2. Methods and materials
The study was conducted in Misugusugu ward within Kibaha urban district in Tanzania. Misugusugu ward as per 2012, National population census had 6,137 people of which 3,000 were females and 3,137, males and household size 3.9 with sex ratio of 105.

The area was a squatter settlement. Official reports from ward health officer and the district medical officer shows that Misugusugu ward had high prevalence of malnutrition status under five children.

Cross sectional research design was adopted, that allows data to be collected at one point in time whereby both qualitative and quantitative data were collected. Formula by Amini, (2001) was used to establish sample size; 96 randomly selected respondents from a list of households with children under five was adopted [1]. 4 key informants from purposively selected officials were selected basing on their understanding of the subject matter. Primary and secondary data were collected using; interview, focus group discussion, observation, anthropometric measurements and review of related documents, annual reports, clinic cards respectively. The collected and processed data were analyzed using Statical Package for Social Science ( IBM-SPSS, V20).

3. RESULTS AND DISCUSSION
The general respondent’s characteristics that were put into account include age, marital status, and education level. Others were household size, household members who live with a child, household income, infant and young feeding and household hygiene practices. According to URT, [11], these characteristics are considered to be important in study of prevalence malnutrition. Results show that 40.6% of mother was aged below 30 years, which is a good child bearing age. Most of respondents (70.8%) were married, and (54.2%) had primary education, (45.8%) had other level of education. Household size varied from less than 3 members 38.5% to more than 7 members 28.1%. Also 50% of children were under the caretaker of their father and mother, and single parent were 36.5% (mother only) and 6.3%(father only). The age distribution of children (month) shows that age range of 0-15 months had the highest (34.4%) while 31-59 months was (33.3%) followed by the age between 16 – 30 months (32.3%).

3.1. Trend of prevalence of malnutrition
As shown in Figure 1 there is improving trends in children underweight that have dropped from 47% to 32% from year 2012 to year 2015. It is unfortunate that prevalence of malnutrition in the study area based on secondary data from ward dispensary for the year 2012 to 2015 shows deteriorating trends for stunting and wasting. It was reported that stunting increased from 32% in 2012, to 38% in 2015; this trend was parallel to wasting which increased from 21% to 31% in 2015 which is a 10% increase.

Figure 1: Malnutrition trend

Source: Misugusugu dispensary

3.1.1 Anthropometric information from surveyed household
The anthropometric information taken from household survey revealed the prevalence of global
The prevalence of global acute malnutrition and stunting were higher in the age groups 54–59 months and 1-17 months respectively compared to the rest of the age groups. The prevalence of global acute malnutrition (GAM) was 18.8%. Finding also shows that Mid-upper circumference for the children above 125mm (nourished) were 70.4%, followed by 115mm-125mm moderate wasting. For moderate acute malnutrition were 23.5% while those children below 115mm severe acute wasting were 6.2%. This study has shown high prevalence of global stunting and global acute malnutrition in the WHO, standard setting as stated in the UNICEF, [13] Multiple Indicator Cluster Survey Manual.

3.1.2. Utilization of Mother Child Healthcare services and types of services received
Distance to access mother child healthcare (MCH) services was examined whereby 38.5% of the respondents were staying less than 5 kilometers and the rest were walking more than 5 kilometers to get to the service. Although 89.6%, were attending clinic during pre and post natal period, only 42.7% reported to have received nutrition knowledge during pre-natal and post natal visits.

3.1.3. Information on feeding practices
Results from breast-feeding shows that 60.4% were exclusively breast-feeding in the first six months, 32.6% used complementary feeding within the first six months and 7% of children were not breast-fed. Finding also shows that more than one third (38.5%) of respondent were breastfeeding four times a day and gave their children feeding supplements. Breastfeeding took 1.5 years for about 23%, 2 years (21.9%) and 7% completely no breastfeeding as shown in Figure 3. Finding shows that majority of mother was breastfeeding less than 2 years unlike with nutrition policy 2012 which indicate that a mother should be breastfeeding up to 2 years and above [12].

The study revealed that child feeding supplements was a porridge locally made from flour of mixed maize, wheat and sardines that was rarely taken by 68% and always by 6.3% of the interviewed respondents. This locally made child-feeding supplement has not gone through any nutritional authority for qualification. This result is supported by the study made by the U.S. Agency for International Development on the nutrition profile of Tanzania [12]. It was also noted that 13.5% of children often eat meat and 20.8% eat fish. Furthermore it was noted that 10.4% of the children always drink cow milk and few (29.2%) often ate fruits.

3.2. Factors associated prevalence malnutrition
3.2.1. Socio demographic factors for malnutrition
Results from cross – tabulation analysis coupled with chi-square test among socio – demographic characteristics and nutrition status of under five indicate that there was significant association between acute malnutrition and marital status (χ² = 17.73, P < 0.001). This could be due to the fact that parents or mothers who were single, widow, or separated were more likely to be constrained by other household necessities that they did not give priority to complementary feeding their children. Other socio demographic characteristics were not significantly associated with acute and chronic (stunting) malnutrition for under five children in the study area (P> 0.05). These results support earlier findings by TDHS,[7] and [5], which observed that socio- demographic factors influence the prevalence of acute malnutrition through marital status.

3.2.2. Mother Child Healthcare services related factors for prevalence of malnutrition
Results from respondents who attended MCH services shows that there was significant association between prevalence of acute malnutrition and prenatal clinic as well as postnatal clinic attendance. The same observations are found in the studies on parental clinic attendance [11, 5, 12]. Utilization of prenatal services among mothers was significantly associated with prevalence of acute malnutrition among children (χ² = 6.45, P < 0.004) whereby mothers who attending clinic are more likely to have moderate to normal nutrition.
status of children compared to those who are not attending. Similar trend is observed for post-natal services utilization. Substantial percentage of children (31.4%) whom their mother didn’t utilize postnatal clinic had severe acute malnutrition. Other MCH related factors considered in the analysis have no significant association with prevalence of chronic and acute malnutrition among children (P > 0.05).

3.2.3 Feeding practices related factors for prevalence malnutrition

After subjecting feeding practices variables to Pearson chi-square test it was observed that; there was significant association between age at onset feeding and prevalence of chronic malnutrition ($\chi^2 = 10.86$, $P < 0.004$). Delayed onset complementary feeding up to a period of at least 6 months was associated with decreased prevalence of severe stunting among under five. However onset of complementary feeding had no effect on chronic malnutrition. Other feeding practices related factors considered in the analysis had no significant association with prevalence of chronic and acute malnutrition among children (P > 0.05). These results support earlier findings by reports which, observed that feeding practices of children like age at onset of complementary feeding are more likely to influence the prevalence of acute malnutrition [18, 6, 9].

3.3. Gender discrimination and traditional beliefs

Three focus groups discussion (FGD) were conducted in the area; one in each Mtaa. Each group consisted of 10 mothers. Important information featured during this discussion that was directly linked to prevalence of malnutrition in some households was heavy workload by mothers in the household that compromised with time to care for the children. Woman aged 27 years from Miomboni Mtaa had the following to say; Domestic activities and farming make women busy and fail to take proper care of their children. Most of the time women use more than 16 hours per day on home activities and farming activities while men had less responsibilities (Misugusugu, Aisha Juma on 18th July 2016)

Other important issues emerged was conflicting priority among family members whereby fathers interest is not to feed children but to spend household income earned for personal gain. This means as the family struggle to generate income, there is different intended expenditure among family members and more strong the father who in most household enjoy upper say in decision making. The following quote from one FGD participant a 36 years mother noted; Traditionally women are not allowed to own income in the household except men. This lead women to fail to afford nutritious food for feeding children as men use most of the household income for personal gain. This further increase food shortage in the household and make mother very weak to withstand breast feeding that makes some women to be afraid to get pregnant (Misugusugu Ward; Chezarina, Mrisho on 18th July 2016). During FGD some of traditional belief on feeding practices that threaten health of children were discussed. In some households, it was taboo for children to eat nutritious food such as eggs and fresh fish to avoid skin rushes, dysentery and fever, which they associate with devil attack. One of the participants of FGD from Zogwale Mtaa lamented; Pregnant mother and young children are not allowed to eat eggs and fresh fish due to traditional belief that they cause skin rushes and devil attack. As a result they don’t get enough nutrients in their bodies. Okay then, how can a weak pregnant women expected to bear a strong child? This is a serious matter, which need more discussion (Misugusugu Ward: Mwantumu Makutika on 18th July 2016).

This is interesting that women in Misugusugu understand that a health of a new-born baby start from pregnant. Tradition belief was found to be rampant in the area because more than 90% of the children observed had totem on either their hand or at the waist. The totem varied from black piece of cloth, seashells and other charms hanged by thread. People believe that totems have capacity to protect their children from evil and witchcraft as it was noted;

Children are vulnerable to evil attack and are easily bewitched because they know nothing, it is the duty of the parent to seek for protection from traditional healer (Misugusugu ward; Chezarina, Mrisho on 18th July 2016).

3.4. Effort taken to combat malnutrition

Kibaha urban district took some efforts to prevent and reduce the prevalence of malnutrition among the under five children in the area. Training and health campaign were conducted to develop a team of expert trainers on infant feeding in Kibaha district and a team of Mtaa level frontline workers who work with people on improving the knowledge, changing attitude and practices on infant feeding in the context of nutrition status. A total of 20 officers from various sectors such as health, community development, and officers from Mtaa level were trained. These experts were distributed in different areas in the district to facilitate people on best practices to combat under five children malnutrition. They used seminars, workshop, flyers, tradition dance, posters
and meeting to impart the knowledge. Plate 1 shows some of the materials used for the task. These are written in Kiswahili, the local language in Kibaha district. There are four booklets; the first one is for the trainer, the second for the participants, the third is for record keeping to be used by service provider and the fourth one is summary of the important information for easy access by both service provider and the participants. However these people who received the training had their routine works, which they are accountable for in each month. To some of them this training was taken as something to assist on income gain as they were paid per diem during training and each time they visited the local people. Even composition of the trained team leave much to be said because out of 20 trainers 4 were trained nurses the rest were selected among members of Mtaa social welfare committee members. It is here where participation collides with professionalism as well as unintended effects of the programme as Kamanzi (2017: 2) noted; The differences in the interests of the actors involved in development cooperation accounts for the results of the evaluations …(Kamanzi, 2017: 2).

Plate 1: Materials used for training

Source: Misugusugu dispensary library.

In February 2016 the trainer’s personnel from community health workers and community women assistance were used to train 9 Mtaa in Kibaha rural district under ministry of health and welfare support. In addition, the trainer’s team managed to train 163(48%) women with children under five, 34(39%) women with pregnant and 13(7.9%) men who attending MCH clinic from all 9 Mtaa. The second training session was undertaken in July 2016 in Kibaha urban district whereby a total of 39 community health workers and women assistance experts’ personnel were used to train community. Therefore, all villages of Kibaha district were covered with these training sessions and in the total number of trained women and men in Kibaha district were 220(61%). Plate 2 shows some of the training session in the district.

Plate 2: Community health workers on face-to-face demonstration to mothers on skills to practice complementary feeding

Source: Field Survey 2016.

3.5. Challenge of nutrition status
Nutrition status challenges in the area varied from little access to food (99.0%) to shortage of income (86.5%) to meet cost of buying food. This result support a FAO, [4] report on the “Intensity of Food Deprivation”. Others were (61.5%) little education from MCH clinic and (54.2%) were frequently ill of children with (46.9%) inadequate water supply as shown in Table 1. These challenges led to increased prevalence of malnutrition.

<table>
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<td>99.0%</td>
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<tr>
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<td>83</td>
<td>21.6%</td>
<td>86.5%</td>
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<tr>
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<td>52</td>
<td>13.5%</td>
<td>54.2%</td>
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<tr>
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<td>6</td>
<td>50</td>
<td>13.0%</td>
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</tbody>
</table>

*Data were based on multiple responses.

5.1 Conclusion
Results show that the prevalence malnutrition of majority of children was moderate acute malnutrition and chronic (stunting) malnutrition. Furthermore result from survey shows that more
than half of children included in the study were found to have severe acute malnutrition and fewer had severe stunting. This prevalence rate of malnutrition for under five children in the study area are connected to various factors which are mostly caused by their mother and these factors are such as marital status, age at onset complementary feed of children, and pre-natal and post-natal clinic attending of mother. Other factors are traditional belief and patriarchal system among the households.

Also poor participation in the effort taken by the government to combat prevalence of malnutrition such as health promotion campaign, MCH seminars, and health community training that led increase the prevalence of malnutrition due to lack of knowledge of nutrition status among the parents or mothers. Though not proved beyond doubt the existing of differences in expectation among stakeholders affected the efforts made by the government.

3.6. The way forward

In order to improve access, the consumption of appropriate nutritious food to improve nutritional status of mothers and their under five children and to the whole society, this paper avail some basic issues to be put into considerations.

Government efforts should be directed to the whole society to create awareness on the importance of healthy eating. It is worth to note that some people are aware of the connection between under-five child malnutrition and health of the mother. This awareness campaign should go hand in hand with education on six month exclusive breast-feeding soon after birth to a newborn child and thereafter use of appropriate complimentary feeding, continued breast feeding for at least two years. Moreover the government in collaboration with private sector and the community should invest in preventative activities such as appropriate complementary food production, hygienic practices and monthly clinic attendance for child and mother health examination and vaccination.

Community development workers may be able to help women to establish income-generating projects. Men should be involved in this campaign to avoid misunderstanding in the family due to belief that women should not own income. If women earn money, they can feed both themselves and families better. This can be done through discussion with appropriate groups in the community and seminars during attending MCH clinic. Women needs to eat and feeding children nutritious food and enough different kinds of food during pregnancy and during breast feeding for their own health and for the health of their babies.

At national level effort should be taken by ministry and institutions which operate at the national level to ensuring that nutrition is adequately reflected in sector policies, strategic plans, legislation, regulations and guidelines that lie within their mandate and jurisdiction. They are also responsible for identifying and allocating human, financial and organization resources for implementation of the strategy, donor coordination, and quality assurance for nutrition at all levels. Also the government should invest in research and create the best way to disseminate findings to all stakeholders. Area of research should seek to know the interest of stakeholders on malnutrition programmes so that they may not turn to be obstacle for the investment and to overcome gender stereotype and wrong belief among the community members.

REFERENCE


