

LONGITUDINAL CHANGES IN THE PREVALENCE OF HYPERTENSION IN PRIMARY SCHOOL LEARNERS: THE NW-CHILD STUDY

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Introduction: Hypertension in children and adolescents have become a growing problem. In the past hypertension in children was underdiagnosed due to the omission thereof in basic medical checks. Research however indicates that the root of adult hypertension lies in the development of hypertension as a child and/or adolescent. **Methods:** The study is based on a stratified and randomized longitudinal research design (NW-Child Health, Integrated with Learning and Development) stretching over a period of 6 years (2010-2016) and that comprises of a baseline measurement and 2 follow-up measurements. Blood pressure was measured with an Omron 705CP-II. Blood pressure was taken while the person was seated, with the left arm resting on the table, palm facing upwards. Three measurements were taken with 2-minutes apart. Data was analyzed with Statistica for Windows (2015) by using, basic statistics, linear mixed models to determine the effect over time and a Pearson correlation coefficient to determine practical significance. **Results:** Results indicated that there was no significant difference between boys and girls over time, but that time had a significant effect ($p \leq 0.05$) on blood pressure. When data was analyzed according to race and socio-economic status (SES), again no significant difference were found between races or high and low SES, however time once again had a significant ($p \leq 0.05$) impact on blood pressure. **Conclusion:** Although gender, race and SES do not seem to have an effect on blood pressure, it was found that the percentage of children with high blood pressure was increasing over time. Due to the possible effect that the development of hypertension in children can cause hypertension in adults, intervention studies does seem to be the next logical step in this health issue.

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