

Anthropometric characteristics and nutritional status of older adults in the Lake Victoria Basin of East Africa: region, sex, and age differences

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Abstract

Background: Malnutrition, either as undernutrition or overnutrition, leads to detrimental alterations in body composition. The objective of this study was to investigate selected anthropometric measurements, and the nutritional status of older men and women living in the Lake Victoria Basin. This was a cross-sectional study.

Setting: The setting was selected rural and urban areas of Kisumu, Jinja, and Mwanza, in Kenya, Uganda and Tanzania, respectively.

Subjects: The subjects were older adults (227 men and 310 women) aged ≥ 60 years.

Outcome measures: The outcome measures were weight, height, arm span, mid-upper-arm circumference (MUAC) and triceps skin-fold thickness (TSF). Body mass index (BMI) and arm muscle area (AMA) were computed using standard equations.

Results: The results show that older adults in the three regions were significantly different (p -value < 0.05) in all anthropometric measurements, except MUAC. The women had significantly higher (p -value < 0.05) BMI, TSF, and MUAC, than the men. Negative slopes indicated a decline in all anthropometric measurements with age. Overall underweight (BMI < 18.5 kg/m²) was 26.4%, 58.3% were normal (BMI 18.5–24.9 kg/m²), 10.8% were overweight (BMI 25–29.9 kg/m²), and 4.5% were obese (BMI ≥ 30 kg/m²). Older men (29.5%) were significantly more underweight (p -value < 0.05) than older women (24.2%), with overweight (12.5%) and obesity (6.8%) being significantly higher (p -value < 0.05) in older women.

Conclusion: The findings suggest energy depletion and loss of muscle mass, with significant differences in the three regions, and in the sex and age groups. A small proportion was overweight and obese. The decline in anthropometric measurements with age indicates poor nutritional status with aging. Thus, nutrition and health interventions should be specific to regions.

Key words:: [older adults](#), [anthropometric measurements](#), [nutritional status](#), [Lake Victoria Basin](#)