



Carren Ginsburg



Julia de Kadt



Alison Feeley

## Our children - Education, diet and mobility

The Developmental Pathways for Health Research Unit (DPHRU) released new research focusing on various aspects related to children. The DPHRU, located in the Department of Paediatrics in the Wits School of Clinical Medicine, was launched in 2011. It aims to research health and well-being across generations.

The first study, with lead author Carren Ginsburg, explores the patterns of residential mobility within a group of Johannesburg-Soweto based children over a 15 year period.

The second, published by lead author Julia de Kadt researches the extent to which children living in the Soweto-Johannesburg area travel to school on a daily basis.

Alison Feeley, lead author of the third study, explores the eating habits and practices of adolescents in Soweto between the ages of 13 and 17.

## Children on the move

*Carren Ginsburg*

Moving home has the potential to result in improved living conditions and well-being, but may also reinforce inequalities and conditions of vulnerability. The potential negative consequences of movement may pose particular risks in the case of children. However, little is known about the frequency and reasons for residential mobility amongst South Africa's urban children, and the consequences of movement have not been explored.

The DPHRU recently conducted a study exploring the patterns of residential mobility within a group of Johannesburg-Soweto based children over a 15 year period. The study also examines the potential consequences of movement in relation to the educational progression and achievement of the children.

The results of the research reveal that two thirds of the children (64%) had moved home at least once by the time they reached 15 years of age; nonetheless, a third of the children had never moved home. Mobility was found to be more likely amongst children whose mothers or caregivers had no formal education and who lived in poorer households, suggesting that residential movement within this group of children was more common in the context of disadvantage.

However, the consequences of such movement were somewhat unexpected. The results of the research showed no evidence that residential mobility impacted negatively on children's progression through school and on the contrary, children who had moved home appeared to achieve higher scores in a numeracy and literacy evaluation.

The study concludes that residential mobility may be associated with opportunities for some children and challenges or hardships for others. However, such movement, even where it was connected to disadvantage, did not appear to prejudice children's educational progression or potential for achievement. The findings are suggestive of children's resilience and adaptability in the face of change and highlight the potential for residential mobility to influence children's lives positively.

## The great education trek

*Julia de Kadt*

Children's access to quality education is one of the core determinants of their educational attainment and economic wellbeing in later life. The poor quality of most public education in South Africa is widely documented, and children and their families are often willing to make substantial investments in pursuit of the best possible educational opportunities.

Recent research conducted by the DPHRU at Wits explored the extent to which children living in the Soweto-Johannesburg area travel to school on a daily basis.

The research measured the distance which primary school children travelled each day to school and back, and found that over a quarter of children travel more than 5 kilometres in each direction, every day. Only 40% of children were attending a school in the same suburb as their home, and only 20% were attending the school that was the shortest distance from their home.

Children who travelled further to go to school typically attended more well-resourced and well-performing schools than children who attended schools closer to home. This suggests that children and families are making use of school choice and travel to improve the quality of education that they are able to access.

Children travelling greater distances to school are typically travelling from homes in township areas to historically advantaged schools in suburban Johannesburg. This typically requires substantial economic investment, to cover transport costs and higher fees, as well as extensive parental involvement to obtain a place for a child in a school, and to arrange transport. Children travelling substantial distances to school were more likely to come from relatively well-off families, and to have relatively well-educated mothers.

Children who were attending schools closer to home, but not the nearest possible school, were more likely to live in a particularly disadvantaged area, and to come from a household with a moderate socio-economic status level, relative to the cohort as a whole. These children and families appear to be making use of a less resource-intensive form of school choice to pursue better educational opportunities than they might otherwise attain.

The results of this research highlight the value which South African families and children attribute to education, and the levels of investment they are willing to make in the pursuit of educational opportunities. They provide evidence about the extent to which even very young children are travelling substantial distances on a daily basis in pursuit of education.

They also support other studies which indicate that access to high quality education in South Africa is increasingly shaped by socio-economic status rather than race. Additional research on the motivations for school choice and the implications of substantial travel to school for young children is urgently needed in order to determine the best possible policy response for South Africa.



The DPHRU aims to research health and well-being across generations.

*Prof. Mark Hanson, President of the International Society of Developmental Origins of Health and Disease, Dr Lisa Micklesfield, researcher in the DPHRU; and Dr Shane Norris, Director of the DPHRU at the launch last year.*



## What are adolescents eating?

*Alison Feeley*

Obesity and its metabolic consequences is an important public health concern. In South Africa half of adult women are either overweight or obese and one in five rural teenage girls is overweight compared with one in three teenage girls living in Soweto.

It is well established that diet plays an important role in the development of obesity – a key research theme at the DPHRU.

Findings from a recent longitudinal study by the DPHRU which interviewed adolescents in Soweto between the ages of 13 and 17 indicate that poor eating habits and practices are well established by the age of 13 and furthermore, these poor habits track with increasing age.

Researchers documented an increase in the number of snack items consumed as the cohort aged (TV snacks, tuck shop purchases, fast food and soft drinks), as well as a decline in both breakfast consumption and lunch box usage at school.

In another study, a cross-sectional analysis, it was found that fast food items were consumed more than seven times per week among 17 year old adolescents in Soweto and furthermore the most popular fast food item among these teenagers was the 'kota'. A typical 'kota' consists of a quarter-loaf of white bread, chips, a slice of cheese and any number of delicatessen meats and sauces.

Food composition analysis showed that an average 'kota' provides 5 369 kJ, 52g fat of which 13g comprised saturated fatty acids and 2 280mg salt. Furthermore, these items cost less than R9 per portion making it very affordable to teenagers on small budgets.

In another study in Mpumalanga, the DPHRU found that fast foods were widely available in an undeveloped rural community, with two thirds of available items either vetkoek or fried chips – both cheap, energy dense foods with little nutritional value.

These studies demonstrate that energy-dense foods are widely consumed and accessible, in both urban and rural environments, particularly at school or in the community. The concern is that regular consumption of energy-dense, micronutrient deficient foods pose health risks, such as increasing susceptibility to obesity.

The researchers speculate that the poor dietary habits of these individuals will set them up to over-consume energy dense snacks which would put them at risk of obesity later on in life. This combined with sedentary activity would exacerbate their risk further. More research is required to assess other lifestyle factors of these adolescents, which may offset their poor eating practices.

## About the DPHRU

The Developmental Pathways for Health Research Unit studies health and well-being across generations. It was launched by the Faculty of Health Sciences in December 2011.

Under the leadership of Shane Norris, Associate Professor and Director, the DPHRU is a new unit situated in the Department of Paediatrics in the School of Clinical Medicine, with a mandate that has evolved from research conducted by the Medical Research Council/Wits Mineral Metabolism Research Unit (MRC/MMRU) and the Birth to Twenty Research Programme (Bt20).

Addressing the national priorities of increasing life expectancy, decreasing maternal and child mortality and strengthening health system effectiveness, the DPHRU will see the MMRU and Bt20 merge to form a unique research opportunity and a platform with substantial infrastructure and equipment, extensive longitudinal data, and well-established links with the Soweto-Johannesburg community.

The DPHRU is well positioned to provide scientific and local formative and intervention research in the area of the developmental origins of health which will complement existing research entities tackling metabolic disease, health, and wellbeing in South Africa. Furthermore, the DPHRU complements the Wits Molecular Biosciences Research Thrust: Health for Africa and the Wits Chronic Diseases of Lifestyle Research Thrust; and the MRC Cardiovascular and Metabolic Diseases National Collaborative Research Programme.

