

**NUTRITIONAL AND HEALTH STATUS OF RURAL ELDERLY  
ATTENDING AYURVEDA MOBILE HEALTH CLINICS  
AT HANGURANKETHA AND MEDADUMBARA**

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Sri Lanka has a fast-growing aging population, and health and nutritional status of elderly will affect the economy in the future. Although there are several studies on nutritional status of hospitalized and institutionalized elderly population in the country, studies on community dwelling elderly is not reported. The present study was conducted to evaluate the nutritional and health status of the rural community dwelling elderly cohort selected from two divisional secretariats of Kandy District of Central Province. Random sampling was used as every patient who met with the selection criteria was taken for the sample. Mini-nutritional assessment tool (MNA), selected anthropometric measurements and biomarkers were used to assess the nutritional and health status. Based on MNA score, 54.2% of the study population (valid  $n = 72$ ) has normal nutritional status. Mean MNA score ( $23.7 \pm 3.2$ ) and BMI ( $20.3 \pm 3.2$ ) lies within the normal range for the age group. Percentage of population at risk of malnutrition is 41.1% despite their overall good health status. Only 4.1% was malnourished. Among the elderly subjects 28.8% were underweight, 64.3% had normal weight and 5.5% were overweight and 5.5% obese. Mean waist to hip ratio (WHR) for study population is  $0.84 \pm 0.06$ , for males  $0.83 \pm 0.06$  and for females  $0.84 \pm 0.06$  with a moderate health risk in 27.4% of subjects; 24.7% females. The mean fasting blood glucose for males was  $101.7 \pm 16.7$  mg dL<sup>-1</sup> and for females  $106.3 \pm 12.2$  mg dL<sup>-1</sup>. Majority of participants (68.7%) were normoglycaemic, 26.8% showed impaired glucose tolerance and 4.5% were hyperglycaemic. Prevalence of anaemia in the study population was 24.1% (6 men and 8 women). Mean serum total protein concentration for males was  $7.1 \pm 0.5$  g dL<sup>-1</sup> and for females  $7.6 \pm 0.8$  g dL<sup>-1</sup> and mean albumin concentration was  $3.7 \pm 0.2$  g dL<sup>-1</sup> for males  $3.8 \pm 0.2$  g dL<sup>-1</sup> for females that lie within normal limits. Mean serum protein thiol concentration for the study population is  $459.5 \pm 98.2$   $\mu\text{mol L}^{-1}$ ;  $430.6 \pm 64.0$   $\mu\text{mol L}^{-1}$  for males and  $484.0 \pm 115.1$   $\mu\text{mol L}^{-1}$  for females. Mean total antioxidant capacity (TAC) of the study population was  $813.4 \pm 143.2$   $\mu\text{mol L}^{-1}$ ;  $831.5 \pm 133.8$   $\mu\text{mol L}^{-1}$  for males and  $797.8 \pm 150.9$   $\mu\text{mol L}^{-1}$  for females. Biomarkers are within the normal ranges though MNA has revealed significant percentage at risk of malnutrition. Correlation between biomarkers and the MNA was not significant and it may be due to small sample size. A large-scale screening in the community is suggested in order to revalidate the MNA tool in Sri Lankan elderly population and to arrive at a better conclusion.

**Keywords:** Elderly health, Mini nutritional assessment, Anthropometry, Serum antioxidant levels, Serum protein thiols