

**DEVELOPMENT OF A
FOOD PRODUCT CONCEPT FORMULATION FRAMEWORK
FOR LOW-INCOME CONSUMERS
IN URBANISED INFORMAL SETTLEMENTS
IN GAUTENG SOUTH AFRICA**

by

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DECLARATION OF ORIGINAL AUTHORSHIP

I declare that the thesis, which I hereby submit for the degree PhD Consumer Science at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

.....

SS Duvenage

.....

Date

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DEDICATION

For those who are in need...

To those who can make a difference...

In dedication to HIM who IS.

SUMMARY

DEVELOPMENT OF A FOOD PRODUCT CONCEPT FORMULATION FRAMEWORK FOR LOW-INCOME CONSUMERS IN URBANISED INFORMAL SETTLEMENTS IN GAUTENG SOUTH AFRICA

by

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Department: Consumer Science

Degree: PhD Consumer Science

A dearth of information was found to guide food product formulation for low-income consumers. The political change in South Africa and neighbouring countries and the accompanying influx to economic centres, resulted in the unprecedented growth of urbanised informal settlements. These communities, accommodating the poorest of the poor and experiencing a high prevalence of nutritional devastation, indicated a merited project opportunity. The purpose of the study was to develop a food product formulation framework for low-income consumers living in urbanised informal settlements in South Africa. The unique contribution of this approach is based on the depiction of the food product attribute (concept) needs perceived as most important by these respondents during purchasing choice of their staple food, maize meal.

The study comprised five sub-objectives, executed in three phases.

The concepts required by low-income consumers were identified, selected and organised through a baseline survey in an informal settlement (n = 60). Satiety value, affordability, packaging size, value for money and taste were identified, in sequence, as the most important design parameters for the framework. The food industry (n = 17) indicated affordability, nutrient content, taste and product quality as the food product attributes of most importance during food product development, indicating a discrepancy.

Phase 2 of this study consisted of two parallel approaches, comprising an extended survey to validate the suggested design parameters in the target market against an established product

maize meal) (quantitative approach) and the description of the identified concepts to reveal embedded elements to clarify terminology use (qualitative approach). Three informal (n = 401) and one formal (n = 101) settlement were involved.

All groups agreed regarding the need for satiety value, product acceptability, convenience and the influence of household factors. Consumers from the informal settlements identified satiety value and affordability as of highest importance, followed by taste. Appearance, product quality, texture, product safety/ shelf life, brand loyalty and nutrient content were indicated as less important, prioritising concepts linked to survival during severely constrained economic conditions. Consumers living in the urbanised formal settlement, identified taste as the key concept.

Focus group discussions revealed no differences in the meaning ascribed to terminology, although perceptions reflected the variance in income level. The identified concept elements revealed the interlinked nature of satiety value and affordability. Differences in the understanding of concepts between these consumers and literature, were revealed.

Concepts to consider when developing food products for low-income consumers were identified as satiety value, affordability, taste, product acceptability, convenience/ ease of preparation, household influence, appearance, value for money, product quality, packaging size, texture, product safety/ shelf life, brand loyalty and nutrient content, in the stated sequence. A framework was proposed. However, from a humanitarian point of view, nutrient content cannot be ignored by the food industry.

As the key to market success lies in the potential of a product to find solutions relating to its physical nature, as well as in the use and advantages of the product, the results of this research project have great application value.

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LIST OF ABBREVIATIONS, ACRONYMS AND SYMBOLS

AI	Average Intake
BFAP	Bureau for Food and Agricultural Policy
CA	Consumers' Association
ed	Edition
Ed	Editor
Eds	Editors
e.g.	Exempli gratia (for example)
EUFIC	European Food Information Council
FAO	Food and Agriculture Organisation of the United Nations
FF	Farm Foundation
g	Gram
GAIN	Global Agriculture Information Network
IDA	International Development Association
JRF	Joseph Rowntree Foundation
kJ	KiloJoules
RDA	Recommended Daily Allowance
SU-LSM	Universal Living Standard Measure
MTech	Magister Technologiae (Master's degree in Technology)
n	Number
NFCS	National Food Consumption Survey
NFCS-FB-1	National Food Consumption Survey Fortification Baseline South Africa
PhD	Philosophiae Doctor (Doctor of Philosophy)
PIR	Poverty and Inequality Report
RSA	Republic of South Africa
SAARF	South African Advertising Research Foundation
SSA	Statistics South Africa
UNICEF	United Nations Children's Fund
URL	Universal Resource Locator
USAID	United States Agency for International Development
US\$	United States of America Dollar
vs.	Versus
WHO	World Health Organisation
WWW	World Wide Web
ZAR	South African Rand
≈	Almost equal to



&	Ampersand (and)
>	Greater than
\geq	Greater than or equal to
<	Less than
\leq	Less than or equal to
%	Percentage
§	Section