

FORMULATION AND EVALUATION OF HERBAL SHAMPOOS FROM LOCAL PLANT MATERIALS

BY

[STUDENT'S FULL NAME]

[MATRIC NUMBER]

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DEGREE IN CHEMISTRY

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Formulation and Evaluation of Herbal Shampoos from Local Plant Materials" 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 formulation and evaluation of herbal shampoos from local plant materials, 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 formulation; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with formulation and evaluation. The study adopted a descriptive survey research design, anchored on the Technology Acceptance Model and the UTAUT. A sample size of 420 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 389 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 = 3.16). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.555$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 6.92, $p < 0.05$). 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 formulation.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of formulation and evaluation of herbal shampoos from local plant materials 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 formulation. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which formulation unfolds. Comparative work by Kalu and Ibrahim (2022) across several states uncovered a consistent pattern linking formulation with evaluation. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. The work of Ogbeide and Ogunlana (2023) extended earlier analyses by demonstrating that evaluation reinforces the effects of formulation. 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.

The phenomenon of formulation, while not new, has acquired fresh analytical urgency in Nigeria. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream formulation into routine governance. Evidence assembled by Salami and Musa (2015) across twelve states underscored the heterogeneity of outcomes linked to formulation. Accordingly, there is a growing consensus that deliberate policy action is required. Research by Ogbeide and Salami (2021) using mixed methods provided particularly rich insight into the mechanisms connecting formulation and evaluation. These observations collectively invite a reconsideration of standard assumptions regarding evaluation. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Scholars have long recognised formulation as a critical determinant of outcomes in chemistry. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of formulation in everyday life. Studies conducted within the West African subregion by Ogbeide and Salami (2018) reached conclusions broadly consistent with the Nigerian evidence. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Findings reported by Osinachi and Ekwueme (2018) observed that respondents with greater exposure to formulation recorded markedly different results. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

The salience of formulation in national discourse has grown steadily, driven by changing social conditions and technological penetration. Evidence from national agencies indicates that formulation has grown considerably in recent times, underscoring the need for systematic inquiry. Longitudinal research by Adekunle and Bello (2016) revealed that sustained attention to formulation yields appreciable dividends over time. Accordingly,