THE ASSOCIATION BETWEEN ABNORMAL DEVELOPMENTAL MILESTONES OF BABIES AND THE PREVALENCE OF SPINAL DEFORMITIES IN ADOLESCENCE

by

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DECLARATION

I, René Alberts hereby declare that this dissertation is my own, unaided work under the guidance of my mentors, Ms AJ van Rooijen and Ms M Eisenberg. . It has not been submitted before for any degree or examination at any other University. This dissertation is being submitted for the degree of Master of Physiotherapy at the University of Pretoria

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(Signature of candidate)

16th day of NOVEMBER, 2000.

Witness

ABSTRACT

The purpose of this study was to investigate whether there is an association between developmental milestones of babies and the prevalence of spinal deformities in adolescents in Middelburg, Mpumalanga. The relationship between spinal deformities in a cross-sectional group of adolescents and parental recall was the focus of the study. One hundred and four adolescents were evaluated to determine if a spinal deformity was present. The subjects were then allocated to either the case (those with spinal deformities) or the control (subjects without spinal deformities) groups. The mothers of the subjects were then interviewed with regard to some of the developmental milestones of their offspring, and other factors which may have had an influence on the development of adolescent spinal deformities.

The results showed that a perfectly "normal spine" was seldom found and that even in the control group some minor deviations, within normal limits, were present. Most of the mothers of subjects from the case group did not realise that their offspring had a deformity. There was a non-significant trend for more crawlers to be present in the control group. Subjects who did not crawl, and who were also late walkers appeared to have an increased tendency to develop adolescent spinal deformities. Despite the fact that the schools approached were multi-racial, only white parents responded to the request for participation in this trial. The possible reasons for this should be investigated and a trial comparing the prevalence of spinal deformities amongst adolescents from all ethnic groups in South Africa should be conducted.

Due to the possible recall bias of this study, it is recommended that a longitudinal study, commencing with the babies attending baby clinics in South Africa (representative of the South Africa population), be conducted to determine the influence of developmental milestones on the prevalence of spinal deformities in adolescence.

Key words: Developmental milestones, spinal deformities, adolescent idiopathic scoliosis, Scheuermann's kyphosis, aetiology.

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