

POSTER PRESENTATIONS PP1

The Screening of Idiopathic Scoliosis and Associated Factors Among Primary School Children in Cheras, Kuala Lumpur, Using i-HANDY Level Application: A Retrospective Screening Study

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ABSTRACT

Background and Objectives: Idiopathic Scoliosis (IS), particularly Adolescent Idiopathic Scoliosis (AIS), is prevalent among primary school girls aged 8–12. Scoliosis can lead to back pain, psychological issues, and pulmonary decline. This study aimed to investigate the prevalence of idiopathic scoliosis among primary school children in Cheras, Kuala Lumpur, and to identify the association between body mass index (BMI) and hamstring muscle flexibility with scoliosis incidence. **Methods:** A total of 105 respondents with criteria 12 years old, boy and girl, lower weight, normal, overweight and obese, attending primary school daily, parents and children are able to speak and understand English and Malay were included in this retrospective study. iHandy Level is an application that can be downloaded from the Apple Store or Google Play. The i-Handy level has the ability to evaluate the Sacral Slope, as well as the Lumbar Curve and the lumbar lordosis. Data were sourced from screening activities by the Physiotherapy Unit of Cheras Health Clinic. Prevalence was determined through demographic data, while associations between BMI body weight was comparing with height, hamstring flexibility by using the tools of sit and reach, and scoliosis were analyzed using descriptive statistics and simple linear regression. **Results:** From the total study of 105 student, study found a higher prevalence of scoliosis among girls 13(76.5%) compared to boys 4(23.5%) hamstring flexibility showed a weak non significant association with the degree of scoliosis with p-value >0.05, where BMI demonstrated a significant strong association with p-value less than 0.001. **Conclusion:** There is a high prevalence of suspected scoliosis among primary school girls in Cheras. Demographic factors, specifically gender and BMI, are significantly associated with the degree of curvature. Future studies should expand the sample size to include children across the Klang Valley to better identify regional prevalence. **Acknowledgement:** The authors would like to express their gratitude to the staff of the Physiotherapy Unit of Cheras Health Clinic, the Cheras District Health Office, and the Cheras District Education Office for their cooperation and support in conducting this study.

Keywords: gender; prevalence; body mass index; adolescent idiopathic scoliosis; spinal curvature; Cheras

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