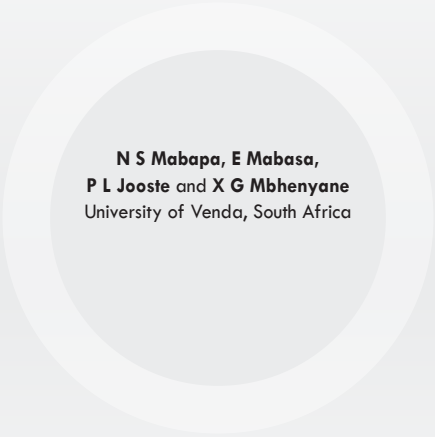


JOINT EVENT

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Iodine status of pregnant women and children age 6 to 12 years feeding from the same food basket in Mopani District, Limpopo province, South Africa

Objectives: The aim of the study was to assess the iodine status of pregnant women and children age 6 to 12 years feeding from the same food basket in Mopani District.

Design: A cross-sectional study was conducted.

Setting: The setting was primary health care clinics and households from five municipalities of Mopani District in Limpopo province.

Subjects: A total of 565 conveniently selected pregnant women and 116 children aged 6 to 12 years were recruited, of which 116 were mother-child pairs.

Methods: The demographic information, iodine nutrition knowledge and salt consumption patterns were obtained using a validated questionnaire. Spot urine, household drinking water and salt samples were collected and analyzed for iodine using standard procedures. A professional nurse, using filter paper to determine thyroid stimulating hormone (TSH) levels, collected spot finger-stick blood samples from pregnant women.

Results: The findings showed that only 52.5% of household salt had an iodine concentration level of more than and equal to 15 ppm. The median iodine concentration of household drinking water was 46.2 µg/l (interquartile range [IQR] 10.8–73.4 µg/l). The TSH levels of the majority of pregnant women were normal and the maternal overall median urinary iodine concentration (UIC) was 164 µg/l (IQR 92–291 µg/l), indicating maternal iodine sufficiency. However, median UIC in the first and third trimesters was below 150 µg/l, indicating iodine insufficiency. The UIC level of children in the study was 386 µg/l (IQR 200–525 µg/l), signifying iodine excess.

Conclusion: Iodine status of pregnant women in this study was sufficient, with UIC for children excessively high, more than two times higher than the iodine status of pregnant women. The reasons for the excessive UIC in school-age children need to be elucidated.

Biography

N S Mabapa is a Lecturer of Nutrition at the University of Venda. He has received his BSc Human Physiology at the University of Pretoria. After a few months of hard work as a student, he decided it was time for a change of scenery where he joined the University of Venda and studied BSc Honours in Community Nutrition and later on MSc. He was offered tenure in the Department of Nutrition. He has registered for PhD at the University of Cape Town which he envisages completing in 2019. He has collaborated on manuscripts with Professor M B Zimmermann and Professor P L Jooste entitled "Vitamin A supplementation in iodine-deficient African children decreases thyrotrophin stimulation of the thyroid and reduces the goiter rate" and "Treatment of iodine deficiency in school-age children increases insulin-like growth factor (IGF)-I and IGF binding protein-3 concentrations and improves somatic growth."

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