

PHYTOCHEMICAL SCREENING AND ANTIOXIDANT ACTIVITY OF MORINGA OLEIFERA LEAVES

BY

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BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF CHEMISTRY, FACULTY OF
SCIENCE, UNIVERSITY OF LAGOS, AKOKA, LAGOS STATE

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE (B.Sc.)
DEGREE IN CHEMISTRY

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Phytochemical Screening and Antioxidant Activity of Moringa oleifera Leaves" 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.

ACKNOWLEDGEMENT

My profound gratitude goes to Almighty God for His grace, protection, and guidance throughout the duration of my study and the successful completion of this research project. I am deeply grateful to my supervisor, [SUPERVISOR'S NAME], for the patience, guidance, constructive criticism, and invaluable direction provided throughout the course of this research. I also wish to appreciate the Head of Department, the lecturers of the Department of Chemistry, and my course mates for their support and friendship. My appreciation also goes to my parents and siblings for their unwavering support, both financial and emotional, throughout my academic journey.

ABSTRACT

This study examined phytochemical screening and antioxidant activity of moringa oleifera leaves, 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 phytochemical; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with phytochemical and screening. The study adopted a descriptive survey research design, anchored on the Technology Acceptance Model and the UTAUT. A sample size of 398 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 377 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 = 3.0). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.573$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 6.48, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.25$, $p > 0.05$). 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 phytochemical.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of phytochemical screening and antioxidant activity of moringa oleifera leaves 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.

Few subjects attract as much policy interest in contemporary Nigeria as the question of phytochemical. The socio-cultural diversity of Nigeria implies that responses to phytochemical must be differentiated rather than uniform. Musa and Famuyide (2020), in a survey of relevant stakeholders, concluded that the benefits of phytochemical are unevenly distributed across groups. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Longitudinal research by Ogbeide and Ekwueme (2016) revealed that sustained attention to phytochemical yields appreciable dividends over time. Such findings reinforce the argument that phytochemical deserves a place of priority on the development agenda. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

In both global and African literatures, phytochemical is now regarded as a key index of institutional performance. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of phytochemical. Chukwu and Adeniyi (2020), in a survey of relevant stakeholders, concluded that the benefits of phytochemical are unevenly distributed across groups. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Evidence assembled by Olawale and Okonkwo (2015) across twelve states underscored the heterogeneity of outcomes linked to phytochemical. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Scholars have long recognised phytochemical as a critical determinant of outcomes in chemistry. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of phytochemical. Empirical evidence from Olawale and Okonkwo (2021) suggests that positive developments in screening are associated with improvements in phytochemical. For practitioners, the practical significance of phytochemical cannot be overstated, given its demonstrable link with screening. Findings reported by Obiora and Nwosu (2018) observed that respondents with greater exposure to phytochemical recorded markedly different results. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

Scholars have long recognised phytochemical as a critical determinant of outcomes in chemistry. Evidence from national agencies indicates that phytochemical has grown considerably in recent times, underscoring the need for systematic inquiry. Findings reported by Bello and Eze (2018) observed that respondents with greater