

Factors influencing body weight changes in Polish adults over 60 years old during the COVID-19 era

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In this issue of *Polish Archives of Internal Medicine* Stepaniak et al¹ published an article evaluating body weight changes and factors that influenced these changes, as well as the effects of COVID-19 prevalence in Polish adults aged 60–84 years. This study is very interesting and contributes to the existing literature on the determinants of body weight changes during the COVID-19 pandemic.

Firstly, it is among the very first published studies conducted in Poland that recruited adults over 60 years old from the general population rather than the hospitalized ones, that is, that investigated a representative national sample. Furthermore, a large study sample size allowed the authors to use advanced statistical methods. Therefore, they could adjust for a plethora of confounders, minimize biases, and provide more accurate and precise findings with greater generalizability.² From a clinical perspective, the evaluation of body weight changes in adults aged over 60 years is of critical importance, as weight loss is often accompanied by lean mass and mainly muscle mass loss, which is detrimental to health-related outcomes, especially in this age group.³

Nevertheless, it is also important to acknowledge the presence of clinical and methodological flaws that may influence the accuracy of the estimates and conclusions owing to various biases. One of the major limitations of the study by Stepaniak et al¹ lies in the methods used to collect participant data. More specifically, the self-administration nature of the survey imports self-report biases, including social desirability and measurement error biases.⁴ It is vital to identify the potential effects of social desirability on the study outcomes during the design phase of the data collection method. There are systematic reviews highlighting the potential for self-report measurement methods to introduce

overestimations or underestimations in adult physical activity levels.⁵ These findings underscore the need for careful consideration when employing self-report methods as a means of quantifying physical activity. Furthermore, meta-research studies indicate that there is a tendency among men and women to underreport body weight and body mass index, while simultaneously overreporting their height.⁶ These findings are consistent with the results of a Polish study that investigated a discrepancy between self-reported and objectively measured anthropometric indices.⁷ However, it is worth noting that these deviations have gradually decreased over the years.⁸

Another limitation of this study is the fact that the authors categorized continuous variables, such as body weight change and physical activity levels, which may have reduced the statistical power to detect a relationship and increased the risk of false-positive results.⁹ Moreover, the information provided in the article on whether the investigated individuals experienced an increase or decrease in body weight or did not present any change during the COVID-19 pandemic, may impact interpretation of the findings. It is widely accepted that a weight change of 5% from the baseline is clinically significant.¹⁰ This threshold helps health care professionals determine whether a patient has experienced a meaningful change in their weight, which could have implications for their overall health and treatment plan. The lack of details regarding the number of kilograms gained or lost impedes the readers' ability to assess the significance of weight change among the participants, and hinders appropriate interpretation and extrapolation of conclusions.

Although the findings of the present study are in agreement with data coming from the LOST in Lombardia study,¹¹ it would greatly benefit the research, if the authors evaluated the body

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composition of the participants, particularly those experiencing weight loss. Considering that weight loss is most often accompanied by a reduction in lean body mass, including muscle mass, this may be the reason for the reported adverse effects on the health-related outcomes, rather than the weight loss primarily involving fat mass reduction.¹²

ARTICLE INFORMATION

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CONFLICT OF INTEREST None declared.

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