Fact Sheet

Dynamics of malnutrition in Hudur District of Somalia*

Background

Malnutrition rates for under-5 children in Somalia are generally high with substantial changes even in short-term depending on seasonality, periodic surge in food insecurity and humanitarian responses. SMART surveys are frequently used as the standard approach of estimating nutrition status of children. In 2017, SCI conducted a number of SMART surveys that showed critical and very critical levels of malnutrition in weight-for-height z-score (WHZ) based on WHO classification. While these SMART surveys are very useful for making nutrition programmes more responsive to needs and effective, these estimates of malnutrition rate do not reveal the extent of chronicity and change. Although stunting is often suggested as a proxy for chronic malnutrition, the SMART surveys in Somalia do not estimate it due to measurement challenges. Therefore, SCI conducted a follow-up survey in December 2017 to investigate the level of change and chronicity in malnutrition for the children measured in a SMART survey 9-months earlier in Hudur district.

Data

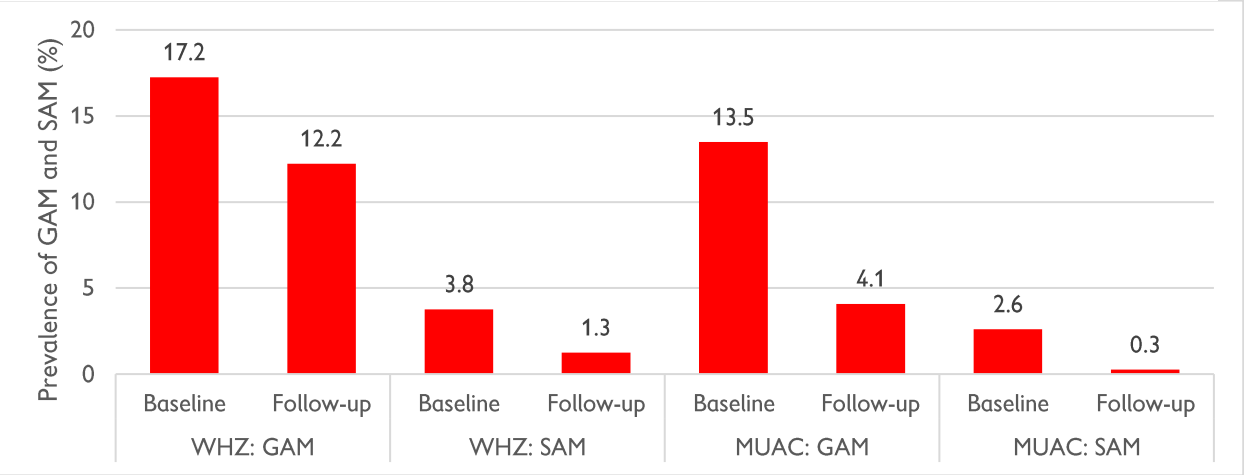
SMART survey methodology was used in the study in March 2017. Two-stage cluster sampling was used. Stage one involved selection of clusters from a list of accessible villages in the district using probability proportional to size (PPS). Stage two involved selection of households at each cluster where simple random sampling method was used. The follow-up survey was conducted on the same children who were included in SMART of March 2017. The two surveys (baseline and follow up) were conducted 9 months apart. An independent consultant conducted both phases of data collection. In the follow-up survey, we traced about 70% of children. Analysis was conducted to measure the correlates of change in nutrition status of the children.

Findings

a. Prevalence comparison

Generally, the mid upper arm circumference (MUAC) identified fewer malnourished children with lower estimates of both global acute malnutrition (GAM) and severe acute malnutrition (SAM) rates in the district. Both WHZ and MUAC showed a declining trend in malnutrition rates. Using WHZ score, results showed a 5 percentage points decrease in GAM rates and a 2.5 percentage points decrease in SAM rates. This is equivalent to 29% drop in GAM and 67% drop in SAM rates. On the other hand, MUAC showed there was 70% drop in GAM and 90% drop in SAM rates. While both estimates showed the improvement in the post-drought period, MUAC shows a larger improvement than WHZ. MUAC, which is used as a proxy indicator and for screening, also seems to be less effective when malnutrition rates are lower compared to period of high malnutrition rates. For example, MUAC based screening correctly identified 35% of the malnourished children in March compared to only 14% in December.

Figure 1: GAM and SAM Prevalence at Baseline and Endline

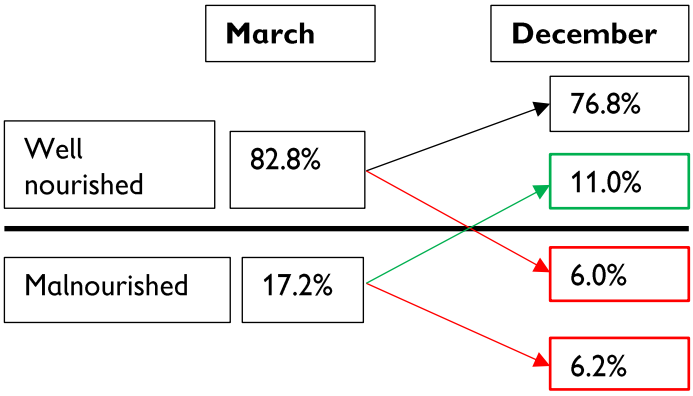


* This fact sheet is based on an operational research conducted by Save the Children research team. For further details, contact Job.Gichuki@savethechildren.org

b. Dynamics of GAM

Figure 2 shows the level of change in malnutrition between March and December. Out of ten children who were well-nourished in March, nine remained well-nourished. On the other hand, out of every ten children identified as malnourished in March, six recovered by December. An important difference to notice in the changes is – over half of the children who are malnourished in December were also malnourished in March. This reflects a high level of chronicity in malnutrition among children. This shows the need to better targeting of children in nutrition programming. In other words, if all the children who were malnourished in March could have been supported to recover, the malnutrition rate in December among them could have been reduced by half.

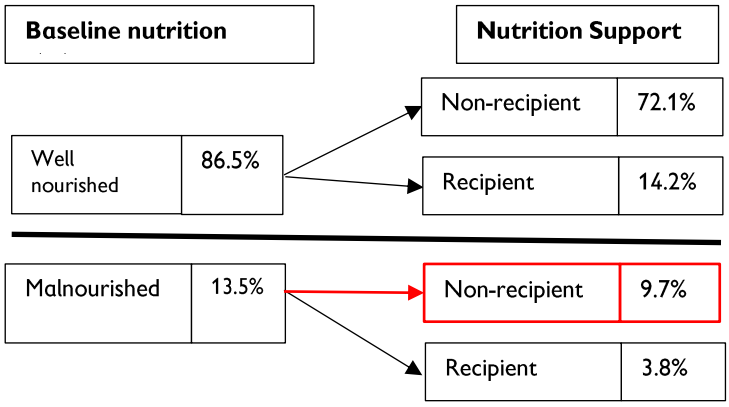
Figure 2: GAM Dynamics (Based on WHZ)



c. Case Identification and program uptake

The follow-up survey explored nutrition program's ability to identify and recruit malnourished cases into the program (Figure 3). A question of where a child received support from any nutrition program in the 9 months preceding the follow up survey was asked. While this is a crude proxy due to recall error, three out of every ten malnourished children (based on MUAC) on the onset of the study received nutrition support. Same analysis by WHZ shows a further decline in malnourished children who received nutrition support by 11%. The findings indicate a barrier in the process between identification and recruitment of acute cases into treatment programs.

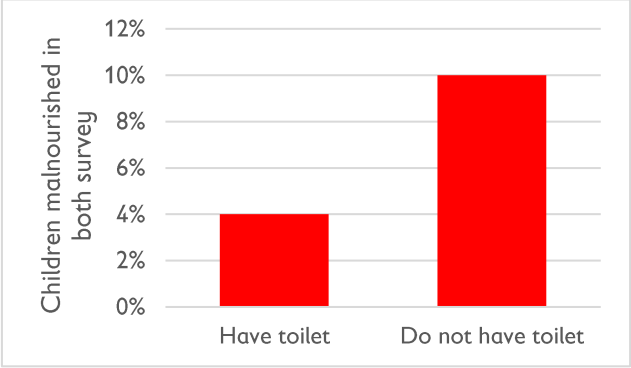
Figure 3: Recipients of Nutrition Programs



d. Correlates of chronicity in malnutrition

We collected a few household level variables to explore the characteristics that are associated with the likelihood of a child being malnourished in both rounds. The analysis shows a strong association between households' ownership and use of sanitary latrine. We find that children from households without a sanitary toilet are 2.5 times more likely to be malnourished in both rounds compared to the households who have a toilet. Among the other variables, participation in nutrition program does not show any strong association with chronicity of malnutrition or the level of changes.

Figure 4. Sanitary toilet and chronic malnutrition



In conclusion, use of MUAC as admission criteria underestimates proportion of wasting and needs to be interpreted with reference to trends. In Somalia, this would mean having a multiplication factor to allow for missed cases by WHZ, especially in areas and periods of low malnutrition rates. There is a significant barrier between identification of malnourished cases and admission to treatment with very few malnourished cases receiving services. The association between chronic malnutrition and sanitary toilet usage indicate possible scope of integrating WASH into nutrition programming.

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