



POTENTIAL SOLUTIONS TO LIFESTYLE AND SOCIO-ECONOMIC INEQUALITIES AND DEALING WITH THE PREVALENCE OF NON-COMMUNICABLE DISEASES IN LOW AND MIDDLE-INCOME COMMUNITIES IN SOUTH AFRICA

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ABSTRACT

Potential solutions to lifestyle and socio-economic inequalities and dealing with the prevalence of non-communicable diseases in low and middle-income communities in South Africa.

South Africa has been undergoing a nutrition transition where micronutrient deficiencies and other forms of under-nutrition co-exist with the pervasiveness of obesity and diabetes. Such health conditions together with the emergent over-nutrition presents a complex series of challenges. What we consume, is to a large extent affected by our traditions and customs, food availability, what we can afford and preference.

The aim of the study was to develop the prototype of a 'super-food' that would promote the health status of middle and old age individuals diagnosed with diabetes. The source chosen was malted sorghum.

We interviewed 99 elderly participants over the age of 50 to get a perspective on their socio-economic, food security, health status and food preferences. We then proceeded with the development of a breakfast soft porridge using malted sorghum. Ultrahigh-performance liquid chromatography mass spectrometry (UHPLC-MS) analysis was carried out to characterize the health-promoting bioactive compound profile of the sorghum grains which had been malted. An analysis was also conducted on an already developed South African porridge which is made from malted sorghum in order to make a comparison between the two products.

Results indicated that our prototype had a slightly higher protein content (10.96) than the established brand (10.87). Total fat was higher (3.58) in the established brand, compared to the prototype (2.48). Dietary fibre was much higher (22.45) in the prototype than the established brand (16.28).

Results suggest that the malted sorghum would make a good source of nutrition for individuals suffering from NCDs. Product fortification through the addition of plant-based products that would further increase the nutritional value of the prototype.

Keywords: Noncommunicable diseases, sorghum, dietary habits, elderly nutrition,

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