

15. Clinical Exposure Improves Medical Students' Understanding of Bariatric Surgery: A Cross-Sectional Study at Mansoura University

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BACKGROUND: The "100 million Health" project in Egypt estimates that 29.5% of adult males and 49.5% of adult females suffer from obesity. Obesity is considered a significant contributory factor for many serious complications, such as insulin resistance, metabolic syndrome, type 2 diabetes mellitus, and cardiovascular diseases. Metabolic/Bariatric surgery (MBS) is considered one of the effective interventions. Despite this, awareness remains low among certain communities. This study aimed to assess the impact of the medical curriculum at Mansoura University on improving students' knowledge and attitudes toward MBS. **METHODS:** This cross-sectional analytical study was conducted among first-year students and interns at Mansoura University. There is no dedicated curriculum for MBS at Mansoura University. Assuming a minimum response rate of 65%, the calculated sample size was 670 (a minimum of 351 interns and 319 first-year students). A 30-question self-reported survey was distributed via social media platforms and on campus from the 4th of November 2024 to the 4th of January 2025. The questionnaire was developed based on a comprehensive literature review on MBS awareness and educational interventions. It was designed to assess demographics (gender, religion, residency, nationality, and BMI), knowledge (15 items), and attitudes (15 items) toward bariatric MBS, with scores assigned for correct answers (1 point), incorrect answers (0 point), or "maybe" (0.5 point). To ensure content validity, the initial draft of the questionnaire was reviewed by a panel of three experts in MBS and medical education. A pilot version was tested on 30 medical students (excluded from final analysis). Reliability testing was done using Jamovi software, and internal consistency was assessed using Cronbach's alpha, which

yielded a value of 0.66 with corrections. **RESULTS:** A total of 683 students (355 (52%) interns and 328 (48%) students in their first year of medical school) accepted to participate in the survey with a response rate of 97.57%. A significantly higher proportion of interns (81%) believe that surgical intervention is the best way to treat obesity compared to first-year medical students (63%) ($p < 0.001$). There was a major lack of knowledge on the eligibility criteria for MBS (interns, 9.5%, and first-year students, 8.5%) with no significant difference ($p > 0.9$). Interns also demonstrated greater awareness of long-term consequences (76% vs. 57%, $p < 0.001$), pregnancy as a contraindication (70% vs. 53%, $p < 0.001$), and procedural types (40% vs. 24%, $p < 0.001$). Overall, Interns demonstrated a significantly higher median knowledge score (9.50) compared to first-year medical students (9.00) ($p < 0.001$). Interns had higher median attitude scores (7.50 vs. 7.00, $p < 0.001$) and were less likely to view MBS as "cheating" (6.2% vs. 16%, $p < 0.001$). Univariate analysis revealed significant associations between attitude scores and years in medical school ($p < 0.001$), gender ($p = 0.005$), and nationality group ($p = 0.043$). Correlation revealed a weak positive relation between knowledge and attitude scores (Pearson's $r = 0.13$) (figure). **CONCLUSION:** While undergraduate education improved knowledge and attitudes, persistent gaps in understanding eligibility and a slightly negative perception of MBS underscore the need for enhanced teaching strategies, such as curriculum revisions and interactive learning, to address low awareness and optimize future physicians' preparedness.

Key Words: "Bariatric Surgery"[Mesh], "Education, Medical, Graduate"[Mesh], "Health Education"[Mesh], "Surveys and Questionnaires"[Mesh] (Source: MeSH-NLM).

Figure: Correlation Between Knowledge and Attitude Scores

