PO4.039

Lifestyle, Mental Health and Physical Status among People with Overweight and Obesity

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Introduction: Overweight and obesity occur when excess fat accumulation increases the risk of adverse health outcomes. Overweight is defined as a body mass index (BMI) of ≥25 kg/m², and obesity as a BMI of ≥30 kg/m². The aim of this research was to investigate lifestyle factors, mental health, and physical status among Lithuanian overweight and obese adults.

Methods: A cross-sectional correlational research strategy was applied to assess the relationship between BMI and various lifestyle factors, as well as physical and mental characteristics in a group of 135 individuals (50 overweight and 85 obese; 42 men, 93 women, aged 25–55 years). Body composition, lung vital capacity, and muscle strength were measured using dynamometry and ergometry (anaerobic lactate and glycolytic capacity), along with an orthostatic test. Sleep quality was evaluated using the Pittsburgh Sleep Quality Index (PSQI), stress levels with the Perceived Stress Scale (PSS), and mindfulness with the Mindful Attention Awareness Scale (MAAS). Data analysis was performed using SPSS 27.0 software.

Results: The results show an association between physical status (lower aerobic capacity) and higher BMI ($p<0.05$). Women's physical indicators (lung vital capacity, $p=0.001$; anaerobic power, $p=0.001$) were lower than men's, while blood lactate concentration was higher after the aerobic performance test ($p=0.022$). BMI was significantly associated with increased systolic ($p=0.002$) and diastolic blood pressure ($p=0.002$) at rest in all participants. In the group of obese women, BMI showed a significant association with blood pressure and a higher waist-to-hip ratio compared to the men's group ($p<0.05$). Univariate logistic regression analysis revealed no significant association between BMI and mental health factors, including perceived stress ($p=0.957$), sleep quality ($p=0.171$), or mindfulness ($p=0.829$). Together, these mental health factors explained only 0.4% of the variation in BMI.

Conclusion: No significant associations were found between BMI and mental health. The influence of psychological factors on body weight may be indirect or emerge only beyond a certain threshold. In the obese women's group, BMI was negatively correlated with physical capacity indicators and positively with the waist-to-hip ratio. Across all participants, a significant correlation was observed between higher BMI and increased blood pressure, especially in women. The findings indicate a trend toward central obesity and metabolic syndrome, which heightens the risk of cardiovascular disease. Future research could focus on designing and implementing targeted exercise interventions to improve lifestyle factors and explore the specific mechanisms linking BMI to mental health.

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Limited Weight Regain From Nadir Weight in SURMOUNT-1 3-Year Study

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Introduction: Obesity management is a long-term journey during which fluctuations in body weight are expected to occur. For some patients, a previous nadir weight can become a point of focus. However, there is not clear literature that nadir weight is clinically relevant. This post hoc analysis of the SURMOUNT-1 3-year study aimed to assess the magnitude of weight regain from nadir weight over 176 weeks with tirzepatide treatment.

Methods: This analysis included 690 tirzepatide-adherent participants (≥75% doses received) with obesity or overweight and prediabetes in the SURMOUNT-1 3-year study who had at least 5% weight reduction at time of nadir weight (the lowest weight achieved during treatment). Weight regain from nadir to Week 176 was defined as the difference between percent weight reduction from baseline to nadir and percent weight reduction from baseline to Week 176. Weight regain analyses included mean percent and were categorized as <5%, 5% to <10%, and ≥10% weight regain. Analyses used efficacy analysis sets (on-treatment data in participants with ≥ 1 dose of study drug).

Results: At baseline, tirzepatide-treated participants had a mean age of 49 years, a weight of 107 kg, and a BMI of 38.6 kg/m2. The mean time to nadir weight was 22 months. The mean percent weight reduction at nadir weight was 23.1% (SD 10.2%). The mean percent weight regain from nadir weight to Week 176 was 3.7% (SD 4.3%) leading to a mean percent weight reduction of 19.4% (SD 10.8%) at Week 176. At Week 176, 73%, 19%, and 8% of participants treated with tirzepatide 5 mg (N=227) regained <5%, 5% to <10%, and ≥10% weight from nadir weight, respectively (Table). Similarly, 65%, 26%, and 9% of participants treated with tirzepatide 10 mg (N=239) experienced <5%, 5% to <10%, and ≥10% weight regain from nadir to Week 176, respectively. Among participants treated with tirzepatide 15 mg (N=224), 73%, 20%, and 7% experienced <5%, 5% to <10%, and ≥10% weight regain from nadir to Week 176, respectively.

Conclusion: This post hoc analysis found that 70% of participants treated with tirzepatide had limited (<5%) weight regain after nadir weight. Less than 10% of participants regained ≥10% from their nadir weight. Overall, these findings suggest that most participants receiving tirzepatide had a relatively stable weight journey over 3 years in the SURMOUNT-1 3-year study.

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Tab. 1. Percentage of participants in the SURMOUNT-1 3-year study who experienced different levels of weight regain from nadir at Week 176 for each dose of tirzepatide.

Data are n (%)	% Weight regain from nadir to Week 176		
	<5%	5% to <10%	≥10%
Tirzepatide 5 mg (N=227)	165 (72.7)	43 (18.9)	19 (8.4)
Tirzepatide 10 mg (N=239)	156 (65.3)	61 (25.5)	22 (9.2)
Tirzepatide 15 mg (N=224)	163 (72.8)	45 (20.1)	16 (7.1)