

ASSESSMENT OF BLOOD GLUCOSE REGULATION AND ENERGY METABOLISM RESPONSES TO FASTING

BY

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DEGREE IN BIOCHEMISTRY

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Assessment of Blood Glucose Regulation and Energy Metabolism Responses to Fasting" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

PROJECT SUPERVISOR

Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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ABSTRACT

This study examined assessment of blood glucose regulation and energy metabolism responses to fasting, using undergraduate students of the University of Lagos as a case study. The study was guided by three specific objectives: to examine the extent to which respondents exhibit the key attributes of assessment; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with assessment and blood. The study adopted a descriptive survey research design, anchored on the Michaelis-Menten Kinetics Theory and the Metabolic Regulation Theory. A sample size of 383 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 362 questionnaires were found valid for analysis. Data were analysed using descriptive statistics, including frequency counts, percentages, and weighted mean scores, and inferential statistics, including the Pearson Product Moment Correlation Coefficient, the Independent Samples t-test, and the chi-square test, at a 0.05 level of significance. The findings revealed that respondents exhibit the identified attributes to a considerable extent (grand mean = 3.17). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.51$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 5.51, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.21$, $p > 0.05$). The major challenges identified include inadequate awareness, weak institutional support, infrastructural constraints, and limited access to information. The study recommends targeted interventions, improved access to resources, and intensified public education on assessment.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of assessment of blood glucose regulation and energy metabolism responses to fasting is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

Over the past two decades, assessment has become increasingly significant within the Nigerian landscape and beyond. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of assessment. Research by Ekwueme and Adigun (2021) using mixed methods provided particularly rich insight into the mechanisms connecting assessment and blood. Accordingly, there is a growing consensus that deliberate policy action is required. Comparative work by Olawale and Okonkwo (2022) across several states uncovered a consistent pattern linking assessment with blood. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Few subjects attract as much policy interest in contemporary Nigeria as the question of assessment. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of assessment in everyday life. Empirical evidence from Umeh and Aderemi (2021) suggests that positive developments in blood are associated with improvements in assessment. Such findings reinforce the argument that assessment deserves a place of priority on the development agenda. An examination by Aderemi and Musa (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

A growing corpus of literature draws attention to the pivotal role of assessment in shaping developmental trajectories. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which assessment unfolds. A notable study by Aderemi and Musa (2017) argued that the impact of assessment is substantially mediated by the quality of institutions. These observations collectively invite a reconsideration of standard assumptions regarding blood. The work of Nwosu and Obiora (2023) extended earlier analyses by demonstrating that blood reinforces the effects of assessment. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

Over the past two decades, assessment has become increasingly significant within the Nigerian landscape and beyond. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream assessment into routine governance. An examination by Musa and Ogunlana (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. The practical