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The Impact of Obesity on Padeographic Patterns in Children

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ABSTRACT

Obesity in children is a growing concern as it is found to have a major effect on plantar pressure distribution. The study of plantar pressure distribution is referred as “Paedography”. In addition to supporting an excessive burden of load, children with obesity are vulnerable to develop biomechanical and structural deformity of foot, meaning it leads to in a varied range of biomechanical and physical complications such as flat foot and heel pain etc.The purpose of this study is to investigate the connection between paedographic patterns and obesity, with a particular emphasis on the effects of excess weight on children’s plantar pressure distribution, arch shape, and general gait dynamics. This review utilised PubMed and Google Scholar to search relevant full texts literature, and identified 35 studies from 2004 to 2020 comprising cross-sectional studies, observational studies, systematic reviews, semi-experimental studies and comparative observational studies. Out of 35 studies, 15 articles were found to be pertinent to the review. The study's findings showed a number of significant variations in plantar pressure distribution in obese children. Children who were obese showed noticeably greater peak pressures in all areas of the foot, but especially in the forefoot and hindfoot. According to these results, the extra mechanical strain brought on by excess body weight modifies the typical pressure distribution and foot biomechanics, which may result in chronic musculoskeletal issues. This study highlights the critical need for early measure to tackle the obesity in children to prevent the risk of alteration in foot biomechanics and potential chances of musculoskeletal disorders. It is feasible to lessen the negative effect of obesity on paedographic patterns and encourage better musculoskeletal development.

Keywords: Obesity, Plantar pressure, Paedography