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The link between muscle dysmorphia and eating disorders as a public health issue: a cross-sectional study

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Background. Eating Disorders (EDs) have gained increasing relevance among university students, particularly due to developmental transitions and the influence of "fitness culture."

Material And Methods. This cross-sectional study (N=2,001 students from the University of Catania) investigated the correlation between symptoms of Muscle Dysmorphia (MD)—measured using the Muscle Dysmorphia Disorder Inventory (MDDI)—and the risk of EDs, as assessed by the EAT-26 (1). The study analyzed both cumulative risk (>39) and individual MDDI subscales: Drive for Size, Appearance Intolerance, and Functional Impairment.

Results. Symptoms of MD emerged as one of the strongest independent predictors of ED risk (OR = 2.94; 95% CI: 2.03–4.25). The analysis of the various MDDI subscales revealed divergent pathways: Appearance Intolerance (OR = 1.18; 95% CI: 1.14–1.23) and Functional Impairment (OR = 1.22; 95% CI: 1.17–1.28) demonstrated a positive association with ED risk, whereas the Drive for Size showed an inverse association (OR = 0.93; 95% CI: 0.89–0.96). Analysis of sociodemographic determinants indicated a significantly higher risk among students aged 18 to 23, those living alone, and those who opted not to disclose their gender (OR = 2.07; 95% CI: 1.15–3.73). Conversely, residing with a partner (OR = 0.24; 95% CI: 0.13–0.42) or with parents (OR = 0.39; 95% CI: 0.28–0.54) exhibited a protective effect. Furthermore, intense athletic activity was associated with an increased risk of EDs (OR = 1.50; 95% CI: 1.19–1.90).

Conclusions. MD serves as a "gateway" to eating disorders. However, the risk appears to be driven primarily by intolerance toward one's body image and functional impairment rather than by the ambition for muscle growth. Consequently, prevention strategies targeting university students should focus on vulnerable phenotypes—specifically younger students, those living in isolation, and gender minorities—while addressing distress related to body image perception. 1. Leonforte F, Mercogliano M, Nicosia V, Lo Bianco M, Leonardi R, Cavallaro A, Ruggieri M, Mistretta A. The muscle dysmorphia-eating disorders link as a public health concern: an epidemiological study of symptom dimensions and social isolation. Front Public Health. 2026 Apr 14;14:1805859. doi: 10.3389/fpubh.2026.1805859. PMID: 42058080; PMCID: PMC13121256.