ACCEPTABILITY OF COMPLEMENTARY PORRIDGE ENRICHED WITH CRICKETS (Acheta domesticus) AMONG WOMEN OF REPRODUCTIVE AGE IN ALEGO-USONGA SUB-COUNTY, KENYA

Abstract.

Protein-energy malnutrition is common among children of under five years of age in sub-Saharan Africa. This is mainly attributed to poor complementary foods and feeding practices, which are often cereal-based and characterized by low nutrient density. Soybean is commonly used to enrich complementary foods, nonetheless, its prospects for use as a rich source of protein and minerals is limited by its low protein digestibility and bioavailability of minerals, costly production and contribution towards environmental degradation. Crickets provide cheap and sustainable source of protein and other nutrients, and holds the potential for substituting soybean in complementary porridge formula. To evaluate acceptability of complementary porridge enriched with crickets, Famila complementary porridge flour, a composite of maize, wheat and defatted soybean was enriched with cricket flour by substituting soybean with cricket flour at 0%, 25%, 50% and 75%. Four porridges were prepared from the flours and coded as CP, CPB1, CPB2 and CPB3, respectively. A total of 40 semi-trained women evaluated the porridges on colour, taste, aroma, texture, mouth-feel and overall acceptability on a 9 - point hedonic scale. The overall acceptability of the porridges were as follows; CP (8.5 ± 0.72), CPB1 (7.08 ± 0.94), CPB2 (5.75 ± 1.53) and CPB3 (3.60 ± 1.95). Control porridge (CP) was highly rated in all sensory attributes while CPB3 was rated the lowest in all the attributes. Unlike CP, the overall acceptability of CP1, CPB2 and CPB 3 improved with experience in insect consumption, age and level of education. The ratings for colour, aroma and taste of cricket-based porridges were higher among women aged 30 years and above, and those with post-primary education. The most accepted cricket-based porridges were CPB1 and CPB2. Enrichment of Famila complementary porridge with cricket flour affected its sensory attributes which were perceived differently by the women. This informs the need for both low and high substitution levels to cater for their diverse preferences.

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