



## Socioeconomic position, weight, lifestyle risk, and multimorbidity in young adults

The prevalence of obesity among young adults in both high-income countries (HICs) and low- and middle-income countries (LMICs) has reached epidemic proportions, which further leads to an increase in multimorbidity.

Multimorbidity is defined as the co-occurrence of multiple health conditions and has been associated with poorer health outcomes and the increased use of health- and social-care services with associated costs. The prevalence of multimorbidity in the general population is high, but even higher in obese when compared to non-obese individuals. As multimorbidity-risk is established early in life, reducing modifiable risk factors in young adulthood in essence, proves among the best efforts to reduce the burden of multimorbidity in later life. No consensus has been reached on whether perceptions of being overweight or underweight foster or discourage healthy lifestyle behaviours and whether these perceptions relate to adverse health outcomes.

### Study design

This cross-sectional study included 3 000 participants from Kenya, South Africa (SA), and the United Kingdom (UK) ( $n = 1000$  and 50% females per country). The sample was targeted to be nationally representative of each country's 18-to-35-year-olds who had internet access.

### Findings from the study

Although the socioeconomic position (SEP) of SA and the UK were comparable, respondents from both countries presented with a significantly higher number of resources than Kenyan respondents. The overall sum of morbidities (cumulative morbidities experienced) did not differ between the countries. Introspectively, several morbidities significantly differed across the countries and between sexes. With regards to lifestyle risk factors, SA reported the highest prevalence of smoking (36.9%) and alcohol consumption (71.5%) yet, reported the most physically active (63.7%) respondents (MVPA  $>60\text{min/day}$ ). Comparing the lifestyle risk scores across the countries showed that both the UK and SA had significantly higher scores when compared to Kenya (both mean scores  $\geq 1.55$ ). More specially, men from both the UK and SA had higher lifestyle risk scores when compared to their female counterparts.

When comparing those stratified in the weight perception groups, the overall sum of morbidities significantly differed across the weight perception groups, with the highest mean

morbidity score, reported in the overweight perception group. Within the overweight perception group, self-reported morbidities such as obesity (49.6%) and asthma/ lung disease (15.7%) were significantly higher in this group, while mental health risk (29.4%) and joint disease (10.0%) reported lower in this group.

Associations of weight perceptions, health outcomes, and socio-demographics

We determined that, when compared to respondents with a normal weight perception, respondents with an overweight

weight perception were multiple times more likely to present with multimorbidity of 2 morbidities compared to their 0-1 morbidity counterparts (**Figure 1**). Additionally, our results showed that the likelihood of having a harsher degree of multimorbidity with 3 or more morbidities increased by more than 1.5 times with an underweight weight perception and by more than 3.5 times with an overweight weight perception with each unit increase in weight perceptions, when compared to those with a normal weight perception.

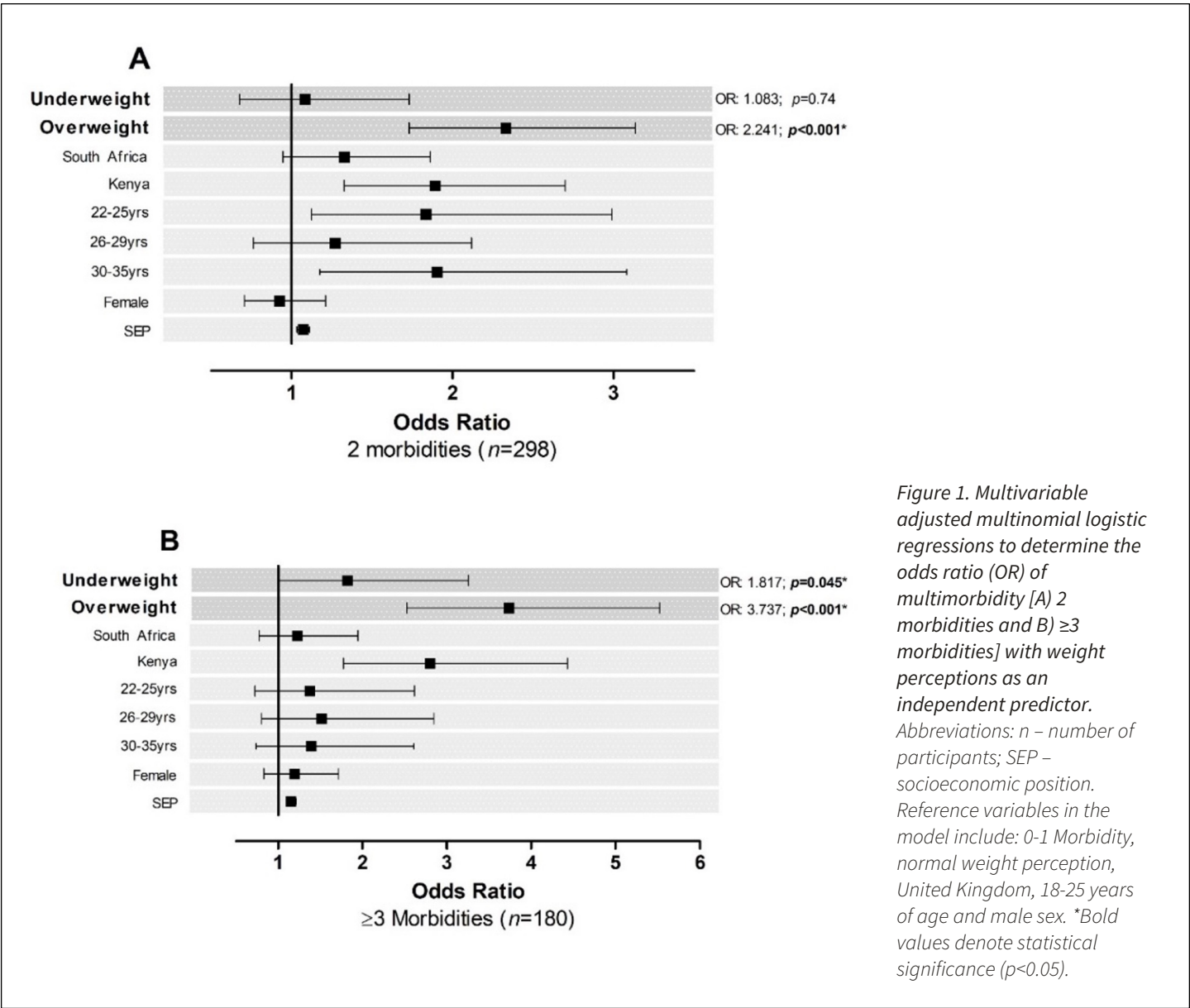


Figure 1. Multivariable adjusted multinomial logistic regressions to determine the odds ratio (OR) of multimorbidity [A] 2 morbidities and B)  $\geq 3$  morbidities] with weight perceptions as an independent predictor. Abbreviations: n – number of participants; SEP – socioeconomic position. Reference variables in the model include: 0-1 Morbidity, normal weight perception, United Kingdom, 18-25 years of age and male sex. \*Bold values denote statistical significance ( $p<0.05$ ).

Structural model analyses

These results show that overweight weight perception partially mediates the association between SEP and multimorbidity of 2 or more morbidities (**Figure 2**).

Furthermore, being overweight/obese additionally partially mediates the association between perceived weight and multimorbidity of 2 or more morbidities.

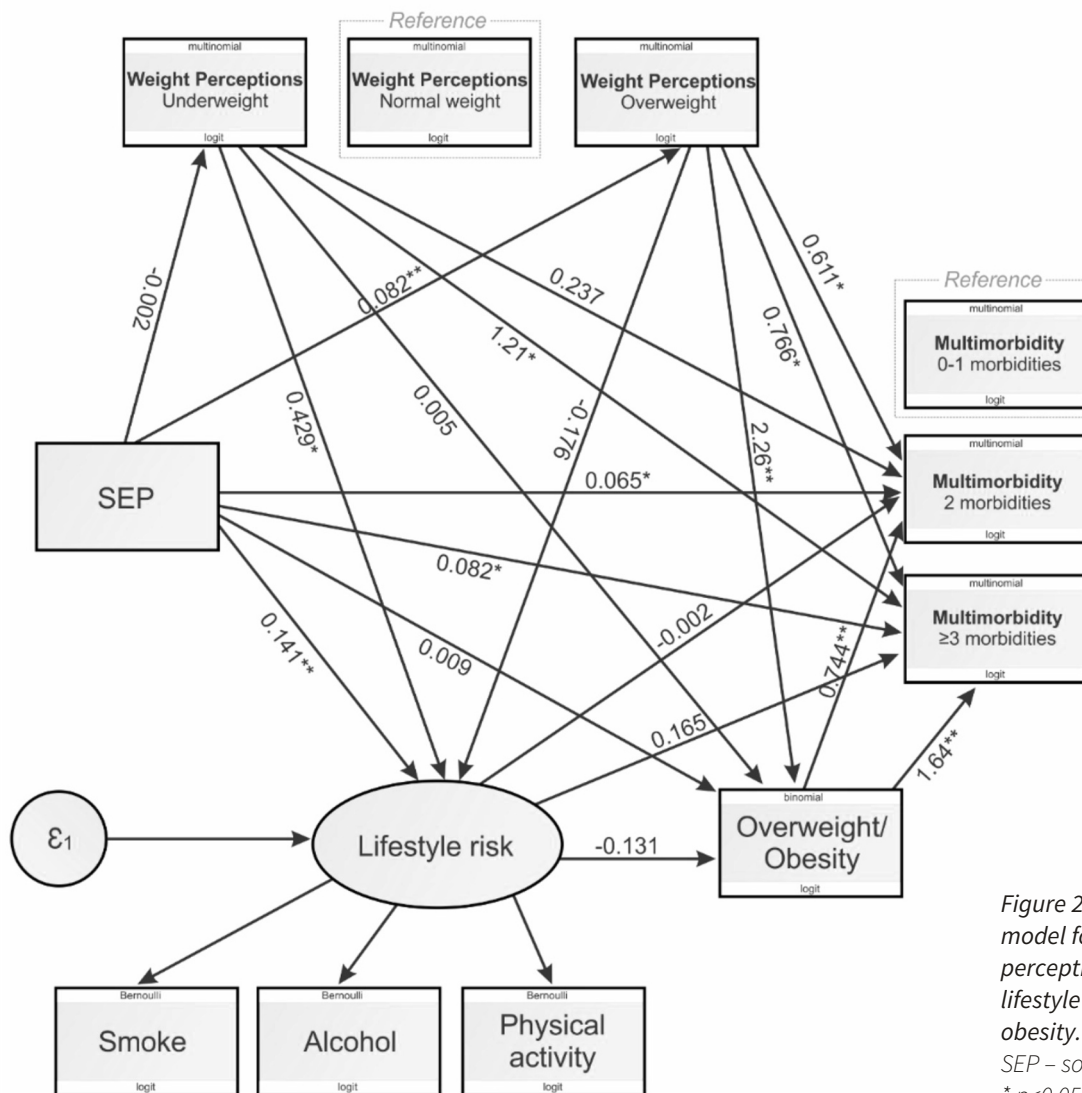


Figure 2. Structural equation model for SEP, weight perceptions, multimorbidity, lifestyle risk and overweight/obesity. Abbreviations: SEP – socioeconomic position. \* $p < 0.05$ ; \*\* $p \leq 0.001$

## Conclusion

This study confirmed poorer health outcomes in those who perceived themselves as overweight. The findings from this study further emphasise the importance of targeted intervention strategies aimed at increasing weight-related awareness and moderating risk factors, specifically in those who reside in lower economically developed countries.

## Reference:

### Socioeconomic position, perceived weight, lifestyle risk and multimorbidity in young adults aged 18 to 35 years: A Multi-Country Study

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