

**DEVELOPMENT OF MATERNITY WEAR SIZE CHARTS FOR 19 TO 45
YEARS OLD IN KENYA: A CONCEPTUAL FRAMEWORK FOR
APPAREL MANUFACTURING**

NELIMA ZIPPORAH BARASA (MSc; FDM)

H87/39748/2016



**A RESEARCH THESIS SUBMITTED IN FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY
(FASHION DESIGN AND MARKETING), TO THE SCHOOL OF LAW,
ARTS, AND SOCIAL SCIENCES OF KENYATTA UNIVERSITY**

JUNE 2024

DECLARATION

This is my original work and has not been presented for a degree in any other University, or for any other award.

Signature 

Date 25/06/2024

Nelima Zipporah Barasa

H87/39748/2016

Department of Fashion Design and Marketing

SUPERVISORS

This thesis has been submitted for review with our approval as university supervisors:

1. Signature 

Date 25/6/2024

Rose Bujehela Otieno (PhD)

Department of Fashion Design and Marketing

Kenyatta University

2. Signature 

Date 28/6/2024

Lydia Nkatha Kinuthia (PhD)

Department of Textiles and Technology

Kirinyaga University

ABSTRACT

This study addresses the critical issue of inadequacy in current maternity wear size charts and apparel manufacturing frameworks to meet the specific needs of pregnant women in Kenya. Challenges persist in producing garments that accurately fit the body shapes of this specific demographic, as pregnant women in Kenya undergo bodily changes influenced by various cultural, regional, and ethnic factors. Yet, the lack of updated anthropometric data and size charts tailored to reflect these diverse needs poses a significant obstacle. Preliminary studies have highlighted the absence of an anthropometric database and size chart specifically designed for Kenyan pregnant women, leading to dissatisfaction with maternity wear fit among many clients. The study aims to develop tailored size charts that accurately represent the body sizes and shapes of Kenyan women aged 19 to 45 during pregnancy and establish a conceptual framework for maternity apparel manufacturing that considers their unique needs and preferences. The specific objectives of this study included identifying coding systems currently in use for maternity apparel manufacturing, collecting views of fashion designers and merchandisers of maternity wear on the utilization of body measurement charts in maternity clothing manufacturing, collecting body measurement data for pregnant women in trimesters two and three, developing body measurement tables to be used in generating maternity wear size charts, determining key dimensions for generation of maternity wear size charts, generating maternity wear size charts for Kenyan pregnant women aged 19 to 45 years, and developing a conceptual framework for maternity wear manufacturing sector in Kenya. The research design employed a longitudinal approach spanning four months to track and collect anthropometric data across various stages of pregnancy, focusing on Nairobi County as the study location. Convenient sampling methods were used to select pregnant women aged 19 to 45 in trimesters two and three and attending antenatal clinics at the public health facilities in Nairobi County, resulting in a sample size of 600 women. The study employed systematic and purposive sampling techniques to ensure a representative sample of the public health facilities in Nairobi County. Measurement lists, self-administered questionnaires and semi-structured interviews were used to collect data from pregnant women, 30 fashion designers, and two stakeholders from KEBS and KAM. A pre-test was conducted on 15 participants attending antenatal clinics at hospitals, health centres, and dispensaries, five fashion designers, and one respondent each from KAM and KEBS. Statistical analysis, using SPSS and Pearson's correlation coefficient analysis, was conducted to determine key dimensions and generate size charts. A total of 6 pairs of pants and bodices in sizes 10 to 18 were produced for fit testing to validate the size charts. Findings reveal the significance of demographic characteristics in defining body shape and size, the effectiveness of alphanumeric size coding systems, and mixed perspectives among manufacturers regarding the use of size charts. The developed size charts, guided by comprehensive body measurement data, offer improved fitting and comfort for Kenyan pregnant women. Fit testing with live models confirms the practical application of the size charts, while the conceptual framework provides a structured approach to maternity apparel manufacturing. The study's findings contribute to advancing knowledge in maternity wear sizing charts and provide essential tools for designers, manufacturers, consumers, and stakeholders to improve the fit, comfort, and satisfaction of maternity wear for Kenyan women. Recommendations for further research, policy development, and practice improvement are provided to address existing gaps and enhance the maternity apparel industry in Kenya.