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EVALUATE THE POSTURE AND FUNCTIONAL IMPAIRMENT OF ANKLE AMONG OBESE AND OVERWEIGHT INDIVIDUAL – AN ANALYTIC STUDY.

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Background: Obesity and overweight are growing public health concerns associated with numerous musculoskeletal complications. Excess body weight imposes increased mechanical load on the lower extremities, particularly the ankle joint, leading to altered posture, compromised biomechanics, and reduced functional capacity. These changes may predispose individuals to pain, instability, and a higher risk of injury, ultimately affecting mobility and quality of life.

Purpose: The present study aimed to evaluate the relationship between Body Mass Index (BMI) and ankle posture, as well as functional impairment of the ankle joint among overweight and obese individuals.

Methods and Materials: An analytic cross-sectional study was conducted on 150 participants who were categorized into overweight and obese groups based on BMI criteria. Postural alignment of the foot was assessed using the Foot Posture Index (FPI), while ankle function was evaluated using the Foot and Ankle Disability Index (FADI). All participants underwent standardized assessment procedures. Statistical analysis was performed to identify correlations between BMI, ankle posture, and functional impairment.

Results: The findings revealed a significant negative correlation between FADI scores and BMI, indicating reduced functional ability with increasing body weight. Additionally, ankle posture demonstrated a tendency toward pronation as BMI increased, FADI mean \pm standard deviation of 29.74 ± 3.18 . Obese individuals exhibited greater pronation and more pronounced functional limitations compared to overweight individuals.

Conclusion: Increased BMI is associated with altered ankle posture and decreased functional performance. Obese individuals are more severely affected than those who are overweight. Early identification and targeted physiotherapy interventions are essential to prevent further complications and improve functional outcomes.

Keywords: Obesity, Overweight, Body Mass Index, Posture, Functional Impairment of ankle.