

Publication

Hypertension among South African children in disadvantaged areas and associations with physical activity, fitness, and cardiovascular risk markers: a cross-sectional study

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Author(s) Joubert, N.; Walter, C.; du Randt, R.; Aerts, A.; Adams, L.; Degen, J.; Gall, S.; Müller, I.; Nienaber, M.; Nqweniso, S.; des Rosiers, S.; Seelig, H.; Smith, D.; Steinmann, P.; Probst-Hensch, N.; Utzinger, J.; Pühse, U.; Gerber, M.

Author(s) at UniBasel [Probst Hensch, Nicole](#) ; [Joubert, Nandi](#) ; [Walter, Cheryl](#) ; [Steinmann, Peter](#) ; [Adams, Larissa](#) ; [Smith, Danielle](#) ; [Utzinger, Jürg](#) ; [Aerts, Ann](#) ; [Pühse, Uwe](#) ; [Des Rosiers, Sarah](#) ; [Müller, Ivan](#) ; [Probst-Hensch, Nicole](#) ; [du Randt, Rosa](#) ; [Nienaber, Madeleine](#) ; [Seelig, Harald](#) ; [Gall, Stefanie](#) ; [Degen, Jan](#) ; [Nqweniso, Siphesihle](#) ;

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Childhood hypertension drives hypertension in later life; hence, assessing blood pressure in children is an important measure to determine current and future cardiovascular health. There is, however, a paucity of childhood blood pressure data, particularly for sub-Saharan Africa. This study explores blood pressure and associations with age, sex, socioeconomic status, physical activity, fitness, and cardiovascular risk markers. In the 'Disease, Activity and Schoolchildren's Health' (DASH) study, a cross-sectional analysis was conducted in disadvantaged neighbourhoods in the Eastern Cape province of South Africa. Assessments included blood pressure, accelerometer-measured physical activity, physical fitness, and cardiovascular risk markers. The study consisted of 785 children (383 boys, 402 girls, $M = 12.4 \pm 0.9$ years). Overall, 18% of the children were classified as hypertensive, while 20% were either overweight/obese, and almost four out of ten children did not meet global daily physical activity recommendations. Hypertensive children were more likely to be overweight/obese, $\chi^2(2, 785) = 14.42$, $p < 0.01$, but only if they did not meet physical activity recommendations, $\chi^2(2, 295) = 11.93$, $p < 0.01$. Considering the moderating effect which sufficient activity has on the relationship between hypertension and body weight, more emphasis should be placed on early primary health intervention and education strategies.

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