Does Obesity Affect the Respiratory Muscle Strength? An Observational Study

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ABSTRACT

Background: Obesity is a condition where the energy intake exceeds energy expenditure of the body. Obesity is seen to affect different aspects of life both physically and emotionally. One such physical aspect is the breathing pattern. Studies on the behaviour of respiratory muscle strength (RMS) in obese patients have found conflicting results.

Methodology: Using purposive sampling, 60 subjects who fulfilled the inclusion criteria were recruited in the study. Each individual was subjected for the assessment of Maximal Inspiratory Pressure (MIP) and Maximal Expiratory Pressure (MEP), Body Mass Index (BMI) and Waist circumference (WC).

Result: A Pearson's product-moment correlation coefficient showed a positive correlation between MIP and WC (r = 0.378, n = 60, p = 0.003 with α at 0.01) and between MEP and WC (r = 0.288, n = 60, p = 0.026 with α at 0.05). There was no correlation found between BMI and MIP (r = 0.138, n = 60, p = 0.292) & BMI and MEP (r = 0.150, n = 60, p = 0.252).

Conclusion: The findings of the study suggest that the respiratory muscle strength is more in individuals with higher waist circumference values whereas with BMI it is inconclusive.

Keywords: Maximal inspiratory pressure, Maximal expiratory pressure, Respiratory muscle strength, Waist circumference

