

Effects of lifestyle changes and bariatric surgery on female sexual function in women with obesity: a systematic review and meta-analysis

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Weight loss interventions improve overall sexual function and the subdomains of sexual function: desire, arousal, sexual satisfaction, lubrication and orgasm

BACKGROUND

- What are the effects of weight loss interventions on female sexual function in women with obesity?

No systematic review or meta-analysis has reported the effects of different weight loss interventions on sexual function in women with obesity. Therefore, we aimed to evaluate the effects of weight loss interventions (e.g., lifestyle changes such as diet, physical activity or both, and bariatric surgery) on female sexual function (measured using the Female Sexual Function Index) in women with obesity.

METHODS

Five databases were searched to identify studies published up to August 5, 2022. Screening and quality assessment were carried out by two authors independently.

RESULTS

The within-group analysis found that weight loss interventions (bariatric surgery and dietary interventions plus physical exercise) resulted in significant improvements on sexual overall Female Sexual Function Index score (Hedges' g effect size [g]=0.64 [95% confidence interval: 0.43–0.85]), sexual desire (g=0.50[0.29–0.71]), sexual arousal (g=0.39[0.19–0.59]), sexual satisfaction (g=0.29[0.17–0.46]), lubrication (g=0.28[0.13–0.43]), and orgasm (g=0.25[0.12–0.38]). However, there was no significant reduction on sexual pain.

All analyses presented evidence of significant heterogeneity ($I^2=83.7-95.4%$, $\tau^2=0.05-0.22$, $p<0.001$).

RESULTS

Table 1 - Sensitivity analyzes using r values (0.7) to estimate standard deviation of mean difference.

Outcomes	r = 0.7
Overall FSFI (n=21)	0.64 (0.43; 0.85), p < 0.001
Sexual desire (n=15)	0.50 (0.29; 0.71), p < 0.001
Sexual arousal (n=15)	0.43 (0.21; 0.65), p < 0.001
Sexual satisfaction (n=15)	0.29 (0.17; 0.46), p = 0.001
Lubrication (n=15)	0.28 (0.13; 0.43), p < 0.001
Orgasm (n=15)	0.25 (0.12; 0.38), p < 0.001
Sexual pain (n=15)	0.06 (-0.06; 0.19), p = 0.326

CONCLUSIONS

Weight loss interventions improve overall and most sub-domains of sexual function (e.g., sexual desire, sexual arousal, sexual satisfaction, lubrication, and orgasm). However, as the included studies presented an overall "poor" quality and "critical/serious" risk of bias, future high-quality and low risk-of-bias randomized clinical trials comprising women with an obesity control group are required.

ADDITIONAL INFORMATION

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Conflicts of Interest: The authors declare no conflicts of interest

