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**THE ROLE OF PHYSICIANS' LIFESTYLE  
COUNSELLING ON PATIENT CHOICES OF  
PREVENTIVE HEALTH MEASURES IN NIGERIA**

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## SUMMARY

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### THE ROLE OF PHYSICIANS' LIFESTYLE COUNSELLING ON PATIENT CHOICES OF PREVENTIVE HEALTH MEASURES IN NIGERIA

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**Aim:** To explore the role of general practitioners in promoting lifestyle changes of patients' choices in Nigeria.

**Objectives:** 1. To evaluate the opinions of patients about the current practices of physicians in general practice (GPs) in lifestyle counselling of outpatients; 2. To assess the measures of lifestyle changes taken by patients after GPs counselling about lifestyle changes; 3. To identify and analyse the challenges faced by patients integrating lifestyle changes into their daily lives.

**Methods:** A cross-sectional study was conducted in St. David Hospital Ibadan Nigeria, focusing on outpatients. A convenient sampling was employed. The study utilized a structured questionnaire. The data collected were analyzed using the SPSS statistical program. Standard statistical analysis methods were applied.

**Results:** 41.5% of the 325 outpatients held a positive opinion about the lifestyle counselling provided by their GPs. 64.3% of respondents reported that they did not receive any lifestyle counselling; 67.4% found the advice unclear and 63.7% felt that their GP did not adequately listen to their concerns. 74.5% of patients did not make any changes in their lifestyle following counselling. Only 25.5% reported making minor changes in diet, regular exercise, sleep. Factors such as marital status, religion, urban versus rural residence, educational level, employment status, and monthly income were significantly linked to how patients perceived GP counselling ( $p < 0.05$ ). In a model predicting behaviour, patients with a positive opinion were 49.47 times more likely (AOR = 49.47,  $p < 0.001$ ) to report significant lifestyle modifications compared to those with negative opinions. A significant portion of patients faced challenges with sustaining lifestyle changes due to psychological barriers like stress and limited support.

**Conclusion:** Many patients held negative opinions about the GP's lifestyle counselling. Common concerns included unclear advice, limited listening from doctors, and a lack of follow-up support. Patients with a positive opinion of their GP's counselling were more likely to adopt meaningful lifestyle changes, while elder age and lower income affected how easily patients could apply these changes in daily life. The study results highlight the importance of patients' positive attitudes towards

physician consultations in order to encourage lifestyle changes. Improving the quality of counselling and addressing personal and socioeconomic barriers can help strengthen the role of physicians in promoting preventive health behaviors in Nigeria.

**Keywords:** Lifestyle Counselling, Preventive Health, Patient Choices, Nigeria.

## SANTRAUKA

Taikomoji visuomenės sveikata

GYDYTOJŲ GYVENSENOS KONSULTAVIMO VAIDMUO PACIENTŲ PREVCINIŲ SVEIKATOS PRIEMONIŲ PASIRINKIMUOSE NIGERIOJE

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**Įvadas:** Vienas pagrindinių šeimos medicinos tikslų – pirmenybę teikti prevencinei medicinai, o ne gydomajam gydymui. Gydytojų rekomendacijos – ypač dažnos ir nuoseklios – gali turėti įtakos pacientų sprendimams dėl gyvenimo būdo pokyčių, tokių kaip rūkymo atsisakymas, fizinio aktyvumo laisvalaikio didinimas ar sveikesnių mitybos įpročių formavimas.

**Tyrimo tikslas:** Išanalizuoti bendrosios praktikos gydytojų vaidmenį skatinant pacientų gyvenimo būdo pokyčius Nigerijoje.

**Uždaviniai:** 1. Įvertinti pacientų nuomonę apie esamą bendrosios praktikos gydytojų (BPG) praktiką konsultuojant pacientus gyvenimo būdo klausimais; 2. Įvertinti pacientų taikomas gyvenimo būdo keitimo priemones po gydytojų konsultacijų; 3. Nustatyti ir išanalizuoti pacientų patiriamus sunkumus integruojant gyvenimo būdo pokyčius į kasdienį gyvenimą.

**Metodai:** Atliktas epidemiologinis stebėjimo momentinis tyrimas Šv. Davido ligoninėje, Ibadane, Nigerijoje, orientuojantis į ambulatorinius pacientus. Naudotas patogus atrankos metodas – dalyviai buvo pasirinkti pagal jų prieinamumą ir norą dalyvauti. Tyrimui naudotas struktūrizuotas klausimynas. Surinkti duomenys buvo analizuojami naudojant SPSS statistinę programą. Taikytos standartinės statistinės analizės priemonės.

**Rezultatai:** 41,5% iš 325 ambulatoriškai besikreipiančių pacientų teigiamai įvertino šeimos gydytojų teikiamas gyvenimo būdo konsultacijas. 64,3% respondentų nurodė, kad negavo gyvensenos keitimo konsultacijų; 67,4 % respondentų nuomone, patarimas buvo neaiškus, o 63,7 % manė, kad jų šeimos gydytojas nepakankamai juos išklausė. 74,5% pacientų po konsultacijos savo gyvensenos nepakeitė. Tik 25,5% pranešė atlikę nedidelius mitybos, reguliarių mankštų ir miego pokyčius. Tokie veiksniai kaip šeimyninė padėtis, religija, gyvenamoji vieta mieste ir kaime, išsilavinimo lygis, užimtumo statusas ir mėnesinės pajamos buvo reikšmingai susiję su tuo, kaip pacientai suvokė šeimos gydytojo konsultavimą ( $p < 0,05$ ). Pagal modelį, prognozuojantį elgesį, pacientai, turėję teigiamą nuomonę apie gydytojo konsultacijas, 49,47 karto dažniau (AOR = 49,47,  $p < 0,001$ ) buvo linkę į reikšmingus gyvenimo būdo pokyčius, palyginti su pacientais, kurių nuomonė buvo neigiama. Nemažai pacientų

turėjo iššūkių išlaikyti gyvensenos pokyčius dėl psichologinių kliūčių, tokių kaip stresas, ir ribota pagalba.

**Išvada:** Daugelis pacientų neigiamai vertino bendrosios praktikos gydytojo teiktus patarimus dėl gyvensenos. Teigė, jog patarimai buvo neaiškūs, gydytojai menkai išgirdo pacientus, ir trūko tolesnės pagalbos. Pacientai, turintys teigiamą nuomonę apie savo šeimos gydytojo konsultacijas, buvo labiau linkę priimti reikšmingus gyvensenos pokyčius, o vyresnis amžius ir mažesnės pajamos turėjo įtakos, ar lengvai pacientai gali pritaikyti šiuos pokyčius kasdieniame gyvenime. Tyrimo rezultatai pabrėžia teigiamo pacientų požiūrio į gydytojų konsultacijas svarbą, siekiant paskatinti keisti gyvenimo būdą. Konsultavimo kokybės gerinimas, asmeninių bei socialinių ir ekonominių kliūčių šalinimas gali padėti sustiprinti gydytojų vaidmenį skatinant prevenciją Nigerijoje.

**Raktažodžiai:** Gyvensenos konsultavimas, prevencinė sveikata, pacientų pasirinkimai, Nigerija.

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## **ABBREVIATIONS AND CONCEPT**

CVD – cardiovascular disease

GP – General Practitioner

HCP – Healthcare Professionals

LTPA – leisure-time physical activity

NCDs – non-communicable diseases

SDM – shared decision-making

WHO – World Health Organization

# INTRODUCTION

## Research problem

Preventive care delivery is not up to par on a global scale, despite numerous efforts to improve the issue. Information transfer, learning through social influence (e.g., quality circles), feedback, prompts and reminders, organizational change, and financial or regulatory action are some of the available forms of intervention. Changes in the way preventative care is delivered are often minor to moderate, even though most are helpful in certain circumstances [1].

Although studies have consistently shown discrepancies between evidence-based preventive care recommendations and general practitioners' preventive care practices, these recommendations are not well established. Relatively few research has examined the viewpoints of patients on factors influencing the provision of preventive care, compared to the numerous studies that have examined these aspects from the standpoint of practitioners [2].

The impact of lifestyle counselling by doctors on patients' decisions to adopt preventive healthcare practices is not well studied in Nigeria. Consequently, the goal of this study was to evaluate how general practitioners in Nigeria contribute to patients' decisions to improve their lifestyles.

## Relevance of the Study

Preventive medicine should take precedence over remedial treatment, according to one of the core goals of family practice. Within the healthcare system, primary health care is essential. It is essential for the success of the overall healthcare system, including the prevention and promotion of non-communicable diseases (NCDs) [3]. Primary healthcare facilities serve as a patient's initial point of contact with the medical system; as such, they should be the sites of health education, which is crucial for both promoting and preventing illness as well as having a significant influence on the effectiveness of restorative treatment [4, 5].

The goal of health education, as a process that entails learning new health protection skills and knowledge, is to alter behaviors. It aims to boost motivation or help a patient feel more confident in themselves in addition to giving them the knowledge they need. An informed patient will engage in the preventative and treatment process more successfully [6]. In addition to treating patients clinically for pre-existing conditions, doctors should take the necessary actions to encourage patients to modify their health-related behaviours. These include identifying their patients' health requirements through

dialogue, recommending healthy lifestyle choices, highlighting healthy habits, and offering support and follow-up on the adjustments [7].

Patients' decisions about changing their lifestyles, such as giving up smoking, increasing their level of leisure-time physical activity (LTPA), and adopting healthier eating habits, can be influenced by General Practitioners (GPs) frequent and thorough recommendations [1]. GPs view the prevention of chronic diseases and health promotion as crucial facets of their profession [8, 6]. They do, however, observe challenges with their execution, such as a lack of resources and time. Furthermore, general practitioners are becoming increasingly concerned that preventative actions might not have the desired effects. However, many working doctors find it challenging to address lifestyle habits, thus more regular counselling is required. However, this can be challenging for a variety of reasons [9].

### **Scientific Novelty**

This study sets a precedent by focusing on the impact of general practitioners' lifestyle counselling in a Nigerian context, a setting that remains underrepresented in the global preventive care literature. Unlike previous studies that primarily emphasize evidence-based recommendations or focus on high-income settings [3, 4], this research employs a robust cross-sectional design to quantitatively assess not only patient perceptions but also the measurable lifestyle changes that follow GP counselling. By integrating socioeconomic and cultural variables into the analysis, the study provides a nuanced understanding of how factors such as income, education, and urban–rural residence mediate the effectiveness of counselling, which are aspects that have been hinted at in earlier works but rarely examined in depth locally. Moreover, by comparing patient-reported outcomes with established global trends in preventive health practices, this thesis offers valuable context-specific insights which can guide tailored interventions and policymaking in Nigeria, thereby advancing the literature on effective translational health strategies.

### **Practical Significance**

Primary care in Nigeria is still developing, therefore, an urgent demand exists for better solutions [10]. Research is required to pinpoint the precise elements influencing patients' decision to choose preventive health measures, as there is a dearth of information on doctors' lifestyle advising on these measures. It would be beneficial to comprehend the role of physicians' lifestyle counselling on patient choices of preventive health measures in Nigeria and see how the role of physicians in lifestyle counselling can affect patients' choice of preventive health measure to evaluate a potential introduction of some of the most well-known solutions in Nigeria. The study would give the health directorates as well as other important stakeholders in the Nigerian Health Service a thorough understanding and useful information on the role of physicians' lifestyle counselling on patients'

choices of preventive health measures in Nigeria. This could lead to more discussion on the necessary adjustments to improve preventive health measures in Nigeria's healthcare system.

### **Author's Contribution**

The author reviewed literature on the impact of lifestyle counselling by doctors on patients' decisions to adopt preventive health measures in Nigeria. A thorough assessment of the literature was conducted with a primary focus on definitions, concepts, theoretical and empirical studies from various research projects about the role of lifestyle counselling by physicians. Also, analysis of studies on the difficulties patients had incorporating new lifestyle choices into their everyday routines was done. Moreover, a questionnaire was designed by the author to explore the role of general practitioners in promoting lifestyle changes of patients' choices in Nigeria.

After securing ethical clearance from the Bioethics Committee, the study was organized and conducted in St. David hospital, Ibadan, Nigeria, ensuring that all aspects of the research adhered to strict ethical guidelines. The author oversaw the recruitment of participants, managed data collection in a systematic manner, and ensured the reliability of the gathered information. Subsequently, all data were carefully entered into a computer database, where they were rigorously processed for statistical analysis. Using advanced techniques, including chi-square tests and logistic regression, the author identified significant associations between patient characteristics, their responses to counselling, and the degree of lifestyle change.

Finally, the author synthesized the results and conclusions into the master thesis, effectively summarizing the findings and providing practical recommendations for enhancing the effectiveness of lifestyle counselling in preventive health practices.

## **AIM AND OBJECTIVES OF THE STUDY**

**Aim:** To explore the role of general practitioners in promoting lifestyle changes of patients' choices in Nigeria.

**Objectives:**

1. To evaluate the opinions of patients about the current practices of physicians in general practice (GPs) in lifestyle counselling of outpatients.
2. To assess the measures of lifestyle changes taken by patients after GPs counselling about lifestyle changes.
3. To identify and analyse the challenges faced by patients integrating lifestyle changes into their daily lives.

# 1. LITERATURE REVIEW

## 1.1 Patient opinions about current practices in lifestyle counselling in general practice

Research indicates that general practitioners (GPs) view lifestyle counselling as challenging, patients describe it as hurried and insensitive, and patient compliance is poor [11]. These findings highlight the difficulties associated with providing lifestyle counselling in general practice. The literature on the best ways to perform general practitioner counselling is lacking [12], notwithstanding, it is well known that patient compliance can be affected by behavioral and psychological techniques, a positive doctor-patient relationship, value-focused care, and patient centered medicine (PCM) [13, 14].

Recent qualitative studies have explored how patients perceive lifestyle counselling delivered by GPs. Wermeling et al. [1] investigated the views of type 2 diabetes patients regarding weight management and lifestyle counselling in general practice. Many patients expressed that while they valued the advice given, the counselling was often brief and insufficiently personalized. They felt that an empathetic, tailored approach was needed to address their individual circumstances effectively.

Patients' opinions regarding their own compliance are raised via shared decision-making (SDM), an integral component of PCM [15]. Patients in SDM value participation in the decision-making process [16]. A key component of SDM is deliberation [17]. In his theory of communicative activity, Habermas provides a thorough explanation of a deliberative process [18]. He places a strong emphasis on polite discourse that aims to achieve mutual understanding through well-supported claims from the social, objective, and subjective domains of existence. Decisions can be grounded in patients' experiential worlds and implicit value systems when reasons for action are made clear. This helps patients communicate their values and norms and enhances the possibility of connecting with what is deemed to be good and right [18].

Similarly, researchers examined the knowledge, practices, and expectations of patients attending government outpatient clinics in Hong Kong. They reported that patients generally anticipated more proactive and detailed preventive care discussions, yet actual encounters sometimes fell short of these expectations [2]. In addition, older individuals in Turkey valued health promotion efforts when GPs provided a trusting relationship and invested time in understanding their individual life context [7]. These studies suggest that there is room for improvement in the way GPs deliver lifestyle counselling so that it better aligns with patients' needs and expectations.

Habermas's theory has been demonstrated to have possible relevance for lifestyle counselling in general practice by wit in earlier publications through theoretical considerations and consultation

analyses [18]. In an era of personalized norms and values, it is crucial to intentionally consider these matters, as they are fundamental to developing internal drive. Expanded autonomy and a greater understanding that leads to realistic goals and a sense of challenges as manageable can be achieved by patients using a deliberative paradigm [19, 20].

Recent qualitative research underscores that effective lifestyle counselling in general practice is viewed by patients as a long-term, partnership-based process rather than a single, isolated encounter. Lönnberg et al. [11] emphasize that building a sustainable relationship between patients and health care providers is essential for lifestyle counselling to succeed over time. This perspective is echoed in studies targeting specific patient groups.

For instance, type 2 diabetes patients have reported that while they value receiving lifestyle advice from their GPs, they often feel that such counselling is too brief or not sufficiently individualized [19]. In addition, older patients appear to have distinct expectations regarding the role of their family doctor in health promotion; these patients perceive the family doctor as a key figure in initiating and maintaining preventive health behaviors [20]. Moreover, cross-national insights indicate that patients in both the United States and Sweden appreciate lifestyle counselling but frequently find a gap between their expectations and the reality of how counselling is delivered in routine practice [18].

In terms of the strict self-control needed to stick to a diabetes-adjusted diet, participants indicated the point at which they no longer followed their general practitioners' advice. They insisted on certain pleasures that, in the context of lifestyle counselling, were non-negotiable since they were shaped and reinforced by the numerous variances in their backgrounds. Although empowerment studies advise general practitioners to respect their patients' priorities, this may not always be easy to do [21].

In conclusion, many patients report that the counselling is often too brief, lacks personalization, and fails to fully address their health concerns. The literature emphasizes that effective counselling should incorporate patient-centred communication and shared decision-making to better connect with individual needs and improve adherence. Overall, there is a clear call for more empathetic and dynamic dialogue between doctors and patients.

## 1.2 Measures of lifestyle changes taken by patients after GPs counselling about lifestyle changes

Patients consider GPs as the most reliable source of health information [22], which is why lifestyle counselling provided by GPs is crucial and appears to be more successful than counselling provided by a health coach or expertise [23]. An effective behaviourally informed, opportunistic 30-second weight-loss intervention can currently be provided by GPs, according to a British study [24]. Studies, however, indicate that general practitioners' counselling techniques differ greatly from one another. As it is not included in standard procedures, lifestyle behaviours are usually only mentioned in a small percentage of sessions. There is variance in the kinds of health behaviours that general practitioners discuss as well as in the components or techniques of lifestyle counselling that the GP employs while providing lifestyle counselling [25].

Literature indicates that when physicians adopt evidence-based counselling practices, such as motivational interviewing, patients are more likely to report measurable lifestyle changes. A systematic review and meta-analysis on motivational interviewing in medical settings found that this technique can increase patient engagement and lead to improvements in dietary habits, physical activity, and weight management. Although the direct measurement of lifestyle changes in outpatient settings varies, studies have indicated that counselling which actively involves patients can foster self-management behaviors [4].

For instance, Znyk et al. [6] identified predictors associated with healthy lifestyle counselling by GPs that correlated with patients' subsequent implementation of healthier practices. In more specialized care, such as for patients with polycystic ovary syndrome, adherence to integrated treatment recommendations that include lifestyle changes has been shown to improve metabolic outcomes [5, 8]. Together, these findings underline the potential for well-executed counselling to translate into real-world lifestyle improvements.

The Dutch College of General Practitioners asserts that GPs play a critical consultative and signalling role in encouraging patients' lifestyle choices. However, there is a lot of heterogeneity among general practitioners on how and how often these principles are implemented, owing to factors like perceived counselling efficacy and lack of time and resources [26]. Therefore, behavioural variables of lifestyle counselling, such as GPs' attitudes towards lifestyle counselling and their perceptions of the facilitators and barriers to lifestyle counselling, can account for the heterogeneity in GPs' counselling practices [22, 23]. GPs sometimes cite low patient motivation, perceived inadequacy in discussing lifestyle, time constraints, reimbursement challenges, and other factors as obstacles [26].

Several studies have explored the extent to which structured counselling in general practice can lead to actual lifestyle modifications. A systematic review that highlighted the role of primary care practice nurses acting as case managers in weight management; their work suggests that when counselling is organized and continuous, positive behavioral changes (such as improved dietary habits and increased physical activity) often follow [13]. Complementary findings in a critical review indicate that nutrition and physical activity guidance practices in general practice can indeed facilitate observable improvements in patients' health behaviors when the counselling is systematically implemented [15].

Healthcare systems in the western world persist in relegating disease prevention to a secondary priority, although several cogent statements and legislative initiatives highlighting its significance and the increasing evidence of its economic advantages. The assessment of the Ottawa Charter two decades post-approval in 1986 yielded a disheartening outcome. The assessment indicated a necessity to involve individuals and communities, along with their representatives, to alter public opinion and political decisions concerning health system functions, emphasizing increased focus and investment in prevention and population health interventions [27].

There is evidence that structured and supportive counselling in primary care settings can translate into measurable lifestyle changes. For example, Aveyard et al. [24] demonstrated in a randomized trial that screening and brief interventions for obesity delivered by GPs can lead to improvements in patient weight management. In addition, physicians' own healthy practices positively influence patient behavior, suggesting that when GPs model healthy lifestyles, patients are more likely to adopt similar changes. Collectively, these studies support the notion that concrete, well-designed interventions following lifestyle counselling can lead to beneficial changes in patient behavior [23].

A multitude of individuals are convinced that primary care ought to adopt a more population-centric approach following decades of experience with preventive healthcare for mothers and children in Sweden. The National Health Care Act of 1982 prioritized prevention. However, in actuality, the outcomes fell short of what was anticipated. In evaluating the effects of exercise referral schemes, a recent systematic review and meta-analysis of eight randomized controlled trials involving 5,190 participants found that there is still a great deal of uncertainty regarding the effectiveness of referral schemes in terms of improving physical activity, fitness, or health indicators for individuals with or without a diagnosis, as well as their cost-effectiveness [28].

The review authors advocated conducting additional trials of these schemes, especially ones that involve theory-driven interventions, after concluding that there was significant heterogeneity across the present trials [28]. Moreover, trials that employ an objective measure of physical activity are necessary, as all but one of the eight included trials relied on a self-report measure. Inactive

patients were directed to an organized, supervised exercise program, usually lasting 10–12 weeks and held at recreation centres, clinics, or parks, by all eight of the trials included in the Pavey evaluation [28]. Similarly, studies examining exercise referral schemes and evaluated for cost-effectiveness indicate that when patients are referred to structured programs following counselling, there is an observable increase in physical activity and improved health outcomes [28, 29].

Anokye and colleagues [29] found that although these programs are linked to a slight rise in lifetime costs and benefits, the cost-effectiveness is extremely sensitive to even slight variations in the cost and effectiveness of the programs. As a result, it's critical to assess the various referral models and compare the cost-effectiveness of various delivery methods (such as in-person and over the phone).

Physicians should conduct clinical checks every three to twenty-four months, depending on the patient's risk for cardiovascular diseases (CVD). These checks should include blood pressure checks, weight/waist circumference checks, assessments of lipids and glucose levels, lifestyle counselling, consideration of medication needs and adherence, and investigation of factors linked to poor management (such as socioeconomic background, mental health issues, co-morbidities, and sleep apnea) [28, 30, 31]. Consequently, changing lifestyle risk factors or lowering the risk of CVD may benefit from thorough and frequent health assessments [25, 26, 27].

Research in this area in Australia has largely concentrated on gaps in general practice's management of CVD risk, including gaps in time spent with patients during consultations, medication adherence, and achieving prescribed physiological parameters [33]. Little is known, though, regarding how a GP more thorough health examination during these visits might affect the way that patients live [31].

Comparing a multidisciplinary lifestyle enhancement treatment for severe mental illness (SMI) inpatients to treatment as usual, a pragmatic evaluation of the latter in an 18-month period revealed substantial advances in physical activity, metabolic health, and psychosocial functioning as well as a decrease in the use of psychotropic medicine [24]. This was the first study to indicate that the inpatient population may benefit from such comprehensive, long-term modifications. Systemic change is necessary within normal clinical care, as indicated by the lack of gains in physical activity and metabolic health in the treatment as usual group during these 18 months [35].

Evidence suggests that structured and coordinated lifestyle counselling can positively influence patient behavior. In the field of cardiovascular prevention, guidelines have informed interventions that result in measurable changes such as improved diet and increased physical activity [32]. Among patients with mental health conditions, multidisciplinary lifestyle interventions have led to notable improvements in both psychosocial functioning and quality of life [34] as well as physical and psychiatric health outcomes [35].

In conclusion, evidence suggests that when GPs employ evidence-based counselling strategies, such as motivational interviewing, patients demonstrate improved engagement in behaviors like healthier diets, increased physical activity, and better weight management. However, the section also highlights considerable variability in the implementation of these practices, which in turn results in inconsistent patient outcomes and underscores the need for standardized counselling techniques.

### **1.3 Challenges faced by patients integrating lifestyle changes into their daily lives**

It is commonly known that implementing lifestyle modifications in individuals presents significant challenges. The substantially lower life expectancy of 7–20 years compared to the general population underlines the need to enhance physical fitness [36]. This is mostly brought on by poor cardiovascular health, which is mostly caused by changeable lifestyle factors like smoking, inactivity, and poor nutrition. Research on changing this lifestyle to alleviate this health disparity has increased in the last few decades. Long-term efficacy of smoking-cessation therapies has been demonstrated [37].

When it comes to the effectiveness of increased physical activity, multiple systematic reviews and meta-analyses have shown benefits in patients' quality of life, cognitive functioning, cardiometabolic health, aerobic capacity, global functioning, and psychiatric symptoms. The most effective interventions are those that are carried out at appropriate intensities by trained exercise professionals [38]. Cardiometabolic risk variables improved as a result of (partially) dietary risk-addressing therapies; the impact sizes of interventions given by trained experts were also higher.

Despite the documented benefits of effective counselling, patients consistently report difficulties in integrating recommended lifestyle changes into their everyday routines. One of the common themes emerging from qualitative studies is that patients often feel overwhelmed by the complexity of health messages and may lack the support necessary to maintain changes over time. For example, qualitative insights from Hong Kong patients [2] reveal that the limited time allocated during consultations and a perceived lack of follow-up can undermine the sustainability of behavioral modifications.

Furthermore, the literature highlights that patients may struggle with practical barriers such as time constraints, personal motivation, and environmental or socioeconomic limitations [7]. Inconsistencies between physicians' own preventive practices and the advice they dispense might negatively influence patient adherence [9]. Moreover, broader systemic and policy-related challenges, such as those discussed in studies on primary health care reform [10], can further

exacerbate difficulties in accessing ongoing support and resources needed to maintain lifestyle changes.

The evidence confirming the long-term sustainability of lifestyle therapy for patients with SMI is currently inadequate, even though these studies were vital in proving the efficacy of lifestyle interventions [39]. Action is needed considering the growing body of data and policy surrounding life interventions for individuals with SMI, which have been emphasized on several occasions [37]. Qualitative insights from type 2 diabetes patients reveal that even after receiving lifestyle counselling, many individuals report difficulties in maintaining changes due to a lack of follow-up, insufficient individualization of advice, and competing daily demands [19]. Older patients, in particular, have expressed that the complexity of integrating new health behaviors is compounded by age-related limitations and a mismatch between their expectations of health promotion and the time allotted during GP consultations [20].

The acceptance of guidelines is influenced by both organizational and individual barriers [40], although primary care interventions can effectively reduce the risk of CVD and promote lifestyle modifications. As a matter of fact, primary care physicians are essential to the therapy and prevention of CVD and its risk factors [41]. Health professionals' lifestyle recommendations, which include a 5–10% decrease in fat intake, a 36% reduction in excessive alcohol consumption, an increase in fruit, vegetable, and fish intake, and a 44–77% increase in the likelihood of quitting smoking, have been found to improve patients' behaviour during routine consultations [42].

Comprehending implementation obstacles and enablers can aid in interpreting intervention outcomes and formulating plans to improve the incorporation of research discoveries into standard clinical treatment [43]. These can be seen at the intervention, person (patient), provider (medical professionals; HCPs), organization, and community/system levels, however in inpatient institutions the latter two tend to overlap more than the former. According to a previous study, patients' perceptions of the advantages of physical activity, such as improved mood, reduced stress, and improved physical health, were found to be in opposition to those of the barriers, which included low motivation, physical comorbidities, stress, and medication side effects [44, 45].

Furthermore, healthcare professionals noted that patients' lack of motivation was the biggest barrier to increasing their physical activity. HCPs said that obstacles included a lack of time, assistance, or training; conflicting demands on their time; and organizational problems, such as poor management support and prioritization [46]. There are, however, few studies assessing the application of lifestyle modifications in “real-world” contexts. Furthermore, prior research has mostly concentrated on the person perspective (that is, patients and HCPs), but understanding the organizational and environmental barriers and facilitators as well as their modifiability, is also necessary [44, 47].

Inpatients with SMI can now obtain a comprehensive lifestyle-enhancing treatment called MULTI in the Netherlands. The purpose of employing MULTI throughout daily treatment was to induce a holistic change in lifestyle, with a focus on lowering sedentary behavior, increasing physical activity, and improving eating choices. The team is composed of psychiatrists, nurses, activity coordinators, team leaders, and a nutritionist. By employing this technique, MULTI complies with current research recommendations, which include personalization/tailoring, the use of numerous components, and a change in organizational culture, in favour of a multidisciplinary and holistic approach that is backed by peers and certified HCPs [48, 49, 50, 51].

The results revealed the difficulty of the patients' MULTI participation. For example, they noted that there was not enough time in the daily schedule for them to select their activities. The findings show that there were varied experiences with the daily program, however, there were also affirmative answers on obstacles such as individual advantages and disadvantages and outcome expectations [48]. This appears to be in line with the time and effort required to engage patients as well as the lack of time HCPs stated for personal growth and customization. These results are consistent with the previously observed discrepancy between perceived advantages and barriers in SMI patients [45], which suggests that lifestyle-focused therapies are more challenging to execute in this population because of the difficulties they face. These include low literacy rates, cognitive deficiencies (such as memory and attention), and negative symptoms (such as dulled affect, lack of initiative, and apathy) [51, 52, 53].

Since patients and HCPs likely had more of those difficulties, this may have added to feelings of self- and MULTI-related barriers, such as ignorance of certain MULTI material. According to these findings, new research indicates that HCPs should devote more time and effort to overcoming these obstacles in addition to customizing interventions to meet patients' needs and offer them personally meaningful and appropriate opportunities for physical activity, which may boost their motivation for such pursuits [51, 54].

Despite increasing discussions about lifestyle, systemic constraints, such as limited consultation time and fragmented follow-up, often diminish the practical utility of the advice given. Barriers, facilitators, and attitudes influencing health promotion in general practice, noting that organizational factors and lack of tailored support often hinder the translation of advice into long-term behavioral change [26].

HCPs, however, primarily mentioned organizational barriers, including organizational changes, lack of resources (financially, in terms of staff replacement and capacity, materials, and time), education, and a decline in allied health professionals' support. These barriers appear to prevent HCPs from devoting the necessary time and attention to overcoming the challenges. Such problems have

been documented in earlier research as elements that may have a detrimental effect on mental health nurses' encouragement of lifestyle-related behaviour [46, 55].

Although the “change from within” strategy, employing the hospital’s present staff and resources appeared to be effective right away (mostly sustained ownership and commitment), MULTI was most certainly impacted by hospital staffing reductions and general budget cuts, which occurred twice for these 18 months. The organization’s lack of coordination appears to be mirrored in the team’s stated ambiguity and inconsistent behavior (management’s official ratification, unclear coordinator, easy access to unhealthy food and beverages within the hospital, and absence of performance feedback). A prior study also found that one of the biggest obstacles to a successful deployment can be a lack of managerial support and coordination [47]. It is vital to acquire formal clearance from leaders in mental healthcare organizations and to designate a champion who encourages the implementation process [46, 48].

However, the ‘bottom-up’ method might be to blame for the fact that we were unable to discover any facilitators inside the organizational framework. MULTI was created and implemented at the team level in this restricted implementation, within a sizable mental health care organization, with little to no help from upper management. Thus, it stands to reason that organizational determinants, which have the potential to improve tailoring, require the greatest development [38, 41, 50, 51].

Concurrently, cognitive and functional impairments may accelerate the “aging” process in these individuals, further complicating efforts to sustain behavioral changes over time [53]. Additional barriers include a lack of ongoing support and individualized follow-up after initial counselling; indeed, while interventions may be effective in clinical or inpatient settings, their impact often diminishes in the transition to everyday life.

Various implementation strategies for embedding exercise interventions are discussed into routine mental health care, yet note that without continuous, tailored support, patients frequently struggle to overcome practical, psychosocial, and environmental challenges [54]. Moreover, qualitative reports have suggested that even when lifestyle counselling is delivered, the intensity and duration of the counselling sessions do not always match the complex needs of patients trying to alter long-standing habits [55].

Furthermore, studies in related contexts reveal that even when motivated, patients encounter practical difficulties, such as limited access to resources, competing social pressures, or insufficiently tailored advice impede sustained behavior change [43, 46]. For example, studies identified motivational barriers in populations with chronic or severe mental illness, and noted that even when exercise prescriptions are provided by health professionals, adherence rates may remain low due to various psychosocial and environmental challenges [45, 46]. These challenges highlight the necessity

for primary care practices to develop more integrated, system-wide approaches that extend beyond consultation to support ongoing lifestyle change.

In summary, key challenges include internal factors like low motivation and psychological stress, alongside external obstacles such as limited consultation time, inadequate follow-up support, and socioeconomic and environmental constraints. The literature calls for multi-level interventions that address not only individual behavioral change but also systemic improvements in healthcare delivery to overcome these hurdles.

## **2. RESEARCH METHODOLOGY**

### **2.1 Study type**

A quantitative cross-sectional study assessing the interactions between the various variables at one point in time was conducted in St. David Hospital Ibadan Nigeria, focusing on outpatients. This method will be used due to the short time frame for the study. This study design was selected because it allows simultaneous assessment and analysis of exploring the role of general practitioners in promoting lifestyle changes of patients' choices in Nigeria. Descriptive cross-sectional study designs are useful for simply describing the desired characteristics of the representative sample that is being studied and allows findings to be generalized to a larger target population and useful for the generation of hypothesis [56]. Cross sectional studies allow the researcher to collect data on cause-and-effect relationship in a snapshot.

### **2.2 Organization of the Study**

The study was carefully organized in accordance with the approved research protocol at St. David Hospital, Ibadan, Nigeria. Permission to conduct the study was officially granted by the hospital authorities on May 24, 2024. This formal approval ensured that all subsequent procedures adhered strictly to ethical standards and institutional guidelines.

Data collection was carried out over a period of four months, from June 2024 through September 2024. During this time, a convenience sampling method was employed, with participants recruited from various outpatient departments within the hospital. The design facilitated easy access to a diverse patient population, as individuals were approached based on their availability and willingness to participate.

Patients who agreed to take part in the study gave written informed consent and completed the questionnaire anonymously. The questionnaire link was made available on the hospital's portal, and doctors explained both the purpose of the study and the link to each patient. For patients who faced internet or device issues, the questionnaire was printed out by the doctors, filled out by the patients, and returned to the doctors. The completed forms were then scanned and sent to the researcher for data entry.

All gathered data was securely entered into Microsoft excel before being exported to SPSS Version 30.0 for data management and analysis.

### **2.3 Study Subjects**

This study included outpatients in St. David Hospital, Ibadan, Nigeria, at the time of the survey.

### **2.4 Sample Size and Sampling Procedure**

The calculated sample size included approximately 300 individuals aged 18 years and above. A convenient sampling was employed, with participants selected based on their availability and willingness to participate within the city of Ibadan. Patients were recruited in the St. David Hospital where they come from varied areas, educational backgrounds, living situations. Efforts were made to invite individuals and to ensure a representative sample.

### **2.5 Research Instrument**

The study involved the use of a structured questionnaire. The questionnaire was developed based on scientific literature review, it included demographic information (questions 1 to 8 collected general information about the respondents, including age, gender, marital status, religion, place of residence, educational background, occupation, and average monthly income), lifestyle and health monitoring habits (such as the respondents' views on key lifestyle areas, including diet, exercise, and stress management), information on GP lifestyle counselling (questions 9 to 18 focused on patients' opinions regarding the current practices of general practitioners in offering lifestyle counselling), details on current lifestyle changes (questions 19 to 27 captured the actual measures of lifestyle changes that patients undertook following GP counselling), challenges in integrating lifestyle changes (questions 28 to 33 explored the barriers and challenges that patients encountered while trying to incorporate these lifestyle changes into their daily routines, including factors related to difficulty, duration of maintenance, available support, and psychological obstacles).

### **2.6 Variables and their Evaluation Criteria**

Dependent variables: Patients' Opinions on GP Lifestyle Counselling and Measures of Lifestyle Changes.

Independent variables: gender, marital Status, religion, residence, educational level, occupation and average monthly income.

Descriptive Statistics: Frequency distributions and summary measures were employed for categorical and continuous variables.

Inferential Analysis: Bivariate analyses (chi-square tests) were used to assess associations between the independent and dependent variables, with a significance threshold of  $p < 0.05$ . Multivariate logistic regression models further quantified these associations, providing odds ratios (OR) with 95% confidence intervals to adjust for potential confounders.

## **2.7. Statistical Analysis**

The collected data were coded, cleaned, and entered into Microsoft Excel before being exported to SPSS Version 30.0 for data management and analysis. Descriptive statistics, including tables and proportions, were used to describe the data. Categorical variables were summarized using frequencies and proportions, whilst continuous variables were organized into standardized groups and then measured using central tendencies.

A Chi-square test (bivariate) analysis was performed to determine the association between dependent and independent variables. At a 95% confidence level, bivariate and multivariate logistic regression analyses were performed to determine the strength of association between dependent and independent variables. The results of the summary and analysis were presented in tables. All analyses with a p-value of less than 0.05 were considered statistically significant. Univariate analysis of the sociodemographic characteristics in terms of gender, age groups, marital status, educational level, etc. was conducted to understand their distributions from the survey.

For the overall opinion, participants were asked to rate their overall opinion of the lifestyle counselling provided by general practitioners using a standardized scale, and the researchers then calculated the median score of these ratings, which was found to be 3.00. This median was used as a cutoff to categorize the responses: those with scores less than or equal to 3.0 were considered to have a negative opinion, while those with scores greater than 3.0 were deemed to have a positive opinion.

## **2.8 Research Ethics**

Ethical considerations were upheld throughout the study. All respondents were provided with information about the purpose of the study and the assurance of confidentiality in the questionnaire

preamble. The study project was presented to the relevant research ethics committee, and approval was obtained by the Bioethics Centre of Lithuanian University of Health Sciences on June 13, 2024. A copy of the approval is included in Annex No. 1. A copy of permission from the St. David Hospital, Ibadan, Nigeria is included in Annex No. 2

### 3. RESULTS

#### 3.1 Socio-Demographic Characteristics of Participants

Out of the 325 participants (outpatients) who responded to the questionnaire, most of them were females (55.4%) and the minority were males which constitutes 44.6%. With the average age of the participants being (38.8 ± 15.46) years, the majority (43.7%) of them were aged between 16-32 years.

The socio-demographic characteristics of the study participants are presented in Table 3.1.1.

Regarding the distribution of respondent's marital status, the largest category consists of 266 married participants, accounting for 81.8% of the total. Also, 59 participants were unmarried, representing 18.2% of the total.

Regarding religious affiliation, the majority identified as Christian (60.6%), followed by 18.5% identifying with Islam, 13.2% reporting no religious affiliation, and 7.7% practicing traditional religions. A higher proportion (56.6%) of participants lived in urban areas while 43.4% lived in rural areas.

**Table 3.1.1 Socio-Demographic Characteristics of Study Participants**

<b>Characteristics</b>	<b>Frequency (N=325)</b>	<b>Percentages (%)</b>
<b>Age in years (mean ± SD)</b>	<b>(38.8 ± 15.46)</b>	
16 - 32	142	43.7
33 - 49	106	32.6
50 and above	77	23.7
<b>Gender</b>		
Male	145	44.6
Female	180	55.4
<b>Marital Status</b>		
Unmarried	59	18.2
Married	266	81.8
<b>Religion</b>		
No religion	43	13.2
Traditional	25	7.7
Islam	60	18.5
Christianity	197	60.6

**Table 3.1.1 Socio-Demographic Characteristics of Study Participants (continued)**

<b>Characteristics</b>	<b>Frequency (N=325)</b>	<b>Percentages (%)</b>
<b>Residence</b>		
Rural	141	43.4
Urban	184	56.6
<b>Educational Level</b>		
J.H.S/Middle	16	4.9
Primary level	26	8.0
S.H.S/O' level	98	30.2
Tertiary	185	56.9
<b>Occupation</b>		
Unemployed	130	40.0
Employed	195	60.0
<b>Average monthly income (if working)</b>		
< 30,000 NGN	37	11.4
30,000 - 60,000 NGN	58	17.8
60,000 - 90,000 NGN	56	17.2
90,000 - 200,000 NGN	60	18.5
> 200,000 NGN	40	12.3

*The result showed that over half of the participants (56.9%) had attained a tertiary level of education, 30.2% had completed Senior High School (SHS) or O' level, 8.0% had primary education, and 4.9% had a Junior High School (JHS) or middle school education. In terms of employment status, 60.0% of participants were employed, while 40.0% were unemployed. Among the employed participants, 18.5% earned a monthly income between 90,000 and 200,000 NGN, 17.8% earned between 30,000 and 60,000 NGN, 17.2% earned between 60,000 and 90,000 NGN, and 12.3% earned more than 200,000 NGN. A smaller proportion (11.4%) earned less than 30,000 NGN monthly.*

### 3.2 Patients' Opinions about the Current Practices of Physicians in General Practice (GP's) in Lifestyle Counselling of Outpatients

The data analysis concerning patients' opinions about the current practices of general physicians (GPs) in lifestyle counselling revealed varying responses. The majority of participants were aware of lifestyle-related health issues (59.1%) but did not receive lifestyle counselling from a GP (64.3%). GP visits were infrequent, with 32.6% of participants rarely visiting in the last decade, and only 12.9% visiting regularly. Most participants did not actively seek lifestyle counselling (72.6%) and expressed dissatisfaction with the counselling received; 54.8% were dissatisfied, and only 18.5% reported satisfaction. Additionally, 63.7% felt their GP did not listen to their concerns, and 67.4% found the advice unclear. Motivation to make lifestyle changes was low (72.0%), and few received additional resources (18.5%). This is shown in Table 3.2.

**Table 3.2 Descriptive analysis of Patients' Opinions about the Current Practices of Physicians in General Practice (GP's) in Lifestyle Counselling of Outpatients**

<b>Opinion</b>	<b>N</b>	<b>%</b>
<b>Aware of lifestyle-related health issues</b>		
No	133	40.9
Yes	192	59.1
<b>Received lifestyle counselling from a GP</b>		
No	209	64.3
Yes	116	35.7
<b>Times visited a general physician for health check-ups/concerns</b>		
Never	91	28.0
Regularly (2 times/ year)	42	12.9
Occasionally (1/year)	86	26.5
Rarely (in the last 10 years)	106	32.6
<b>Actively seek lifestyle counselling or information</b>		
No	236	72.6
Yes	89	27.4

**Table 3.2 Descriptive analysis of Patients' Opinions about the Current Practices of Physicians in General Practice (GP's) in Lifestyle Counselling of Outpatients (continued)**

<b>Opinion</b>	<b>N</b>	<b>%</b>
<b>Extent satisfied with the lifestyle counselling received from GP</b>		
Very dissatisfied	13	4.0
Dissatisfied	178	54.8
Neutral	62	19.1
Satisfied	60	18.5
Very satisfied	12	3.7
<b>Felt GP listened to concerns and individual circumstances during the counselling</b>		
No	207	63.7
Yes	118	36.3
<b>Found the information and advice provided by GP clear and easy to understand</b>		
No	219	67.4
Yes	106	32.6
<b>I felt motivated to make lifestyle changes after the counselling</b>		
No	234	72.0
Yes	91	28.0
<b>Felt your GP provided additional resources or support to help you make lifestyle changes.</b>		
No	265	81.5
Yes	60	18.5

Only about 35.7% received lifestyle counselling from their GP, and a significant majority (58.5%) held a negative overall opinion of the counselling they received. Key issues such as infrequent visits, unsatisfactory listening, unclear advice, and lack of follow-up support are highlighted, suggesting gaps in the current counselling practices.

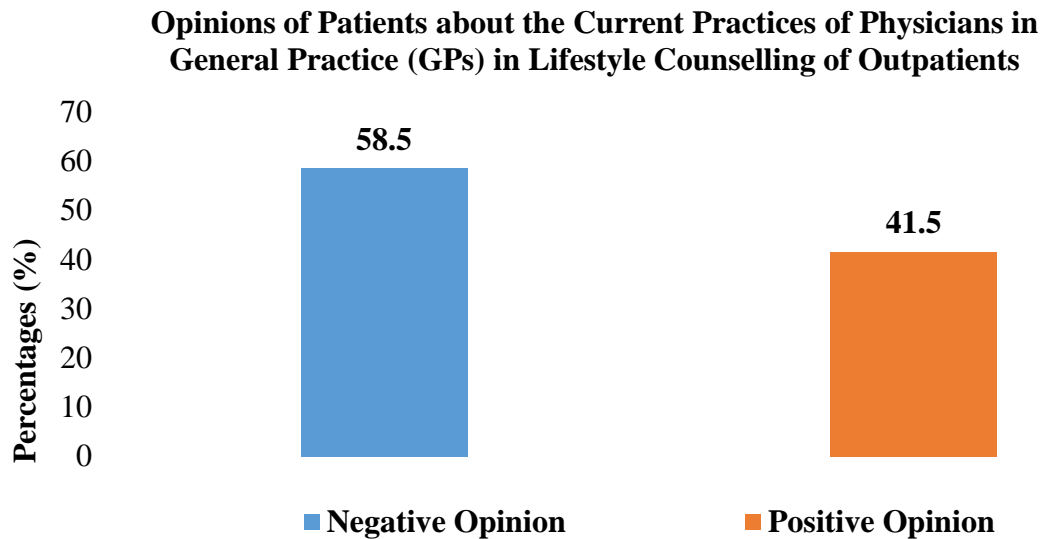


Figure 3.2 Opinions of Patients about the Current Practices of Physicians in General Practice (GPs) in Lifestyle Counselling of Outpatients

*The result of study found that only 41.5% of patients held positive opinions about the lifestyle counselling provided by general practitioners (GPs), whereas a majority 58.5% had negative opinions. In practical terms, many patients indicated that they were not satisfied with the counselling they received. Specific issues included a lack of clarity in the advice given (reported by 67.4% of respondents), insufficient listening by the GP (63.7% of participants felt that their concerns were not adequately heard), infrequent GP visits, and the absence of follow-up resources. Consequently, despite the recognized importance of preventive advice, the delivery of lifestyle counselling in these general practice settings appears to be falling short of patient expectations.*

### 3.2.1 Bivariate analysis between Levels of Opinions and other correlations

A Pearson’s Chi-Square Test was conducted on selected variables with the levels of opinion to ascertain the level of statistical associations. At a p-value threshold of 0.05, it was observed from the result that many of the chosen indicators affirm strong significance. For example, marital status ( $p = 0.028$ ), religion ( $p = 0.020$ ), residence ( $p = 0.001$ ), educational level ( $p < 0.001$ ), occupation ( $p < 0.001$ ), monthly income ( $p < 0.001$ ), and lifestyle changes ( $p < 0.001$ ) of participants had statistically significant association with patients’ opinions. However, no significant associations were found for age ( $p = 0.106$ ) and gender ( $p = 0.531$ ). The analysis also revealed that higher education, higher income, and significant lifestyle changes were associated with more positive opinions, while unemployment, rural residence, and lower education were linked to negative opinions (Table 3.2.1).

**Table 3.2.1 Bivariate analysis between Levels of Opinions and other correlates**

Variables	Opinion Levels			$\chi^2$	p-values
	Negative	Positive	Total		
	Opinion N (%)	Opinion N (%)	N (%)		
<b>Age (years)</b>				4.49	0.106
16 - 32	79 (55.6)	63 (44.4)	142 (100)		
33 - 49	58 (54.7)	48 (45.3)	106 (100)		
50 and above	53 (68.8)	24 (31.2)	77 (100)		
<b>Gender</b>				0.39	0.531
Male	82 (56.6)	63 (43.4)	145 (100.0)		
Female	108 (60.0)	72 (40.0)	180 (100.0)		
<b>Marital Status</b>				<b>4.81</b>	<b>0.028</b>
Unmarried	42 (71.2)	17 (28.8)	59 (100.0)		
Married	148 (55.6)	118 (44.4)	266 (100.0)		
<b>Religion</b>				<b>9.87</b>	<b>0.020</b>
No religion	27 (62.8)	16 (37.2)	43 (100.0)		
Traditional	20 (80.0)	5 (20.0)	25 (100.0)		
Islam	40 (66.7)	20 (33.3)	60 (100.0)		
Christianity	103 (52.3)	94 (47.7)	197 (100.0)		
<b>Residence</b>				<b>10.95</b>	<b>&lt;0.001</b>
Rural	97 (68.8)	44 (31.2)	141 (100.0)		
Urban	93 (50.5)	91 (49.5)	184 (100.0)		
<b>Educational Level</b>				<b>41.96</b>	<b>&lt;0.001</b>
J.H.S/Middle	11 (68.8)	5 (31.3)	16 (100.0)		
Primary level	22 (84.6)	4 (15.4)	26 (100.0)		
S.H.S/O' level	77 (78.6)	21 (21.4)	98 (100.0)		
Tertiary	80 (43.2)	105 (56.8)	185 (100.0)		
<b>Occupation</b>				<b>15.26</b>	<b>&lt;0.001</b>
Unemployed	93 (71.5)	37 (28.5)	130 (100.0)		
Employed	97 (49.7)	98 (50.3)	195 (100.0)		

**Table 3.2.1 Bivariate analysis between Levels of Opinions and other correlates (continued)**

Variables	Opinion Levels		Total N (%)	$\chi^2$	p-values
	Negative Opinion	Positive Opinion			
	N (%)	N (%)			
<b>Average monthly income (if working)</b>				<b>68.57</b>	<b>&lt;0.001</b>
< 30,000 NGN	35 (94.6)	2 (5.4)	37 (100.0)		
30,000 - 60,000 NGN	48 (82.8)	10 (17.2)	58 (100.0)		
60,000 - 90,000 NGN	26 (46.4)	30 (53.6)	56 (100.0)		
90,000 - 200,000 NGN	27 (45.0)	33 (55.0)	60 (100.0)		
> 200,000 NGN	7 (17.5)	33 (82.5)	40 (100.0)		
<b>Lifestyle Changes</b>				<b>180.75</b>	<b>&lt;0.001</b>
Minimal Changes	177 (86.8)	27 (13.2)	204 (100.0)		
Significant Changes	13 (10.7)	108 (89.3)	121 (100.0)		

Overall, significant associations were found for marital status, religion, residence, educational level, occupation, monthly income, and reported lifestyle changes. Notably, higher income, urban residence, and higher educational status were linked to more positive opinions, suggesting that socioeconomic factors play an important role in shaping patient perceptions.

### 3.2.2 Multivariate logistic analysis selected variations on Patients' level of Opinion

A binary logistic regression analysis was conducted to predict the factors which were most statistically significant, influencing patients' opinions on GP counselling. The analysis was conducted in adjusted model, with odds ratios (OR) and 95% confidence interval (C.I.) reported. The results of the study are summarized as follows.

In the adjusted model, patients earning between 60,000 and 90,000 NGN (AOR = 20.19,  $p < 0.001$ ), 90,000 - 200,000 NGN (AOR = 21.39,  $p < 0.001$ ), and above 200,000 NGN (AOR = 82.50,  $p < 0.001$ ) were significantly more likely to have a positive opinion than those earning less than 30,000 NGN. In the adjusted model, the associations remained significant for patients earning 60,000 - 90,000 NGN (OR = 15.04,  $p = 0.016$ ) and above 200,000 NGN (OR = 31.61,  $p = 0.004$ ). The

strongest predictor of a positive opinion was the extent of lifestyle changes. Again, patients who reported significant changes were 54.46 times more likely to have a positive opinion than those with minimal changes (AOR = 54.46,  $p < 0.001$ ). This association remained highly significant in the adjusted model (AOR = 51.33,  $p < 0.001$ ). Other factors, such as age, gender, marital status, religion, residence, education, and employment, showed no significant associations after adjustment.

**Table 3.2.2 Multivariate logistic analysis selected variation on Patients' level of Opinion**

Characteristics	Adjusted Model	
	AOR [95% C.I.]	p-values
<b>Age (years)</b>		
16 - 32	1.16 (0.37 – 3.67)	0.801
33 - 49	0.93 (0.29 – 2.97)	0.897
50 and above	1	
<b>Gender</b>		
Male	1	
Female	1.09 (0.46 – 2.62)	0.843
<b>Marital Status</b>		
Unmarried	1	
Married	0.53 (0.14 – 1.96)	0.338
<b>Religion</b>		
No religion		
Traditional	0.76 (0.11 – 5.15)	0.776
Islam	2.11 (0.42 – 10.49)	0.362
Christianity	1.54 (0.39 – 6.10)	0.543
<b>Residence</b>		
Rural	1	
Urban	0.45 (0.14 – 1.45)	0.182

**Table 3.2.2 Multivariate logistic analysis selected variation on Patients' level of Opinion (continued)**

Characteristics	Adjusted Model AOR [95% C.I.]	p-values
<b>Educational Level</b>		
J.H.S/Middle	1	
Primary level	0.72 (0.05 – 10.18)	0.809
S.H.S/O' level	0.66 (0.07 – 6.77)	0.730
Tertiary	2.78 (0.27 – 29.15)	0.393
<b>Occupation</b>		
Unemployed	1	
Employed	2.49 (0.62 – 9.89)	0.196
<b>Average monthly income (if working)</b>		
< 30,000 NGN		
30,000 - 60,000 NGN	6.15 (0.73 – 51.79)	0.095
60,000 - 90,000 NGN	15.04 (1.67 – 135.70)	<b>0.016</b>
90,000 - 200,000 NGN	5.21 (0.58 – 46.79)	0.140
> 200,000 NGN	31.61 (2.96 – 337.60)	<b>0.004</b>
<b>Lifestyle Changes</b>		
Minimal Changes	1	
Significant changes	51.33 (17.87 – 147.45)	<b>&lt;0.001</b>

*I = Reference categories, OR= Odds Ratio, C.I. = Confidence Interval*

*This finding revealed that, after adjusting for confounding factors, income and the extent of lifestyle changes are strong predictors of a positive opinion regarding GP counselling. For example, patients earning higher incomes and those who achieved significant lifestyle changes were much more likely to report positive opinions. Other factors, including age, gender, and marital status, were not statistically significant after adjustment, emphasizing that economic and behavioral outcomes are key determinants.*

### 3.3 Measures of Lifestyle Changes Taken by Patients After GPs Counselling About Lifestyle Changes

Regarding the lifestyle changes patients made after receiving counselling from general physicians (GPs), the findings revealed that majority of participants (74.5%) did not make any lifestyle changes after receiving advice from their GP, and 71.1% reported a lack of motivation to make positive changes. Only 29.5% of participants noted a positive impact on their health and well-being. Specific lifestyle changes were minimal: 82.2% did not alter their sleep patterns, 76.3% did not modify their diet, and 81.5% did not incorporate regular exercise. Additionally, 89.8% did not make any other changes based on their GP's counselling, with only 10.2% reporting additional modifications (Table 3.3).

**Table 3.3 Descriptive Analysis of the Measures of Lifestyle Changes Taken by Patients After GPs Counselling About Lifestyle Changes**

<b>Characteristics</b>	<b>N</b>	<b>%</b>
<b>Made any lifestyle changes based on the advice provided by your general physician during counselling sessions.</b>		
No	242	74.5
Yes	83	25.5
<b>Felt GP's counselling has motivated you to make positive lifestyle changes.</b>		
No	231	71.1
Yes	94	28.9
<b>Making these lifestyle changes had a positive impact on your overall health and well-being</b>		
No	229	70.5
Yes	96	29.5
<b>Made any modifications to sleep patterns after the counselling</b>		
No	267	82.2
Yes	58	17.8
<b>Made any modifications to diet patterns after the counselling</b>		
No	248	76.3
Yes	77	23.7

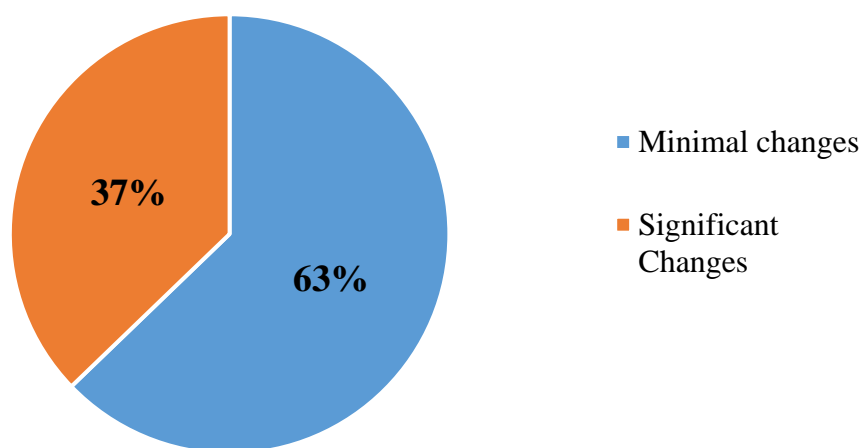
**Table 3.3 Descriptive Analysis of the Measures of Lifestyle Changes Taken by Patients After GPs Counselling About Lifestyle Changes (continued)**

Characteristics	N	%
<b>Incorporated regular exercise into your routine following the counselling</b>		
No	265	81.5
Yes	60	18.5
<b>Other changes incorporated after receiving lifestyle counselling</b>		
No	292	89.8
Yes	33	10.2

With around 74.5% reporting no lifestyle changes and merely 25.5% reporting any modifications, the table indicates that the counselling had limited practical impact on patient behavior.

Figure 3.3 illustrates the overall lifestyle change among participants.

**Measures of Lifestyle Changes Taken by Patients After GPs Counselling About Lifestyle Changes**



**Fig. 3.3 Measures of Lifestyle Changes Taken by Patients After GPs Counselling About Lifestyle Changes**

This figure graphically displays the level of lifestyle changes reported by participants, contrasting the proportions of patients who made minimal changes (around 62.8%) with those who implemented significant modifications (approximately 37.2%). It succinctly highlights the limited impact of GP counselling on driving lifestyle change within the study population.

*For this study, the overall lifestyle changes among participants showed that a majority (204 participants, 63.0%) made minimal changes, while 121 participants (37.0%) reported significant modifications. This distribution highlights the limited impact of GP counselling on lifestyle behaviors for most patients.*

### 3.3.1 Bivariate analysis between Lifestyle Changes and other correlations

A Pearson’s Chi-Square Test was conducted on selected variables with the measures of Lifestyle Changes to ascertain the level of statistical associations. At a p-value threshold of 0.05, significant associations were observed between lifestyle changes and variables such as age ( $p = 0.007$ ), marital status ( $p < 0.001$ ), religion ( $p < 0.001$ ), residence ( $p < 0.001$ ), educational level ( $p < 0.001$ ), occupation ( $p = 0.008$ ), monthly income ( $p < 0.001$ ), and patients' opinions ( $p < 0.001$ ). However, no significant associations were found for gender ( $p = 0.354$ ). Key findings show that older patients, lower-income individuals, rural residents, and those with negative opinions were more likely to report minimal lifestyle changes. Conversely, higher-income earners, those with tertiary education, urban residents, and individuals with positive opinions were more likely to report significant lifestyle changes (Table 3.3.1).

**Table 3.3.1 Bivariate analysis between Lifestyle Changes and other correlations**

Variables	Lifestyle Changes		Total N (%)	$\chi^2$	p-values
	Minimal Changes	Significant Changes			
	N (%)	N (%)			
<b>Age (years)</b>				<b>9.93</b>	<b>0.007</b>
16 - 32	82 (57.7)	60 (42.3)	142 (100.0)		
33 - 49	62 (58.5)	44 (41.5)	106 (100.0)		
50 and above	60 (77.9)	17 (22.1)	77 (100.0)		
<b>Gender</b>				0.86	0.354
Male	87 (60.0)	58 (40.0)	145 (100.0)		
Female	117 (65.0)	63 (35.0)	180 (100.0)		
<b>Marital Status</b>				<b>12.69</b>	<b>&lt;0.001</b>
Unmarried	49 (83.1)	10 (16.9)	59 (100.0)		

**Table 3.3.1 Bivariate analysis between Lifestyle Changes and other correlations (continued)**

Variables	Lifestyle Changes		Total N (%)	$\chi^2$	p-values
	Minimal Changes	Significant Changes			
	N (%)	N (%)			
Married	155 (58.3)	111 (41.7)	266 (100.0)		
<b>Religion</b>				<b>20.71</b>	<b>&lt;0.001</b>
No religion	32 (74.4)	11 (25.6)	43 (100.0)		
Traditional	22 (88.0)	3 (12.0)	25 (100.0)		
Islam	45 (75.0)	15 (25.0)	60 (100.0)		
Christianity	105 (53.3)	92 (46.7)	197 (100.0)		
<b>Residence</b>				<b>18.34</b>	<b>&lt;0.001</b>
Rural	107 (75.9)	34 (24.1)	141 (100.0)		
Urban	97 (52.7)	87 (47.3)	184 (100.0)		
<b>Educational Level</b>				<b>30.43</b>	<b>&lt;0.001</b>
J.H.S/Middle	11 (68.8)	5 (31.3)	16 (100.0)		
Primary level	23 (88.5)	3 (11.5)	26 (100.0)		
S.H.S/O' level	77 (78.6)	21 (21.4)	98 (100.0)		
Tertiary	93 (50.3)	92 (49.7)	185 (100.0)		
<b>Occupation</b>				<b>7.13</b>	<b>0.008</b>
Unemployed	93 (71.5)	37 (28.5)	130 (100.0)		
Employed	111 (56.9)	84 (43.1)	195 (100.0)		
<b>Average monthly income (if working)</b>				<b>57.34</b>	<b>&lt;0.001</b>
< 30,000 NGN	33 (89.2)	4 (10.8)	37 (100.0)		
30,000 - 60,000 NGN	51 (87.9)	7 (12.1)	58 (100.0)		
60,000 - 90,000 NGN	35 (62.5)	21 (37.5)	56 (100.0)		
90,000 - 200,000 NGN	26 (43.3)	34 (56.7)	60 (100.0)		
> 200,000 NGN	11 (27.5)	29 (72.5)	40 (100.0)		
<b>Patients' Opinion</b>				<b>180.75</b>	<b>&lt;0.001</b>
Negative Opinion	177 (93.2)	13 (6.8)	190 (100.0)		
Positive Opinion	27 (20.0)	108 (80.0)	135 (100.0)		

The result analysis revealed significant associations between significant lifestyle changes and variables like age, marital status, religion, residence, educational level, occupation, monthly income, and particularly, patients' opinions about counselling. Younger and middle-aged patients (particularly those aged 33-49) showed a higher likelihood of making lifestyle changes in the unadjusted model, though the association weakened after accounting for other factors. In contrast, gender did not show a significant effect. This underscores that factors such as positive counselling perception and better socioeconomic status are crucial for motivating lifestyle changes.

### 3.3.2 Multivariate logistic analysis selected variations on Lifestyle Changes

The results in Table 3.3.2 below showed the predictive measures of the effects of selected variables on the factors which are the most statistically significant, influencing patients' opinions on GP counselling. A further test was conducted to determine the association between patients with positive opinion of GP counselling. Patients with a positive opinion of GP counselling were the strongest predictor of significant lifestyle changes. They were 49.47 times more likely to make significant lifestyle changes compared to those with a negative opinion ( $p < 0.001$ ). This association remained highly significant (AOR = 49.47,  $p < 0.001$ ). Gender, marital status, religion, residence, and education were not significant factors in the adjusted model.

**Table 3.3.2 Multivariate logistic analysis selected variations on Lifestyle Changes**

Characteristics	Adjusted Model	p-values
	AOR [95% C.I.]	
<b>Age (years)</b>		
16 - 32	2.64 (0.68 – 10.35)	0.163
33 - 49	3.77 (0.99 – 14.39)	0.053
50 and above	1	
<b>Gender</b>		
Male	1	
Female	0.98 (0.41 – 2.37)	0.966
<b>Marital Status</b>		
Unmarried	1	
Married	3.51 (0.82 – 15.14)	0.092
<b>Religion</b>		
No religion	1	

**Table 3.3.2 Multivariate logistic analysis selected variations on Lifestyle Changes****(continued)**

<b>Characteristics</b>	<b>Adjusted Model</b>	<b>p-values</b>
	<b>AOR [95% C.I.]</b>	
Traditional	1.31 (0.15 – 11.19)	0.808
Islam	1.65 (0.29 – 9.23)	0.566
Christianity	3.77 (0.94 – 15.11)	0.061
<b>Residence</b>		
Rural	1	
Urban	0.81 (0.25 – 2.56)	0.715
<b>Educational Level</b>		
J.H.S/Middle	1	
Primary level	1.44 (0.08 – 24.55)	0.802
S.H.S/O' level	0.97 (0.10 – 9.45)	0.981
Tertiary	0.98 (0.11 – 9.09)	0.987
<b>Occupation</b>		
Unemployed	1	
Employed	0.60 (0.14 – 2.59)	0.498
<b>Average monthly income (if working)</b>		
< 30,000 NGN	1	
30,000 - 60,000 NGN	0.57 (0.09 – 3.69)	0.553
60,000 - 90,000 NGN	1.22 (0.20 – 7.44)	0.829
90,000 - 200,000 NGN	5.22 (0.89 – 30.54)	0.067
> 200,000 NGN	2.55 (0.39 – 16.83)	0.332
<b>Patients' level of Opinion</b>		
Negative Opinion	1	
Positive Opinion	49.47 (17.64 – 138.77)	<b>&lt;0.001</b>

*The analysis of the results highlights that a positive opinion of general practitioner (GP) counselling is the strongest predictor of significant lifestyle changes. Patients who held positive views were nearly 49 times more likely to adopt meaningful lifestyle modifications compared to those with*

negative opinions. While some income brackets showed moderate influence, other socio-demographic factors had limited impact in the adjusted model.

Despite this strong association, the majority of respondents (74.5%) did not make any lifestyle changes following GP counselling. Only 25.5% reported any modifications, with very few altering key behaviors such as sleep, diet, or exercise. Overall, 63.0% of patients made only minimal changes, and just 37.0% achieved significant lifestyle adjustments. These findings emphasize that while patient opinion is a key driver of behavior change, the overall practical impact of GP counselling remains limited, pointing to the need for improved communication strategies and tailored support to enhance its effectiveness.

### 3.4 The challenges faced by patients integrating lifestyle changes into their daily lives

The study explored the challenges patients face when trying to integrate lifestyle changes into their daily lives. The findings indicated that most participants reported feeling neutral about the ease of incorporating lifestyle changes (61.2%), with 14.5% finding it somewhat challenging and 11.7% very challenging. The majority maintained these changes for 1-3 months (67.4%), with fewer participants sustaining them for longer periods. Difficulty in adopting changes was not a major issue for 60.6% of participants, though 23.4% found it somewhat difficult, and 16.0% found it very difficult. Social support was rated as average by 68.0% of participants, and 32.0% reported facing psychological barriers, such as stress or mental health issues, in integrating lifestyle changes (Table 3.4).

**Table 3.4 Challenges faced by patients integrating Lifestyle Changes into their daily lives**

Items	N	%
<b>How easy or challenging was it for you to incorporate these lifestyle changes into your daily routine?</b>		
Neutral	199	61.2
Somewhat challenging	47	14.5
Somewhat easy	37	11.4
Very challenging	38	11.7
Very easy	4	1.2

**Table 3.4 Challenges faced by patients integrating Lifestyle Changes into their daily lives(continued)**

<b>Items</b>	<b>N</b>	<b>%</b>
<b>How long have you been able to maintain these changes?</b>		
1- 3 months	219	67.4
4 - 6 months	38	11.7
7 months and above	27	8.3
Less than 1 month	41	12.6
<b>How hard has it been to adopt the lifestyle changes recommended by your general physician?</b>		
Not difficult	197	60.6
Somewhat difficult	76	23.4
Very difficult	52	16.0
<b>To what extent do you feel supported by your social circle in making lifestyle changes?</b>		
Average	221	68.0
Low	67	20.6
Very high	37	11.4
<b>Do you face any psychological barriers, such as stress or mental health issues, in integrating lifestyle changes?</b>		
No	200	61.5
Not sure	21	6.5
Yes	104	32.0

*Results revealed that while many patients reported a neutral level of difficulty in adopting lifestyle changes and maintained them for 1–3 months, a significant portion faced ongoing challenges—particularly with sustaining those changes due to psychological barriers like stress and limited support. These findings highlight the need to address both individual and systemic obstacles through clearer guidance, stronger social support, and targeted interventions to improve long-term patient outcomes.*

## 4. DISCUSSION OF THE RESULTS

The study evaluated the impact of physicians' lifestyle counselling on patients' decisions on preventive health measures in Nigeria. The questionnaire specifically aimed to assess patients' opinions of general practitioners' current practices in lifestyle counselling for outpatients, evaluate the lifestyle modifications undertaken by patients following such counselling, and identify and analyze the challenges encountered by patients in incorporating lifestyle changes into their daily routines.

While much of the previous research on physicians' lifestyle counselling has been conducted in high-income countries or broader sub-Saharan contexts, this study provides Nigeria-specific evidence. By focusing on outpatients at a major Nigerian hospital (St. David Hospital, Ibadan), the thesis fills a gap in the literature regarding how general practitioners (GPs) in Nigeria influence patient choices concerning preventive health measures. This localized approach highlights cultural, socioeconomic, and systemic factors unique to Nigeria that affect both the delivery and uptake of lifestyle counselling.

### 4.1 Patient opinions about current practices in lifestyle counselling in general practice

This cross-sectional study indicated that less than half 41.5% of participants were cognizant of lifestyle-related health concerns. These findings align with a comparable study conducted among selected sub-Saharan African family physicians and trainees which concluded that participants had less than optimal lifestyle practices [57].

Additionally, Ameh and colleagues found that while sub-Saharan African family physicians and trainees frequently provided dietary counselling (with 65% always or usually doing so), their counselling on other key lifestyle issues such as exercise (0.6%), smoking cessation, alcohol abuse, weight management, and screening for diabetes or hypertension occurred much less often. This discrepancy in the comprehensiveness of counselling is likely to contribute to patient dissatisfaction. Furthermore, they highlighted that physicians' own suboptimal personal lifestyle practices and possibly unsatisfactory training may negatively impact their counselling frequency and quality, which in turn may clarify the negative patient perceptions noted in this present study [57].

These observations align with previous findings by which also reported that patients value individualized counselling and express dissatisfaction when the consultations are rushed or superficial [1,2]. Moreover, patient-centered communication and shared decision-making (SDM) are repeatedly emphasized in the literature as vital to effective preventive care [15, 17].

In our study, patients who reported receiving more comprehensive and empathetic counselling were more likely to have positive opinions. This is consistent with the partnership model described by Lönnberg and colleagues [11] and the findings from cross-national comparisons [18], which indicate that continuity and deliberative dialogue are critical for patient satisfaction. Socioeconomic factors also played a role; for example, patients with higher income and greater educational attainment were more likely to report positive opinions. These socioeconomic disparities echo prior research in Nigeria [10, 57] and highlight the need for adaptations in counselling practices to meet the diverse needs of patients.

A critical concern emerging from the study is the deficit in patient-centered communication. Evidence from the document shows that only a minority of patients actively sought lifestyle counselling (27.4%), and many felt that their concerns were not adequately considered during consultations. This lack of empathetic communication can reduce patients' trust and limit motivation to change health behaviors [20].

However, these findings contrast with a comparable study conducted in Nigeria, which underscores the potential benefits of a structured, patient-centered approach to lifestyle counselling in the Nigerian primary care setting using Patient Information Leaflets (PILs) featuring an "ABC" mnemonic (Activity increase, Behavioral modification, Calorie reduction). This provided clear, actionable guidance that helped 76.2% of obese participants achieve weight reduction [58].

In the same vein, these findings contrast with a similar study conducted in Japan, which indicated a significant level of health awareness among its participants. It also indicated that health awareness was elevated among the aged due to the following reasons: they possessed more time to contemplate it or exhibited greater concern regarding diseases [59].

Again, this study disagrees with a cross-sectional analysis conducted among university students in Japan, which indicated that graduate students and those in medical disciplines had superior eHealth literacy, a crucial element in sustaining a healthy lifestyle. Moreover, pupils possessing elevated eHealth literacy exhibited superior exercise regimens [60].

The study reported that 58.5% of the participants held unfavorable views of the current lifestyle counselling approaches in general practice. This research aligns with a comparable cross-sectional study conducted among pregnant women in Germany. This study suggests that there are disparities in women's knowledge and perspectives regarding lifestyle during pregnancy. Focus on specific areas, such as breastfeeding and typical GWG ranges, is still required during counselling [61].

The study reported that exactly 41.5% of the participants had positive opinions about the lifestyle counselling provided by general practitioners. In other words, 41.5% of respondents rated their overall satisfaction with the counselling above the median cutoff of 3.00, indicating a favorable perception. Moreover, the analysis revealed that factors such as marital status, religion, residence,

educational level, occupation, monthly income, and the extent of lifestyle changes were significantly associated with these more positive perceptions. This means that patients who were more likely to exhibit characteristics like higher education or income, or who had undergone notable lifestyle modifications, tended to view the counselling more positively, which underscores the importance of socioeconomic and demographic influences on patient satisfaction. This finding agrees with a cross-sectional observational study of pregnant women in Southern Germany, which reported that factors affecting women's knowledge and opinions of lifestyle-related risk factors during pregnancy were specifically associated with socioeconomic status, such as lower household net income, middle educational level and statutory health insurance status [62].

This study revealed that the overall negative opinion appears to be influenced by socioeconomic factors. Patients with lower incomes, those residing in rural areas, and those with lower educational status were more likely to report negative experiences with lifestyle counselling. These disparities highlight the need for tailored interventions that consider the social determinants of health. For example, providing culturally sensitive counselling and ensuring accessible follow-up support could help bridge this gap for underserved populations [25].

The thesis empirically demonstrates that patient opinions about the quality of lifestyle counselling are strongly associated with the degree of actual lifestyle changes implemented. This finding underlines a substantial gap between patients' expectations and the counselling they experience. Respondents noted that counselling was often brief, not sufficiently personalized, and lacked both clarity and active listening by the physician. For instance, over 63% of patients felt that their GP did not properly listen to their concerns, and more than two-thirds reported that the advice given was unclear.

#### **4.2 Measures of lifestyle changes taken by patients after GPs counselling about lifestyle changes**

The findings suggested that most individuals reported feeling neutral regarding the ease of integrating lifestyle modifications, with only a few participants finding it somewhat tough and very challenging. Moreover, major findings from this study suggest that older patients, lower-income individuals, rural dwellers, and those with negative sentiments were more likely to report limited lifestyle modifications.

In line with this study, Tosato et al. [63] indicated that older people in their study reported major lifestyle adjustments. Moreover, their data showed that people who most likely implemented lifestyle modifications were younger, with higher education status and better Clinical Frailty Scale scores.

Similarly, a cross-sectional survey also out that rural survivors remained more likely than urban survivors to report fair/poor health [64]. In addition, a comparable study demonstrated that rural inhabitants had an increased probability of identifying at least one social or environmental obstacle built. Compared to urban inhabitants, rural people showed much higher likelihood of reporting impediments to facility access. Urban dwellers expressed lower desire for physical activity, lower enjoyment of physical activity and lower confidence in their capacity to routinely engage in physical activity [65].

The study also reveals a close association between patient opinion and actual lifestyle modifications. Patients with a positive perception of their GP's counselling were significantly more likely to implement meaningful lifestyle changes. This strong association suggests that improving the quality of lifestyle counselling could directly enhance patient engagement and lead to better public health outcomes [20].

Specific changes, including alterations in diet, sleep patterns, or the incorporation of regular exercise, were reported by less than one-quarter of respondents. These results are consistent with earlier studies that demonstrate a discrepancy between the provision of lifestyle counselling in theory and its practical uptake in general practice [4, 6, 15].

It is noteworthy that the literature supports the effectiveness of structured interventions in promoting behavioral change. Aveyard and his colleagues [24] showed that brief, opportunistic interventions can lead to improvements in weight management. Similarly, guidelines and reviews indicate that evidence-based techniques (e.g., motivational interviewing) can enhance self-management behaviors and improve lifestyle outcomes [4, 14].

The study adds nuance to the literature by showing that factors such as income, educational attainment, and residence significantly correlate with both patient satisfaction and the extent of lifestyle changes. However, our findings suggest that in real-world outpatient settings, where consultation time is limited and follow-up is often insufficient, patients rarely receive the in-depth support needed to translate advice into actionable change. This gap reinforces the need for more systematic and sustained approaches in GP counselling to improve lifestyle outcomes.

Patients with a positive opinion of their GP's counselling, were substantially more likely to adopt significant lifestyle changes, highlighting the critical role of patient perception and satisfaction in promoting behavioral shifts in health practices. Younger patients are generally more open to lifestyle modifications than older individuals although further study could clarify these age-related dynamics.

### 4.3 Challenges faced by patients integrating lifestyle changes into their daily lives

This study indicated that majority of participants did not make any lifestyle adjustments after obtaining advice from their GP, and more than half of participants expressed a lack of enthusiasm to make good changes. Moreover, social support was regarded as ordinary by most of participants, and a minority reported confronting psychological difficulties, such as stress or mental health issues, in integrating lifestyle modifications. Inadequate communication, a lack of individualized follow-up, and systemic barriers diminish the impact of the counselling provided. Additionally, while only a minority of patients report undertaking significant lifestyle changes following GP counselling, those who do are substantially more likely to hold positive perceptions about their healthcare encounters.

This finding aligns with a previous study which revealed that when lifestyle difficulties were mentioned, the advice contributed to 39.2% of patients undertaking a lifestyle adjustment, to a higher extent amongst men, older patients and those with a poor education level [66].

According to the review by Kwasnicka et al. [67], the drive to avoid unfavorable health consequences is expected to be insufficient to maintain preventive behavior demanding maintained effort. In line with our findings, individuals are intrinsically driven when lifestyle modification is viewed as personally significant and approximating one's values and beliefs [68].

Additionally, a study by Lee et al. [69] found that lacking social support and motivation in dietary interventions was judged to create social isolation. In activity interventions, a lack of social support impeded action. For example, not having a friend for workout.

These challenges are multifactorial. Many patients cited inadequate follow-up and support as key barriers, a finding that resonates with reports from Hong Kong [2]. The literature suggests that limitations such as insufficient consultation time, lack of individualized coaching, and inadequate social support are significant impediments to lasting lifestyle modification [25, 26, 44].

Our study also noted that a sizable proportion of respondents experienced psychological barriers (e.g., stress and other mental health issues), which further complicate adherence to lifestyle changes. Moreover, socioeconomic pressures among rural residents and those with lower income, as well as a lack of tailored resources, contribute to the difficulties in sustaining behavioral adjustments, a finding consistent with previous work in similar contexts [7, 21, 62].

Contrary to the findings of this present investigation, a study by Keyworth et al. found that Most patients were enthusiastic about, and were willing to accept behavior change treatments from their GP during a routine session. They found that behavior change interventions were seen by patients as appropriate and useful during regular medical consultations, particularly where behavior change could have a favorable influence on long-term condition treatment [70].

By pointing out that more than half of patients perceived the counselling as inadequate, with issues such as unclear advice, insufficient listening, and lack of follow-up, the thesis underscores systemic challenges in the delivery of preventive health advice. These findings echo those from studies in other contexts [2, 13] but add a critical perspective from the Nigerian reality, prompting the need for reforms in training, resources, and consultation practices within primary care.

### **Advantages of research**

1. **Context-Specific Evidence:** The thesis fills an important research gap by providing insights specifically from Nigeria, a context where there is limited data on how general practitioners' lifestyle counselling influences patients' preventive health choices. This context-specific evidence is crucial for informing local policy and practice.

2. **Comprehensive Assessment:** The study examines multiple dimensions of the issue. It does not only evaluate patients' opinions about GP counselling but also measures actual lifestyle changes and investigates the challenges patients face in integrating these changes. This multidimensional approach provides a richer understanding of how counselling practices translate into everyday behavior.

3. **Robust Data Collection and Analysis:** Using a structured questionnaire and recruiting a moderately large sample (n=325) enabled us to gather quantitative data that are amenable to both descriptive and inferential analyses. The application of bivariate and multivariate logistic regression helps identify significant predictors, such as socioeconomic factors, patient perceptions of lifestyle changes and satisfaction with counselling.

### **Limitations of research**

1. **Cross-Sectional Design:** Being a cross-sectional study, the research captures data at one point in time. This limits the ability to establish causal relationships between GP counselling and lifestyle changes. Longitudinal studies are needed to observe changes over time and infer causality.

2. **Convenience Sampling and Single-Site Recruitment:** The sample was drawn from outpatients at a single hospital (St. David Hospital, Ibadan) using convenience sampling. This approach may introduce selection bias and limits the generalizability of the findings to all Nigerian settings. Patients from other regions or different healthcare facilities might have different experiences or perceptions.

**3. Reliance on Self-Reported Data:** The study uses a structured questionnaire to collect data on opinions, lifestyle changes, and encountered challenges. Self-reported measures are subject to biases such as recall bias and social desirability bias, which can affect the accuracy and reliability of the responses.

## CONCLUSIONS

1. The study found that only 41.5% of patients held positive opinions about the lifestyle counselling provided by general practitioners (GPs). Many patients (58.5%) indicated that they were not satisfied with the counselling they received. Specific issues mostly included a lack of clarity in the advice given, insufficient listening by the GPs, infrequent GPs visits, and the absence of follow-up resources. Consequently, despite the recognized importance of preventive advice, the delivery of lifestyle counselling in these general practice settings appears to be falling short of patient expectations, with 64.3% of patients reporting that they did not receive any lifestyle counselling.

2. The results indicate, that in terms of actual lifestyle modification, about 74.5% of patients did not make any changes following GPs counselling, only minority reported making changes, with very few altering key behaviors such as sleep, diet, or exercise. The results suggest that several demographic and socioeconomic factors influence patients' likelihood of making significant lifestyle changes following GPs counselling, but the strongest predictor across all models is the patients' opinion of the counselling received. Patients with a positive opinion of their GP's counselling were substantially more likely to adopt significant lifestyle changes compared to those with negative opinions. Older patients, lower-income individuals, rural residents were more likely to report minimal lifestyle changes, while higher-income earners, those with tertiary education, urban residents were more likely to report significant lifestyle changes.

3. Results revealed that while many patients reported a neutral level of difficulty in adopting lifestyle changes and maintained them for 1–3 months, a significant portion faced ongoing challenges—particularly with sustaining those changes due to psychological barriers like stress and limited support. The study identified several challenges that affect patients' ability to integrate lifestyle changes into their daily routines. Age appeared to play a role, with younger and middle-aged adults (especially those aged 33–49) showing a higher likelihood of making lifestyle changes in the unadjusted model, though this effect weakened when adjusted for other factors. Economic status also influenced outcomes—patients with higher incomes were more likely to adopt healthier lifestyles, suggesting that financial stability can provide the resources and flexibility needed for such changes. However, in the adjusted model, the effect of income became less pronounced. Other demographic factors such as gender, marital status, religion, residence, and education showed no strong independent associations with lifestyle change, indicating that while they may seem relevant initially, their influence may be shaped by other underlying variables. These findings suggest that challenges to adopting lifestyle changes are multifaceted and influenced by a combination of personal and contextual factors.

## PRACTICAL RECOMMENDATIONS

Overall, the findings emphasize the importance of fostering positive patient perceptions of GP counselling to drive lifestyle changes. Additionally, targeted interventions for specific age and income groups could further support and enhance the effectiveness of lifestyle counselling efforts, ultimately contributing to improved public health outcomes. Again, further research is needed to establish the role of patients in promoting their personal lifestyle modifications in Nigeria.

To support individuals with lifestyle diseases in the process of initiating and maintaining lifestyle change, as well as to enhance intrinsic and autonomous motivation, it seems important that health care providers explore the individual's perceptions of risk, their beliefs, and their personal values.

Below are practical recommendations for multiple stakeholders, including the government, general practitioners and patients.

### **1. Recommendation for Government and Policy-Makers**

- Allocate funds to strengthen primary health care with an emphasis on preventive services. Such funding should support the routine training of general practitioners (GPs) in effective lifestyle counselling techniques, as well as the provision of infrastructural resources, such as instructive materials and follow-up systems in public health facilities.

- Implement socially appropriate public health campaigns to advance awareness about the essence of lifestyle modifications in disease prevention, ensuring that both the public and healthcare professionals recognize their roles in prevention.

- Establish national standards and guidelines for lifestyle counselling that integrate evidence-based lifestyle interventions.

### **2. Recommendations for General Practitioners**

- Engage in regular training programs in motivational interviewing, shared decision-making, and other patient-centered counselling practices. This will help overcome challenges faced by patients as regards their counselling.

- Adopt and utilize standardized tools such as patient information leaflets (PILs) and mnemonics like the “ABC” (Activity increase, Behavioral modification, Calorie reduction) to provide clear, actionable, and consistent advice as such tools have been shown to improve patients' health outcomes and satisfaction.

- Tailor counselling patients by understanding and incorporating the socioeconomic and cultural contexts of patients. When counselling is personalized, it is more likely to be effective, as noted by the association between these factors and positive patient perceptions.

- Work collaboratively within team-based care models where other specialists, such as dietitians, exercise physiologists and psychologists contribute to a comprehensive lifestyle counselling program. This integrated approach can address multiple aspects of behavior change more effectively than isolated interventions.

### **3. Recommendations for Patients**

- Patients should share their experiences, both positive and negative, with their healthcare providers. Productive feedback can help practitioners advance their counselling styles and adjust their methods to better serve patient needs.

- Patients should commit to regular self-monitoring and attend scheduled follow-up appointments as these are crucial steps toward achieving and maintaining lifestyle changes.

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### LIETUVOS SVEIKATOS MOKSLŲ UNIVERSITETO BIOETIKOS CENTRAS

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Medicinos akademija (MA)

Nr. 2024-BEC2-763

Antrosios pakopos studijų programa - Taikomoji visuomenės sveikata (anglų kalba magistr.)

1 k. studentė: Precious Oluwapelumi Aderoju

Darbo vadovas: Lektorius Lolita Šileikienė

Profilaktinės medicinos katedra

#### DĖL PRITARIMO TYRIMUI

LSMU Bioetikos centras, įvertinęs pateiktus dokumentus, moksliniam-tiriamajam darbui tema „The Role of Physicians’ Lifestyle Counselling on Patient’ Choices of Preventive Health Measures in Nigeria“ P R I T A R I A .

*dr. Eimantas Peičius 2024-06-13 10:15:26*

\* Pastaba: šis pritarimas neatleidžia tiriamąjį mokslinį darbą vykdančių asmenų nuo prievolės laikytis Bendrojo duomenų apsaugos reglamento nuostatų ir nuo atsakomybės gauti nacionalinio arba regioninio bioetikos komiteto leidimą, jei toks leidimas būtinas pagal LR Biomedicininį tyrimų etikos įstatyme numatytus reikalavimus.

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24<sup>th</sup> May, 2024

LITHUANIAN UNIVERSITY OF HEALTH SCIENCES  
MICKEVICIAUS G. 9, 44307  
KAUNAS

**APPROVAL TO CONDUCT RESEARCH STUDY- PRECIOUS OLUWAPELUMI ADEROJU**

In reference to your request on the subject; request for permission to post a questionnaire on the hospital's portal.

The Management of St David Specialist Hospital, Ibadan hereby approves your request, and permission has been granted to Precious Oluwapelumi Aderoju to post a research questionnaire as part of her master's thesis on the topic of "The Role of Physicians' Lifestyle Counselling on Patients' Choices of Preventive Health Measures in Nigeria", on St David Specialist Hospital's portal, primarily for academic purposes.

We appreciate your interest in using our portal to reach out to potential participants for your research on this important topic, and are happy to collaborate with you.

To ensure a smooth research process, we kindly ask that you comply with the rules and regulations governing the hospital and the Nigeria Health Service.

We wish you success in collecting data for your research.

Thank you.



DR SALAWU ADEDAMOLA HAMMED  
(MEDICAL DIRECTOR)

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## Study Questionnaire

### Topic: The Role of Physicians' Lifestyle Counselling on Patient' Choices of Preventive Health Measures in Nigeria

Dear Respondents,

My name is Precious Oluwapelumi Aderoju, and I am a student at Lithuanian University of Health Sciences, studying in the Public Health Department. Before proceeding with the questionnaire, I want to assure you that your participation is entirely voluntary, and you can stop answering questions at any time you feel uncomfortable or if you no longer wish to continue.

The aim of my research is to investigate the impact of lifestyle counselling by doctors on patients' decisions to adopt preventive health measures in Nigeria.

Your responses and insights will be kept confidential and strictly for academic purposes, as it will contribute to the advancement of knowledge in healthcare and preventive medicine. This would only take 10-15 minutes of your time.

Thank you for your time and valuable input.

If you have any questions about this questionnaire, please contact ([precious.oluwapelumi.aderoju@stud.lsmu.lt](mailto:precious.oluwapelumi.aderoju@stud.lsmu.lt))

#### Instructions for completing the survey.

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Certain questions offer "Yes" and "No" answers. Please cross (X) the box that best matches your opinion.

Example:   Yes  No

\* For questions requiring multiple selections, please ensure to mark all options that apply.

\* If you select "Others", please specify your answer in the provided space.

\* Failure to select all required options may result in incomplete responses.

Thank you for your participation!

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**GENERAL INFORMATION ABOUT YOURSELF**

**1. Age (in years)**

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**2. Gender**

- Male

- Female

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**3. Marital Status**

- Single

- Married

- Cohabiting

- Separated/Divorced

- Widowed

---

**4. What is your religion**

- Christianity

- Islam

- Traditional

- No religion

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**5. Place of residence?**

- Urban

- Rural

**6. Educational background**

- Primary level
  - J.H.S/Middle
  - S.H.S/O'level
  - Tertiary
- 

**7. What is your main occupation?**

- Unemployed
  - Government
  - Selfemployed
  - Retired
  - Student
- 

**8. (If working) What is your average monthly income?**

- <30,000 NGN
- 30,000-60,000 NGN
- 60,000-90,000 NGN
- 90,000-200,000 NGN
- >200,000 NGN

**OPINIONS OF PATIENTS ABOUT THE CURRENT PRACTICES OF PHYSICIANS IN GENERAL PRACTICE (GPs) IN LIFESTYLE COUNSELLING OF OUTPATIENTS.**

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**9. Are you aware of lifestyle-related health issues?**

- a. Yes
  - b. No
-

**10. Have you received lifestyle counseling from a GP?**

a. Yes

b. No

**11. How often do you visit a general physician for your health check-ups or concerns?**

a. Regularly (two times per year)

b. Occasionally (once a year)

c. Rarely (3 to 5 years)

d. Never (in the last 10 years)

**12. What areas of lifestyle counselling do you think GPs should focus on the most? (Select all that apply)**

a. Diet/nutrition

b. Exercise/physical activity

c. Smoking cessation

d. Alcohol consumption

e. Stress management

f. Sleep hygiene

g. Others

**13. Do you actively seek lifestyle counseling or information?**

a. Yes

b. No

14. How satisfied were you with the lifestyle counselling you received from your GP?

- a. Very satisfied
- b. Satisfied
- c. Neutral
- d. dissatisfied
- e. Very dissatisfied

15. Did you feel your GP listened to your concerns and individual circumstances during the counselling?

- a. Yes
- b. No

16. Did you find the information and advice provided by your GP clear and easy to understand?

- a. Yes
- b. No

17. Did you feel motivated to make lifestyle changes after the counselling?

- a. Yes
- b. No

18. Did you feel your GP provided additional resources or support to help you make lifestyle changes?

- a. Yes
- b. No

**MEASURES OF LIFESTYLE CHANGES TAKEN BY PATIENTS AFTER GPs COUNSELLING ABOUT LIFESTYLE CHANGES**

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19. Have you made any lifestyle changes based on the advice provided by your general physician during counseling sessions?

- a. Yes
- b. No
- c. If yes, please specify\_\_

**20. Do you feel that your GP counselling has motivated you to make positive lifestyle changes?**

- a. Yes
- b. No

**21. Has making these lifestyle changes had a positive impact on your overall health and well-being?**

- a. Yes
- b. No

**22. What factors do you consider when making decisions about your health and preventive measures? (please select all that apply)**

- a. Physician advice
- b. Family history
- c. Personal research
- d. Friends' recommendations
- e. I don't consider anything.

**23. Are there any specific sources of information other than your physician that you rely on for making decisions about your health? (select all that apply)**

- a. Internet
- b. Friends and family
- c. Other healthcare professionals
- d. Traditional medicine
- e. Religious leaders
- f. Others (please specify) \_\_\_\_\_

**24. Have you made any modifications to your sleep patterns after the counseling?**

- a. Yes
  - b. No
-

25. Have you made any modifications to your diet patterns after the counseling?

a. Yes

b. No

26. Have you incorporated regular exercise into your routine following the counseling?

a. Yes

b. No

27. Are there any other changes you have incorporated after receiving lifestyle counselling? \_\_\_\_

**CHALLENGES FACED BY PATIENTS INTEGRATING LIFESTYLE CHANGES INTO THEIR DAILY LIVES**

28. How easy or challenging was it for you to incorporate these lifestyle changes into your daily routine?

a. Very easy

b. Somewhat easy

c. Neutral

d. Somewhat challenging

e. Very challenging

29. How long have you been able to maintain these changes?

a. Less than 1 month

b. 1-3 months

c. 4-6 months

d. 7 months and above

**30. What factors have helped you to maintain these changes? (Please select all that apply)**

- a. Support from family and friends
- b. healthcare professional follow-up
- c. Personal motivation
- d. Availability of resources (e.g., healthy food options, gym membership)
- e. Others

**31. How hard has it been to adopt the lifestyle changes recommended by your general physician?**

- a. Very difficult
- b. Somewhat difficult
- c. Not difficult

**32. To what extent do you feel supported by your social circle in making lifestyle changes?**

- a. Very high
- b. Average
- c. Low

**33. Do you face any psychological barriers, such as stress or mental health issues, in integrating lifestyle changes:**

- a. Yes
- b. No
- c. Not sure

**CONSENT**

By submitting this questionnaire, you acknowledge that your responses will be used for research purposes and grant permission for their use in the master's thesis.

I consent to participate.

THANK YOU