MeetingsPremium
MP Journal of Medical Research
Journal of poster communications · ISSN 3144-8402 (Online)
Vol. 1 · 2026-0036
OPEN ACCESS

TYPE
Poster communication

SPECIALTY
Endocrinology & Diabetology

PRESENTED AT
2nd Malaysian Obesity Society National Obesity Scientific Meeting NOSC (2026)

PUBLISHED
15 October 2026

DOI
10.5281/zenodo.23394799

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KEYWORDS
BMI · obesity · sarcopenic obesity phenotype · body composition · metabolic risk

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POSTER COMMUNICATION · ENDOCRINOLOGY & DIABETOLOGY

Limitations of BMI in Characterising Obesity Phenotypes

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KEY MESSAGES

1. SOP participants have significantly lower body weight and BMI despite obesity.
2. Adiposity and glycaemic levels are comparable between SOP and non-SOP groups.
3. BMI alone may mask important differences in body composition and metabolic risk.

ABSTRACT

Introduction. BMI classifies obesity but does not account for body composition such as muscle or fat distribution.

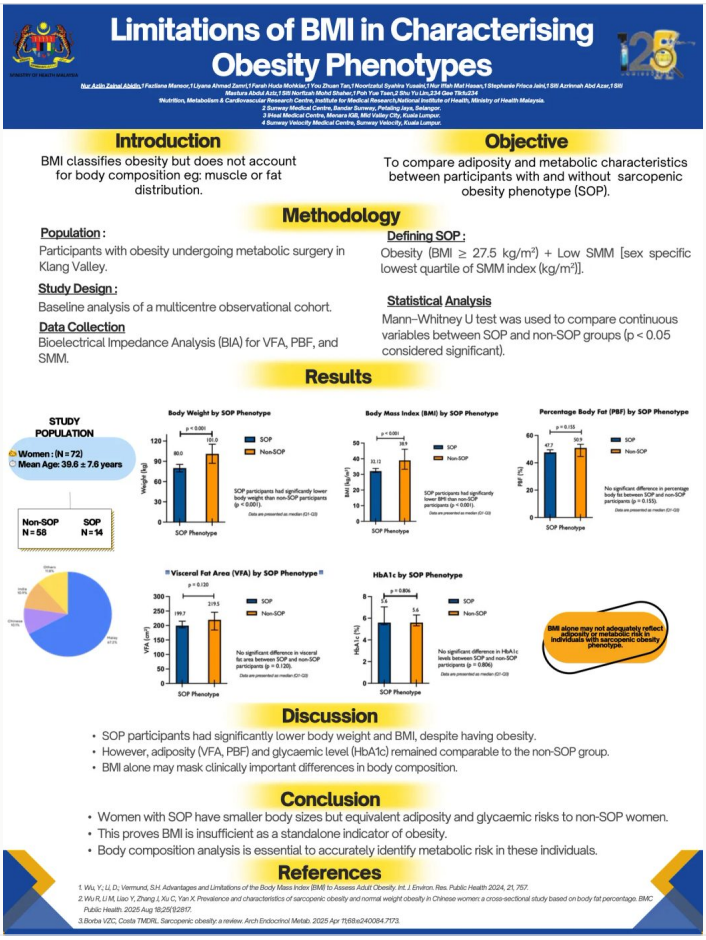
Materials and methods. Participants with obesity undergoing metabolic surgery in Klang Valley were studied in a baseline analysis of a multicentre observational cohort. Bioelectrical Impedance Analysis (BIA) was used to measure visceral fat area (VFA), percentage body fat (PBF), and skeletal muscle mass (SMM). Sarcopenic obesity phenotype (SOP) was defined as obesity (BMI ≥ 27.5 kg/m^2) plus low SMM (lowest quartile of sex-specific SMM index). Mann–Whitney U test compared continuous variables between SOP and non-SOP groups.

Results. SOP participants had significantly lower body weight and BMI compared to non-SOP participants despite having obesity. There was no significant difference in percentage body fat, visceral fat area, or HbA1c levels between SOP and non-SOP groups, indicating comparable adiposity and glycaemic levels.

Conclusion. Women with SOP have smaller body sizes but equivalent adiposity and glycaemic risks compared to non-SOP women. BMI alone is insufficient as a standalone indicator of obesity. Body composition analysis is essential to accurately identify metabolic risk in these individuals.

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POSTER



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CITE THIS PUBLICATION

Zainal Abidin NA, Mansor F, Zamri LA, Mohkiar FH, Tan YZ, Yusaini NS, et al. Limitations of BMI in Characterising Obesity Phenotypes [Poster]. MP J Med Res. 2026;1:2026-0036. doi:10.5281/zenodo.23394799

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Original poster in high definition on the online record.

SOURCE

Presented at 2nd Malaysian Obesity Society National Obesity Scientific Meeting NOSC (2026). Republished with the agreement of the authors.

PROCESS

Record checked by the editorial team, approved by the corresponding author, then reviewed by the journal's editorial board.

INDEPENDENCE

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