

Evaluation of the use of oral rehydration therapy in the management of diarrhoea among children under 5: knowledge attitudes and practices of mothers/caregivers

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Abstract (Full text available online at www.tandfonline.com/ojfp)

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Introduction: Dehydration from diarrhoea and vomiting has remained a threat to the lives of children under 5 years old especially in developing countries. Oral rehydration therapy (ORT) administered by caregivers is lifesaving but evidence shows unsatisfactory implementation of this.

Methods: A descriptive cross-sectional study involving 377 systematically recruited caregivers was conducted. A face to face questionnaire was used to measure the level of ORT knowledge, attitudes, practices, and responses to diarrhoea and vomiting in children. The data collected were analysed by the use of descriptive statistics, the chi-square test, and Fisher's exact test. The main outcome measures were the level of ORT knowledge of mothers/caregivers, attitudes, practices, and responses to diarrhoea.

Results: In total, 88.3% of caregivers were biological mothers. Only 53.3% were aware of the importance of initiating ORT at home with the onset of diarrhoea, and 4% administered traditional remedies. Some 66% of the caregivers had used ORT, 18.3% knew that it prevents dehydration, and 33.7% were able to prepare a correct recipe. Knowledge and attitudes correlated with the ability to initiate ORT at home ($p = 0.0000$).

Conclusion: Unsatisfactory uptake of ORT appears to be due to caregivers' lack of knowledge concerning the perfect mixture, function, and appropriate quantity of ORT administration. Mothers have heard of ORT, but some still believe that traditional remedies are better in treating diarrhoea.

Keywords: attitudes, caregivers, knowledge, ORT, practices

Profile and management of the firework-injured hand

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Background: Numerous studies internationally highlight the devastating effects of firework-related injuries and the costs involved in treating these injuries, in addition to the calls to alter legislation to prevent these injuries from occurring. There has, however, been a paucity of research studies in the South African context that describes the complexity of the injuries sustained. The aim of this study was thus to profile the firework-injured hand and to review the management from a surgical and rehabilitation perspective.

Methods: A retrospective file audit was conducted on patients who had sustained firework injuries between 2009 and 2014 ($n = 65$) in two hospitals in KwaZulu-Natal (KZN), South Africa.

Results: The firework-injured hand has a varied profile, which appears to be dependent on the blast capacity. The thumb, index and middle fingers were predominantly affected at the level of the distal phalanges and distal interphalangeal joints resulting in amputation due to severe soft tissue injury and resultant fractures. Hand Injury Severity Scores indicated a large percentage of cases within the severe category. Medical and surgical interventions occurred within the first three to six hours post-injury and involved washout, cleaning, debridement and suturing. Formalisation of amputation was the predominant course of action. Rehabilitation was focused on assessment and hand therapy to ensure functional outcomes.

Conclusions: From this study, the authors conclude that the firework-injured hand should be managed according to the resultant diagnosis, be it an amputation, fracture, or soft tissue injury, whilst managing the symptoms of oedema, pain and stiffness, which will all impact on hand function outcomes.

Keywords: hand function, hand rehabilitation, hand therapy, soft tissue injuries, traumatic amputation

Multiple cardiovascular disease risk factors in rural Kenya: evidence from a health and demographic surveillance system using the WHO STEP-wise approach to chronic disease risk factor surveillance

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Background: To describe the distribution of obesity, hypertension, dysglycaemia and dyslipidaemia (which are risk factors for cardiovascular disease) using a Health and Demographic Surveillance System (HDSS) site in western Kenya.

Design: Descriptive cross-sectional population survey.

Setting: Webuye Health and Demographic Surveillance System (HDSS) site in western Kenya.

Participants: Persons aged 18 years and above.

Interventions: Body mass index (BMI), blood pressure levels, fasting blood sugar and fasting lipid profile.

Main outcome measures: Cardiovascular disease risk factors in a rural Kenyan population.

Results: The mean age was 44 years and 57% were female. The distribution of BMI was: mean = 20 kg/m² (range 24–36); 18.5–25 kg/m² = 57%; < 18.5 kg/m² = 35%.

Distribution of blood pressure levels: Normal in 40%; pre-hypertensive 40%; hypertension stages 1 and 2 was 13% and 8% respectively. Nearly all affected were unaware of their elevated blood pressure.

Impaired fasting glucose was found in 4.5% while 6.5% were diabetic.

Fasting serum lipid profile was normal in over 85% of the population.

Conclusions: This rural population had low BMI with 92% having a BMI below 25 kg/m² and about 20% of them being in hypertension stage 1 and 2 and nearly all unaware of it. Despite the majority having below normal BMI, it was noted that rates of hypertension increased with increasing BMI. There was significant presence of dysglycaemia but not dyslipidaemia.

Keywords: cardiovascular disease, dysglycaemia, dyslipidaemia, rural adult population, Webuye Health and Demographic Surveillance Systems site

Snakebite in north-eastern South Africa: clinical characteristics and risks for severity

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Objectives: To identify the toxicity profile of snakebites and to assess clinical severity.

Methods: An analysis of all patients admitted to Ngwelezane Hospital's Emergency Department with a diagnosis of snakebite over five years was done. All patients were admitted, assessed and standard haematological and biochemical tests were done. Patients were observed for a minimum of 12 hours' observation.

Results: In total, 879 cases were analysed. Envenomation was identified in over two-thirds of admissions. Cytotoxic snakebites accounted for 98% of envenomations. Only four cases of haemotoxic bleeding and five cases of neurotoxicity were admitted. Abnormal laboratory indices correlated with severity: INR > 1.5 (odds ratio 2.25, CI 1.12–4.53; $p = 0.023$), platelets < 100x10⁹/L (OR 2.35, CI 1.01– 5.49; $p = 0.048$), haemoglobin concentration < 8.0 g/dL (OR 5.68, CI 2.15–15.00; $p < 0.001$) and leucocyte count > 10x10⁹ (OR 3.15, CI 1.89– 5.26, $p < 0.001$). Children and delays to admission correlated to and were predictors of severity.

Conclusion: Two-thirds of patients who present to hospital with snakebite will have symptoms of envenomation, with the overwhelming majority having been bitten by cytotoxic species. Some factors correlate to severity and may be useful for anticipating the patient's clinical course.

Keywords: Snakebite, cytotoxic, neurotoxic, haemotoxic, envenomation, emergency, KwaZulu Natal

Physical activity of children from a small rural town, South Africa

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Introduction: Physical activity plays an integral role in the normal physical, mental, social and cognitive development of children. One of the main reasons for overweight children in low- and middle-income countries like South Africa is inactivity. This study's aim was to describe the physical activity measured in boys and girls from section 21, quintile 5 pre-primary and primary schools in a small rural South African town and to compare it with recommended international physical activity levels.

Method: Seventy-eight rural children, representing Caucasian and black African children, divided into three age groups, were issued a piezoelectric pedometer for seven complete days. Pedometer data obtained were total steps, aerobic steps, aerobic walking time, calories and distance. Steps per day were compared with international levels. Correlation statistics examined the association between physical activity and adiposity.

Results: Boys in the age groups 9–11 and 12–14 years are statistically more active than girls of the same age ($p = 0.005$ and 0.045 respectively). Although girls' physical activity levels tend to decrease with age, their aerobic activity levels increase with age. This group of rural children's physical activity levels are far lower than the recommended international normative levels. No correlation was found between physical activity and adiposity.

Conclusion: The pedometer data indicated that gender and age influence the activity of children. This group of rural children's physical activity is far less than international normative levels. Nine to 11-year-old boys are the most active boys, and girls of 12–14 years old are the most aerobic active girls in this study, therefore the authors concluded that, to increase physical activity, the age group 9–11 may be the ideal age to focus on for gender-specific intervention programmes.

Keywords: children, descriptive study, pedometer, physical activity, steps per day, South Africa

South African–Cuban Medical Collaboration: students' perceptions of training and perceived competence in clinical skills at a South African institution

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Background: The South African–Cuban Medical Collaboration programme aims to alleviate the critical shortage of practitioners in local South African rural settings. The students who return from Cuban-based facilities in their fourth year experience difficulty, especially in clinical settings, upon joining the MB ChB final-year student programme at the University of KwaZulu-Natal. Attempts to support their skills acquisition for local practice have led to an investigation of their prior clinical skills exposures, the curricular context and exposures in Cuba in which skills had been acquired, and students' perceptions of their competence in clinical skills.

Methods: This descriptive, cross-sectional study explored the clinical experiences of the 2013 cohort of students. Qualitative and quantitative data were collected through questionnaires that explored the curricular approach and setting of clinical skills training in Cuba, the students' exposure to clinical skills and their perceptions of their competence at performing these skills.

Results: Students experienced the Cuban curriculum as didactic and lecture intensive as opposed to the systematic, problem-based curriculum offered in South Africa. Clinical training in Cuba occurs in hospital wards while local students first train in a clinical skills laboratory prior to hospital exposures. The majority of students self-reported a lack of clinical exposure to 35 of an overall 75 core-skills list as identified by the undergraduate UKZN curriculum. In addition, they reported an inability to perform 71 of the 75 (95%) skills independently.

Conclusion: This study has highlighted a mismatch between the focus and scope of clinical training offered to students studying in Cuba and those at a South African institution.

Keywords: clinical skills, competence, Cuba, medical education, South Africa