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Body Mass Index in Association with Frailty in Community-Dwelling Elderly

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Background. Frailty is a geriatric syndrome with increasing incidence and high influence on elderly population. Weight loss is a key component of frailty. However, obesity is associated with disability linked with frailty.

Objection. The study was intended to evaluate the correlation between body mass index (BMI) and frailty in community-dwelling elderly.

Methods. Data was derived from a random sampling in community-dwelling elderly in Malang. The cross-sectional study included sixty five community-dwelling people aged 65 and older. Frailty was defined as having three or more components, including slowness, weakness, exhaustion, low activity and decrease of body weight. Robust are healthy elderly. BMI is a weight in kilograms divided by the square of height in meters. Pearson correlation is used to associate frailty with BMI.

Results. Subjects of this study consist of 32 robust (49.2%) and 33 frail (50.8%) elderly. With 55 female (84.6%) and 10 male (15.4%), mean age 73.9±7.7 years. The association between BMI and frailty showed a U-shaped curve. Frailty was associated in those with BMI < 18.5 kg/m2 and ≥ 25 kg/m2. The correlation between frailty and body mass index were r 0.384 and p 0.002.

Conclusion. The Increased levels of frailty shows in those with low and very high BMI. Obesity associated with slowness, decrease activity levels, weakness, exhaustion, and increase proinflammatory markers. Among underweight older people, high waist circumference was possibly responsible for increase proinflammatory markers. Diet and exercise should be the target of intervention in elderly people.