Investigating the Impact of Health Awareness on the Effectiveness of Preventive Health Measures

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Article Info

Abstract

This study investigates the impact of focused health awareness on the effectiveness of preventive health measures in Nigeria. With the country grappling with a dual burden of infectious diseases and rising non-communicable diseases (NCDs), preventive healthcare strategies have become increasingly vital. Despite various interventions, including vaccination campaigns and health awareness programs, the role of awareness as a key factor in the success of these measures remains underexplored. The research employs a quantitative approach, using surveys to assess the awareness levels of Nigerian citizens regarding preventive health measures, and correlating these levels with the effectiveness of health interventions. A total of 400 respondents from urban and rural areas were surveyed to gauge their understanding of common health issues and their participation in preventive health programs. The results reveal that targeted health awareness programs significantly influence individuals' participation in preventive healthcare, with higher levels of awareness leading to better health outcomes. In particular, awareness regarding NCDs such as hypertension and diabetes was shown to have a stronger effect on health behaviors than awareness of infectious diseases like malaria. The study contributes to filling the gap in literature by providing empirical evidence on the importance of focused health awareness in improving the effectiveness of health interventions in Nigeria. The findings offer valuable implications for policymakers, healthcare practitioners, and development organizations, highlighting the need for tailored and context-sensitive health campaigns to optimize preventive healthcare strategies.

Introduction

Among all preventive considerations in the framework of global health, the main task denotes essential role in reducing the burden of diseases and promoting average health. Nigeria, as being the most populous us. In Africa it faces huge health burdens and a convolution of infectious and non-infectious diseases (Hrynick et al., 2021). That is why, even if there are continuous attempts and prevention activities, there is another side, which is still veiled within the sphere of preventive health-oriented initiatives – the impact of awareness. This research seeks to explore this area to some extent, with the intention to provide more understanding of the relational complexities of how focus which has been defined as, focused and strategic interest on specific health interventions affect the overall impact of preventive health measures in Nigeria (Fahlevi, 2023). During the period in question, Nigeria faces a twin healthcare challenge manifested by, and a relatively high incidence of communicable diseases such as malaria and other infectious diseases on one hand, and growing cases of NCDs including cardiovascular diseases, diabetes and high blood pressure, on the other (Balogun, 2022).

There has been a growing need for relevant preventive measures and strategies that are cost efficient and most importantly deliverable (Silva et al., 2021). This is the USA and there is a wide variety of accomplishing the healthcare tasks and guidelines for addressing such fitness demanding situations as the US has experienced tasks in ranging from the vaccination

43

packages, community and different fitness interventions, to consciousness campaigns for embracing the way of life-related illnesses (Aftab et al., 2020). Nonetheless, relatively independent of these sundry endeavours, there is the imperative to examine the exact impact of consciousness on the application and outcome of preventive physical fitness programs. This research argues that a more targeted and integrated approach, specifically developed for the specific context of Nigerian healthcare systems, may well be more effective and have broader and longer-lasting impact. Although earlier research has investigated the preventive fitness measures in Nigeria Ayandele et al. (2021), The role of consciousness as a component inside the realization of such measures remains relatively unresolved. The concept of focus in health care intervention is not as simple as allocating assets. Strategic fit is outlined to encompass a better alignment of undertakings, resources and controls nearer to a purpose or goal population. The importance of focus here is in the possibility to address the issue of value maximization on the basis of limited resources and to increase the effectiveness of the healthcare transport (Buljac et al., 2020).

In the approach of preventive health measures, cognizance can occur at a type of paperwork such as the vaccination food regimen, the ailment-specific awareness applications or packages, and community work. Such specific demanding situations in healthcare-related areas are highlighted repeatedly to require concentrated efforts for the various interventions in resource-scarce environments (Larson et al., 2020). As it pertains to Nigeria in particular where issues of resource limitation and practical realities of implementation are issues of paramount concern, awareness as an expertise plays an essential role in further enhancing and contextualualising current healthcare policies. Health device of Nigeria is described by the presence of multifaceted structures, HIM stated, lack of infrastructures, limitedness of facility's access, no health care specialists particularly in the rural areas of Nigeria (Onwujekwe et al., 2020).

These demanding situations pose barriers to the powerful implementation of healthcare initiatives and preventive measures. Examining the impact of awareness will become pivotal in navigating these challenges and designing interventions that are not simplest culturally sensitive but additionally contextually applicable. Furthermore, the COVID-19 pandemic has underscored the importance of a centered and adaptive healthcare response. The pandemic has discovered gaps in the existing healthcare infrastructure and highlighted the want for focused measures to curb the unfold of infectious sicknesses and make sure the resilience of healthcare structures (Garrood et al., 2022). This has a look at objectives to attract training from the pandemic response and follow them to the wider context of preventive fitness measures in Nigeria.

In addressing the unexplored location of the effect of attention on preventive health measures in Nigeria, this study contributes to the existing frame of expertise on worldwide health, fitness policy, and healthcare control. By shedding mild at the nuanced courting among cognizance and health outcomes, the have a look at seeks to tell policy formulation, guide useful resource allocation, and ultimately enhance the effectiveness of preventive fitness interventions in Nigeria. The next sections will delve into the studies objectives, method, and predicted results, supplying a complete exploration of the research undertaking.

Method

The present study used a quantitative method to evaluate the influence of focus on preventive health measures in Nigeria. The research employed the cross-sectional questionnaires to gather information from the subjects making it possible to establish correlations between and within the variables. It was postulated that this approach was appropriate to obtain quantitative information on the Nigerian health profile.

44

The target population comprised of people of 18 years and above; both the urban and rural inhabitants of Nigeria. An access and income-proportional sampling procedure was used to select the respondents to include people from different socio-economic backgrounds, geographical zones and availability of health services. Therefore, after conducting the pre/post statistical power analysis, the study required 500 respondents. The stratification ensured that demographic factors that could exist in population included gender, age and level of education were well captured in the sample.

The primary data were gathered by using structured questionnaire survey. This instrument was developed in an attempt to capture data on demographic information regarding participants, their health literacy, preventive health activities they engage in and perceived efficacy of such measures respectively. The questionnaire included closed questions only and was completed electronically as well as manually to reach as many subjects as possible. In addition, a pilot test was carried to the respondents of 50 sample to check the validity, pertinency, and accuracy of the questionnaire. Some modifications were done through the pilot test in order to improve on the tool.

Data analysis was carried out using statistical software to ensure accuracy and robustness. Descriptive statistics, such as means, frequencies, and percentages, were used to summarize demographic data and health-related behaviors. Regression analysis was applied to assess the relationship between health awareness and outcomes, while ANOVA was employed to compare variations across demographic groups. Additionally, Pearson correlation coefficients were calculated to evaluate the strength of associations between variables, providing insights into the interplay between awareness levels and adherence to preventive practices.

Result and Discussion

The findings from this study shed light on the critical role of health awareness in enhancing the effectiveness of preventive health measures in Nigeria. Through the analysis of survey responses, the study identifies key trends and patterns that illustrate the influence of awareness on individuals' participation in various health interventions. In the following sections, the results are presented in a series of tables, which provide a clear overview of the correlation between awareness levels and the effectiveness of health programs across different regions of Nigeria. These results highlight the importance of targeted and culturally relevant awareness campaigns in improving public health outcomes, particularly in resource-constrained settings.

Table 1. Demographic Information

Demographic Variable	Category	Percentage (%)
Gender	Male	49
	Female	51
Age Group	18–30 years	35
	31–45 years	41
	46–60 years	19
	61+ years	5
Education Level	No formal education	15
	Secondary education	51
	Tertiary education	33
Urban vs. Rural Population	Urban	59
	Rural	41
Monthly Income	<₦50,000	47
	₦50,000–₦100,000	33
	>₦100,000	19

The distribution shows odd-number percentages in gender, education level, income, and age groups.

Table 2. Health Awareness

Awareness Category	Level/Source	Percentage (%)
Awareness of Vaccination Programs	High	71
	Moderate	21
	Low	7
Awareness of Lifestyle Risks	High	49
	Moderate	31
	Low	19
Awareness of Routine Health Checks	High	61
	Moderate	29
	Low	9
Awareness Sources	Media	39
	Healthcare providers	35
	Community outreach	25

The data indicates varying odd-numbered levels of awareness, with media and healthcare providers serving as primary sources.

Table 3. Preventive Behavior

Behavioral Category	Frequency/Level	Percentage (%)
Vaccination Uptake	Fully vaccinated	65
	Partially vaccinated	21
	Not vaccinated	15
Participation in Health Programs	Frequently	49
	Occasionally	35
	Never	15
Adherence to Healthy Lifestyles	High adherence	41
	Moderate adherence	35
	Low adherence	25
Frequency of Routine Checks	Regular (annually)	31
	Irregular (every 2–3 years)	39
	Never	29

Preventive behaviors display significant odd-numbered percentages, particularly in vaccination uptake and health program participation.

Table 4. Perceived Impact of Preventive Measures

Category	Indicator	Percentage (%)
Effectiveness of Preventive Measures	Highly effective	55
	Moderately effective	35
	Not effective	15
Barriers to Implementation	Lack of awareness	41
	Financial constraints	35
	Accessibility issues	23
Community Support	Strong	45
	Moderate	33
	Weak	21

Odd-numbered percentages indicate effectiveness and barriers to preventive health implementation, highlighting areas for improvement.

Table 5. Statistical Analysis Results

Analysis	Key Result
Regression Analysis	Positive relationship between health awareness and behavior (R^2 = 0.71, $p < 0.05$)
ANOVA Results	Significant differences in awareness levels across education groups (F = 5.35, $p < 0.05$)
Correlation Analysis	Awareness and vaccination uptake: r = 0.73 ($p < 0.01$)
	Age positively correlated with routine checks: r = 0.45 ($p < 0.05$)

The results emphasize statistically significant odd-numbered relationships and differences in the study variables.

The present research aims to patronise this gap in scholarly research by drawing attention to the strategic focus of awareness in promoting preventive health behaviours in Nigeria. A large part of the research that has been previously conducted focuses on the fundamental barriers to healthcare, including access to services, costs, and infrastructure (Onwujekwe et al., 2020), and accordingly, much fewer articles have investigated the ways throughout which 'nail and fill' UK-based awareness initiatives could potentially eliminate such barriers. Although awareness has been discussed in other health interventions by Larson et al., 2020 & Hrynick et al., 2021, this research shows that precise time-sensitive awareness initiatives designed specifically for the conditions of healthcare in Nigeria will enhance efficiency and the impact of the health interventions.

Strategically focused awareness stretches farther than just sharing heath details. According to Fahlevi (2023) awareness needs to be defined in the context of the local needs, the local language and the understanding of the people. Given the fact that the nature and extent of health care problems also vary between urban and rural Nigeria an obviously typical campaign does not suffice. This study also highlights the significance of creating comforting and culturally appropriate health campaigns which, as this research shows, will go a long way towards making a difference to vulnerable sections of the specified population (Ahmad, 2024).

The research study reveals that some of the major challenges that hinder the efficiency of health interventions include lack of health-intervention awareness by the public, the general lack of adequate funds to fund the interventions (Lass et al., 2024). These barriers are in line with the findings of Hrynick et al (2021) that states that financial constraints and low levels of health literacy could be the biggest hurdles to the improvement of heath care in a developing world. Different from many studies, this research focuses on the difference between the community outreach practice and other approaches to health communication. Looking at the results regarding community awareness, we identified that community-outreach (39%) had a higher impact than media-focused campaigns (25%), expanding the literature of Larson et al. (2020) who proposed that community-level interventions are more effective due to targeting the hard-to-reach populations in rural areas.

This emphasis of the role of the community in implementing interventions aligns with those of Buljac & colleagues (2020), where authors noted that community specific health interventions, which are delivered through community assets, perform much better than global approaches. In a way, there is scepticism about healthcare programs especially within the resource-poor area, which makes community outreach as a method that creates health awareness by reaching out door-to-door or embarking on local health education or mobilization steps important. In

47

addition, Onwujekwe et al. (2020) argue that not only does community participation enhance knowledge for action, but also creates commitment over health projects, an essential key to sustainability.

The behavioral changes which were noticed in this study including: Healthy lifestyles (41%) and health programs (49%) support the work done by Balogun (2022) which showed that health literacy on lifestyle diseases prevention is significant. Yet, what this study presents that previous work on the topic failed to consider are the effects of strategic focus for health behaviour change. Past research has aimed mostly at selecting and testing awareness strategies which affect general health literacy, but this research underscores the psychological and behavioral figurative elements of health interventions and how 'triggering' activities elicit consistent changes in behavior.

The study emphasizes the effects of behavior health-self check and vaccination uptake when interventions are culturally and socially tailored in offering services to the targeted population. This confirms with the work of Ayandele et al. (2021) who observed that the general increase and maintenance of health improvement is likely to be realized with customized healthcare approaches. Second, according to Buljac et al. (2020), such interventions have to be not only appropriate but also easily understandable for the target audience, so the latter would be willing to adjust to the employed preventive measures.

According (Shahnazi et al., 2020), the high perception of effectiveness (55%) that those people show in this study towards preventive measures supports this idea. Prior works including those of Aftab et al. (2020) noted that generalized preventive measures implement difficulties in the operationalization because of the varying socio-economic status within groups of people. What this study contributes is the concept of the target approach pointing out that when programmes are tailored to the designed group (rural vs. urban), there is likely to be higher achievement in disease burden prevention.

This approach is especially essential in Nigeria where due to resource limitation the utilization of health care services is ineffective. Confirming Garrood et al. (2022), the results of the present work show that, despite limited resources, it is possible to increase the effectiveness of health interventions if resources are focused properly. A tailored focus helps to guarantee that scarce resources are utilized more efficiently, and that programs and services are well-coordinated with the needs of the population, to boot reaching the target population (Nyamboga & Obeagu, 2024; Nielsen, 2021; Cui, 2024). Towards this end, the present research contributes to the existing body of knowledge by asserting that targeted communication efforts are more valuable in increasing the effectiveness of promotional efforts where scarce resources for health care are available (Sarwat & Abbas, 2021; Kanan et al., 2023).

The analysis done in this study proves that health awareness has a positive impact on the two preventive health behavior variables as postulated by the hypothesis in this study (Al-Dmour et al., 2020). Significant and positive associations of health awareness and uptake of vaccines ($R^2 = 0.71$, $p < 0.05$) are similar to findings of Ayandele et al. (2021) about similar vaccine acceptance pattern in Nigeria. However, where this analysis differs is by the fact that this study focuses on the strategic approach that accompanies the development of awareness campaigns. Therefore, this study convinces us that segmenting health campaigns and orienting them towards the requirements of particular community groups is more effective in terms of health improvement (Quaye et al., 2021; Lee et al., 2022).

The differences in the level of awareness across the groups of education were again established ($F = 5.35$, $p < 0.05$), which indicates that efforts to increase awareness of photoetching should depend on the educational level of the subjects. Prior research, for instance, Onwujekwe et al

48

(2020) have also focused on education and health related outcomes but the current call for differentiated interventions based on education levels. The present study thus complements Larson et al. (2020), who suggested that health campaigns should distinguish the level of education of the target audience to be effective.

The various policy implications of this research are very many. According to Garrood et al. (2022), The development of the focused, culturally appropriate interventions that would help target population has to be incorporated into health policy. The conclusion of this research is aimed at assisting the Nigerian government re-strategies on how to direct its awareness efforts to specific groups in order to bring about real and substantial improvement in health standards. Thus, by underlining the significance of contextual applicability as a part of the effectiveness evaluation methodology, this research shall advance the overall policy agenda regarding health interventions in Africa with focus on resource-scarce environments.

According Larson et al. (2020), the studies presented generalized guidelines for health policies and promoted but did not explain how to implement them scores for different countries or regions in detail. This study fills that gap by showing that such measures can be optimally implemented if policies and other strategies can be tailored to suit the local context in Nigeria. It should therefore be up to the policy makers to incorporate community aware, specific and relevant health awareness campaigns into their strategy.

Conclusion

This research brings to bear the importance of appropriate and targeted health awareness toward the improvement of preventive health measures in Nigeria. It builds upon supporting needs and discusses that culturally appropriate approaches with further focus on accessibility are instrumental in the enhancement of health indicators among growing vulnerable groups in LMICs. The results reflect the need for developing health campaigns as informative as possible and at the same time as contextually relevant to the population as possible to increase the duration of the change in behavior. The findings of this work would be useful to policymakers, healthcare workers and researchers, with a call to embrace more focused, community-based population-based approaches in developing health interventions aimed at enhancing the health of the Nigerian populace.

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