



The Bursary will be for approximately R8 000 per annum, for a period not exceeding 5 years per recipient.

Conditions applying are: (i) applicants who matriculated in or near George, Southern Cape, will be preferred; and (ii) recipients of the Bursary must intend to practise in South Africa after qualifying.

Applicants must include a short statement of the intended study/research, as well as a short CV, and an accompanying letter from the applicant's university to verify the factual content of the application.

Please address applications to the Secretary, Outeniqua Branch (address below) within a month of publication of this issue of SAMJ.

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Childhood lead exposure in South Africa

To the Editor: In August 2002, during a Medical Research Council (MRC) survey of blood lead levels in 383 grade 1 children attending schools in the Johannesburg suburbs of Alexandra, Soweto, Westbury, Riverlea and an inner city area, a 7-year-old girl was found to have a blood lead level of 44.4 µg/dl, which was considerably higher than the mean sample concentration of 9.4 µg/dl. Analysis of a repeat blood sample taken 1 month later showed an increase in the blood lead concentration to 51.5 µg/dl, more than five times as high as the internationally accepted action level of 10 µg/dl. During follow-up home interviews conducted with the parents, it emerged that the girl was often observed to ingest putty, paint from indoor and outdoor walls, and soil from around the apartment building in which they lived. Concern over their daughter's pica tendency and health had previously prompted the parents to take her to a local hospital for investigation. However, over-exposure to lead had not been considered at the time.

Subsequent analyses of lead concentrations in samples of paint, putty, soil and water taken from the girl's home and surrounding areas showed that lead levels in the water were below detectable levels, while soil lead concentrations ranged from 11.4 to 87.5 µg/g. The levels of lead in paint samples

taken from the walls of the girl's home were high (up to 3 940 µg/g), as was the lead concentration in a paint sample taken from the classroom of the school she attended (2 601 µg/g). A subsequent medical examination revealed evidence of microcytic anaemia.

This case study illustrates the potential vulnerability to lead exposure among South African children with a pica tendency living in older housing developments, or attending schools in which lead-based paint has been used. Preliminary data from the current MRC survey indicate that around 9% of children in the Johannesburg phase of the study were ingesting paint, cigarette ends, cement, sand or other non-food items.

Given the health effects associated with even relatively low blood lead concentrations (10 µg/dl and below), including hearing loss,¹ hyperactivity, shortened concentration span, reduction in IQ, poor school performance² and the emergence of aggressive/violent behaviour,³ as well as anaemia at higher concentrations, it is important that South Africa follow the example of many other countries around the world in taking wide-ranging actions to address the preventable risk of childhood lead exposure. In respect of aspects associated with lead in paint specifically, these actions should include appropriate research and surveillance programmes to identify high-risk settings and groups, and the development and enforcement of standards for childhood blood lead levels and maximum permissible concentrations of lead in paint used in housing and school buildings, and in consumer products such as children's toys and furniture, be these locally produced or imported. Landlords should be obligated to alert prospective tenants to the presence of lead-based paint in dwellings.

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