

CAN GEOPHAGIA IMPROVE MEDICAL AND NUTRITIONAL DEFICIENCIES OF GEOPHAGIC INDIVIDUALS? A CASE OF GEOPHAGIA IN EASTERN CAPE PROVINCE, SOUTH AFRICA

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Deliberate ingestion of soils (Geophagia) is widely practiced in several countries across continents including Africa (South Africa, Cameroon, Democratic Republic of Congo, Nigeria, Swaziland, Tanzania and Uganda), Asia (China, India, Guatemala, New Guinea, Philippines, and Thailand) and the Americas. The ingestion of soils and clays has never been satisfactorily understood and explained, but studies have pointed to nutrient deficiency as the main cause, especially among pregnant and lactating women. Several studies have however revealed the practice to be common in non pregnant females and a few males. The ability of the soils to satisfy the requirement of the geophagic individual is influenced by its properties. In this study a survey was carried out to investigate the reasons behind the practice of geophagia, in the Eastern Cape Province of South Africa and to appreciate the physical and chemical properties of the soils ingested in the light of the reasons advanced to justify the practice. Information on type, colour, and quantity of geophagic materials ingested, frequency of ingestion, and reason for ingestion was obtained through the administration of a questionnaire. Geophagic clayey soils were collected from different areas around the Province and their physicochemical properties (texture, pH, cation exchange capacity) and chemical properties (major and trace elements, and total carbon) determined. Results indicate geophagia to be mostly common among single women between the ages of 21 – 40. The soils eaten were described as clays, stones, soil and soft soil having a gritty, silky or powdery feel. About 20g of the preferred soil was consumed at least once a day for a variety of reasons that were mainly medical, nutritional and cultural. The soils varied in their properties with pH values of between 5 and 9, and CEC values that were indicative of the presence of primary rather than secondary clay minerals. Low total carbon content in the geophagy soils indicated that the CEC was derived mainly from the minerals contained in the soil. It is worth noting that geophagia was most common in women in their child bearing age. Contributions to the recommended dietary requirements of the geophagic individual from the ingested clay are reported. The implications of the physicochemical and chemical properties of the soil on the various reasons advanced to justify their ingestion are also discussed.

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