ABSTRACT

Moderate acute malnutrition (MAM) is estimated to affect 11% of children worldwide. Karamoja region in Uganda, has the highest cases of acute malnutrition in Uganda. Corn Soya Blend Plus (CSB+) is the traditional treatment for MAM in children 6-59 months. CSB+ does not provide a sustainable treatment for MAM due to unavailability to local communities and its high cost. Despite the availability of local foods to constitute dietary supplements for children that are relatively cheaper than CSB+ and with greater potential to provide a more sustainable solution to treat MAM, they are not widely promoted. There is need therefore to formulate food supplements from locally grown foods and to test their efficacy in treating MAM among children aged 6-59 months old. The study developed a food supplement from sorghum, peanut mixed with cow ghee and honey (SPB) and tested its efficacy in MAM in children aged 6 - 59 months in Karamoja, Uganda. The study was conducted in Karamoja, Northern Eastern Uganda. The study was conducted in two phases: phase I, formulating a test food supplement from sorghum and peanut, mixed with honey and ghee (SPB) along with assessing its nutritional and anti-nutrient profile. Phase II, the intervention, in which the acceptability and efficacy of SPB versus CSB+ in treating MAM was tested. The sample size for efficacy study was 440 children, 220 for each study arms; SPB and CSB+. Study used randomised single-blind parallel cluster trial. Each child received a daily ration of 269g of either SPB or CSB+ for a maximum period of 3 months. The primary outcomes were the recovery rate and the mean length of stay in the programme before full recovery. Data was analysed using (SPSS version 17). Levels of macronutrients, CSB+ had significantly higher amounts of protein and carbohydrates whereas SPB had significantly higher amounts of fat and crude fibre. There was no significant difference in terms of energy content in SPB and CSB+. Micronutrients were available in adequate amounts in both products. Vitamin A level was higher in CSB+ than SPB. Levels of anti-nutrients were in significantly higher levels in SPB but were in amounts lower than the acceptable limits. Aflatoxins were also below the 20ppb upper limits by FDA. The two food supplements were acceptable to the study participants in terms of all the sensory attributes. The recovery rates were not significantly different (91.4%) in the SPB and 87.1% in the CSB+ group (Chi-square test; P=0.193). Duration of recovery was significantly shorter for CSB+ group; median 43 days compared to 57 days in the SPB (Kaplan-Meir Survival test). The recovery rate and the duration of stay on using CSB+ and SPB were all within the acceptable limits. The cost of SPB was lower than the CSB+. SPB has the potential to become a cost effective, sustainable locally made food supplement to treat MAM in study community and other similar circumstances.
Publications from the Research


