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ASSESSMENT OF NUTRITIONAL STATUS AND DIFFERENCES IN SELF-REPORTED AND MEASURED HEIGHT AND WEIGHT IN THE STUDENT POPULATION

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Introduction

Nutritional status is an important indicator of the health status and physical ability of an individual. Commonly used tools to evaluate nutritional status include anthropometric measurements, body mass index (BMI) and body composition assessment. Each method or tool used for nutritional assessment has its advantages and disadvantages, but with proper data collection and analysis, each one can provide valuable information. The aim of this study was to compare values and nutritional status assessed by various tools.

Participants and methods

105 participants (M=21; F=80)
1. Self-reported body weight and height (BMI)
2. Measured body weight and height (BMI)
3. Body composition assessment

1. 

2. 

3. 

Table 1 Differences in self-reported and measured height and weight

		Male (n=21)	Female (n=80)	All (N=101)
Body height (cm)				
Self-reported	Mean ± SD	181.1 ± 7.2	167.6 ± 6.2	170.4 ± 8.5
Measured	Mean ± SD	180.3 ± 7	166.8 ± 6.3	169.7 ± 8.5
Diference (measured - self-reported)	Mean ± SEM	0.8 ± 0.32	0.7 ± 0.17	0.7 ± 0.15
p value		0.030	0.000	0.000
Body weight (kg)				
Self-reported	Mean ± SD	79.5 ± 12.9	64.3 ± 13,2	67.5 ± 14.5
Measured	Mean ± SD	79.8 ± 14.3	64.7 ± 13.1	67.8 ± 14.7
Diference (*measured - self-reported*)	Mean ± SEM	0.4 ± 0.59	0.3 ± 0.22	0.3 ± 0.21
p value		0.550	0.131	0.111

Results

105 respondents participated in the study. Due to insufficient data, four participants were excluded from the study. Out of 101 participants, 79% were female. Results showed differences between the self-reported and measured values for height and body mass. The majority of the student population overestimates their body height. A statistically significant difference between self-reported and measured values was shown for body height but not for body weight (**Table 1**). The majority of participants (69%) had normal body weight, both according to self-reported and measured values. When compared BMI values based on self-reported data and measured BMI showed oscillations in underweight, overweight and obesity groups (**Figure 1**). When it comes to body composition and body fat content most of the participants had normal body fat content (66%) which is in accordance with measured BMI results (**Figure 2**). Results also indicate that female students tend to see themselves as overweight; 14% had increased body weight, but 39% of female participants perceived themselves as such. Unlike women, men assess their figures more realistic (**Figure 3**).

Conclusion

BMI and body composition (fat content) are confirmed as a good choice to evaluate nutritional status in studies conducted on the student population while self-reported values due to shift in values should be used only in studies where other options are not available.

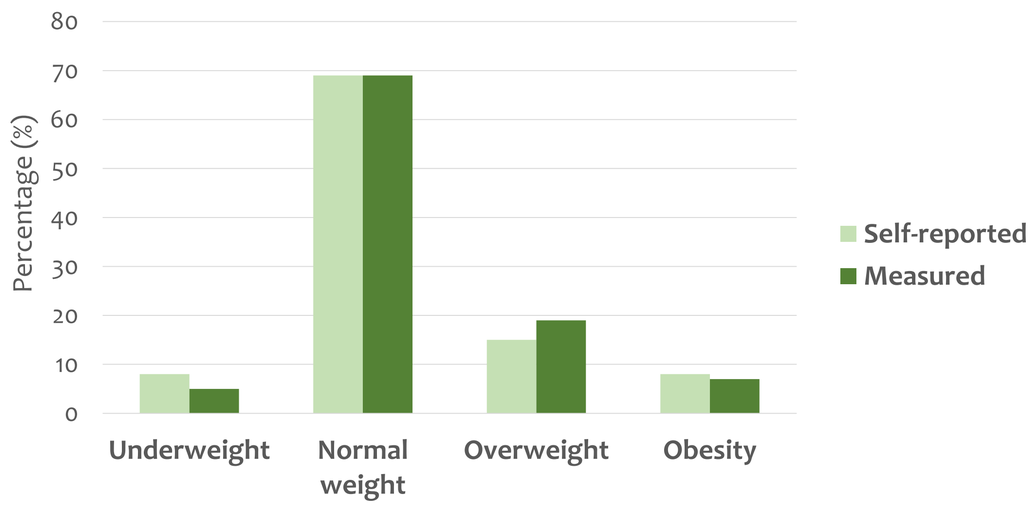

Figure 1 Difference in BMI calculated from self-reported and measured values

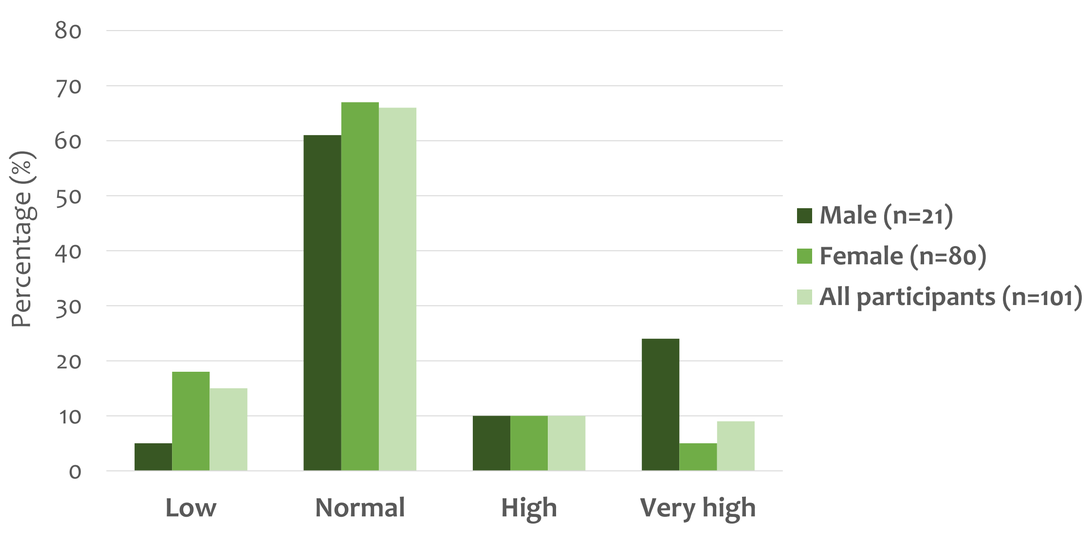

Figure 2 Body fat content

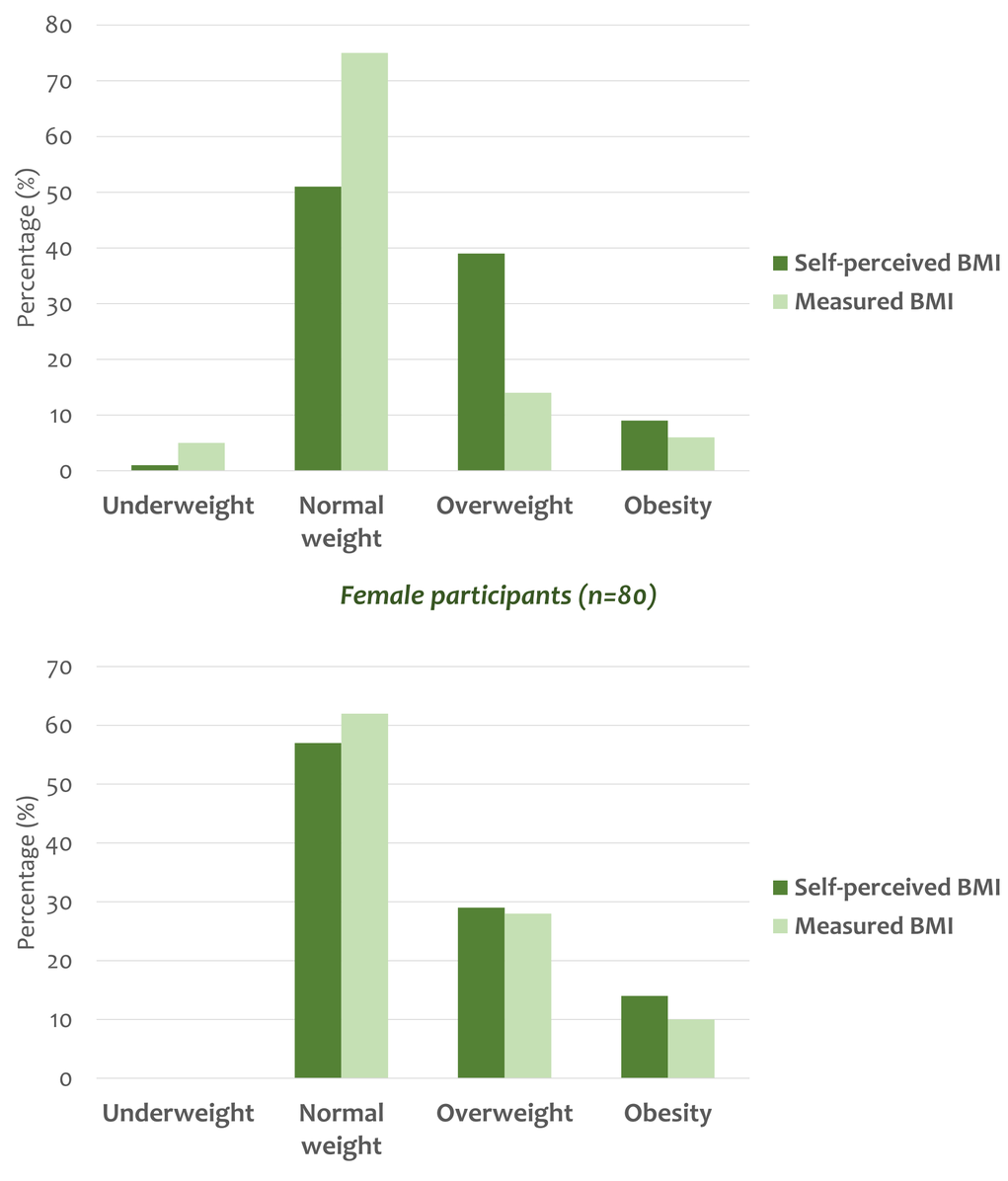

Figure 3 Difference in self-perceived and measured BMI by gender