

Infertility and Obesity: Impact of Lifestyle Modification

Abstract Background: Obesity increases the risk of sub-fecundity and infertility due to dysfunction in the hypothalamic-pituitary-ovarian axis, low oocyte quality, and reduced endometrial receptivity, and increases the risk of normal-gonadotrophic anovulation. **Aim:** evaluate the impact of lifestyle modifications on women's BMI and infertility among women with polycystic ovary syndrome. **Subjects and Methods:** A quasi-experimental design at Beni-Suef University Hospital's gynecological and infertility clinics; a purposive sample of 116 women with polycystic ovary syndrome, overweight, and obesity, was selected. Tools: I: The Arabic-structured interview questionnaire contains personal data; II: anthropometric measures contain body mass index and waist circumference; III: lifestyle and habit characteristics contain nutritional habits and block adult physical activity (PA). **Results:** It revealed that the anthropometric measures get better for the study group after intervention (60.3%; BMI ≥ 25.0 : overweight and 46.5%; waist circumference ≥ 88) compared to 29.3%; BMI ≥ 25.0 : overweight and 77.6%; waist circumference ≥ 88) before intervention, respectively. About 95.1% of BMI ≥ 30 : obesity in the study group had irregular menstrual cycles before intervention. Compared to 94.3% of BMI ≥ 25 : overweight and 100% of BMI 18.5- 24.9: normal weight, the study group had a regular cycle after the intervention. There is a positive correlation between anthropometric measures and menstrual cycle regularity ($p < 0.01$). Also, 87.5%, 83%, and 77.7% of the poor nutrition habits of the study group women experienced hypo-menorrhea, irregular cycles, and oligo-amenorrhea before intervention, compared to 78%, 75.6%, and 83.3% of good habits after intervention. Moreover, 87.5%, 93.6%, and 77.7% of mild physical activity have hypomenorrhea, irregular cycles, and oligoamenorrhea before intervention, compared to 68%, 80%, and 83.3% of moderate physical activity after the intervention. **Conclusion:** The study shows a positive correlation between anthropometric measures and menstrual cycle regularity and suggests that poor lifestyle habits can lead to irregular cycles and hypomenorrhea. **Recommendations:** Collaboration among gynecologists, nutritionists, and endocrinal specialists is needed to address women's fecundity-decline-related obesity.

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