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Article

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Abstract: The study investigated the impact of traditional medicine on life expectancy in Nasarawa State, Nigeria. The study adopted a quantitative research approach. Purposive or judgmental sampling was used to elucidate the data set used for the study. Cross-sectional data were gathered with the help of a well-designed questionnaire from a total of three hundred and fifty-seven (357) respondents who were available for the survey. The data set collected was analysed using descriptive and linear regression using Ordinary Least Squares (OLS). From the results, 53%, 87%, and 56% were male, below 50 years old, and in the low-income class, respectively, suggesting that the bulk of the respondents under investigation were male, young, and had rather modest incomes. Also, 53% were married, and all had one form of formal education. 67% of respondents acknowledge using traditional medicine; however, the majority of respondents preferred Orthodox medical care over alternative kinds of care. Traditional medicine (TM) and factors that contribute to the advancement of traditional medicine (FITM) have a negative impact on life expectancy, according to the regression analysis. On the other hand, TM has no statistically significant impact on life expectancy, despite FITM having a statistically significant effect at the 5% level. All available data, however, indicates that TM and FITM have an impact on life expectancy, either directly or indirectly. Based on the results, this study concluded that traditional medicine has the potential to significantly increase life expectancy in Nasarawa State and throughout Nigeria. The study recommends that traditional health professionals, stakeholders, and concerned government agencies should put efforts in place to improve and promote modern traditional medicine among the people, especially its effectiveness and medicinal quality, increase its accessibility to people, and efficiently regulate its prices to increase its affordability for low-income earners.

Keywords: traditional medicine; life expectancy; health care

1.0. Introduction

1.1. Background to the Study

For millions of people, improving health will directly lead to longer and better lives, making it a significant societal goal in the modern world. Concern about the possibility that enhancing health may hasten economic growth and have equally significant unintended benefits is also emerging. According to Sarma et al. (2019), eliminating malaria in sub-Saharan Africa may increase the region's per capita growth rate by up to 2.6% each year. Extending the coverage of essential health services to the world's poor could save millions of lives each year, reduce poverty, spur economic development, and promote global security (Sarma et al., 2019). Despite the sizable pool of health professionals in Nigeria, compared to other developing nations, Nigeria is still rated poor in terms of its health condition. According to the World Bank (2022), the average life expectancy is 52 years, the crude mortality rate is 14%, only 124 newborns out of every 1000 do not make it beyond the age of five, and about 3 million individuals (between the ages of 15 and 49) are living with high blood pressure in Nigeria in 2022.

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According to Aregbeshola and Khan (2018), over half of Nigeria's population lives below the poverty line due to the country's low per capita income. As a result, the provision of appropriate financing for health care by households or governments has continued to be challenging. Health care stakeholders in Nigeria include both the public and non-governmental organisations, for-profit commercial companies, community-based organisations, and providers of traditional and religious care. The public sector's provision of health services is the duty of the government, which is often at three levels, namely primary, secondary, and tertiary health service providers. At the primary level, there are preventive, curative, primitive, and pre-referral care services that are available at the community's doorstep. The medical professionals include nurses, community health officers, community health extension workers (CHEWs), environmental health officers, and pharmacists, among others (Fawzi, 2013). Over the years, traditional medicine has also contributed immensely to providing health care services to citizens in Nigeria at varying levels. Traditional medicine refers to health practices, methods, knowledge, and beliefs that include manual techniques, exercises, spiritual treatments, and medicines derived from plants, animals, and minerals that may be used alone or in combination to treat, diagnose, and prevent diseases or preserve health. The long-term, unsustainable economic condition in Nigeria has contributed to the rise in popularity of traditional medicine throughout the last ten years. The therapeutic approach to alternative traditional medicine as a means of alternative to a deliberate search for new chemical entities (NCE) has been prompted by the high cost of pharmaceuticals and an increase in treatment resistance to prevalent ailments, including malaria, bacterial infections, and other sexually transmitted diseases.

Despite the various empirical research on health delivery systems, the literature (Fawzi, 2013; Aregbeshola and Khan, 2018), in their effort to provide an expression of the health care system in the developing world and to account for the health-seeking behaviour of patients in the developing world, has failed to capture the true picture of the health care system in the developing world. The research done so far has a tendency to look at patients' physical demands—the only thing that matters—when analysing their health needs in the developing and even slightly developed worlds. Patients in the developing world, on the other hand, have a holistic perspective on health, which includes not only the physical need to treat illnesses but also the spiritual need to eliminate the illness's alleged underlying cause and reestablish harmony between the patient and the environment and spirits. The literature currently in publication does not provide much insight into this issue. Fawzi (2013) and Aregbeshola and Khan (2018) models fail to account for the importance of this psycho-social component of health care for patients in the developing world, and as a result, they evaluate the health-seeking behaviour of patients in this region from a monistic perspective.

Given these limitations, the purpose of this study is to investigate the factors that account for patients' health-seeking behaviour in the Kefffi, Mararaba, and Nasarawa local government areas of Nasarawa state. The findings of this study will be helpful in informing patients and health care professionals about traditional medicine and what they may learn to extend their lives in the state of Nasarawa. This study's findings may assist policymakers in suggesting measures aimed at lowering the prevalence of HIV and increasing life expectancy in order to reduce high blood pressure.

2.0. Methodology

The research was carried out in the Kefffi, Mararaba, and Nasarawa Local Government Areas of Nasarawa State. The study adopted a quantitative research approach. Purposive or judgmental sampling was used to elucidate the data set used for the study. Cross-sectional data were gathered with the help of a well-designed questionnaire from a total of three hundred and fifty-seven (357) respondents who were available for the survey.

2.1. Method of Data Analysis

The acquired data were subjected to both inferential and descriptive statistical analysis. Data analysis for the study objectives was done using basic linear regression using Ordinary Least Square (OLS). The econometric model form for the research, which used a basic linear regression model, is shown below.;

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$$Y_t = \beta_0 + \beta_1 Y_{t-1} + e_i \quad (3.1)$$

where; ε_i is the random disturbance term which is serially independent and assumed to be constant.

2.2. Model Specification

To examine the connection between life expectancy and conventional medicine. The independent variables and dependent variable had its association determined separately using the Ordinary Least Square simple regression model. Life expectancy (LE) is proxied by the scale of respondents' age (LEA), socioeconomic status (LSE), medical care (MDC), and usage of traditional medicine (UTM) indexes, whereas traditional medicine (TM) is proxied by the scale of respondents' reaction to traditional medicine (TM), improvement of traditional medicine (ITM), nature of traditional medicine (NTM), and determinant of improved traditional medicine (FITD) (independent variable/regressor). In this sense, the regressor (X) determines the likelihood that the regressands (Y) will rise or decrease. Following the research of Islam et al. (2018) on the correlates of healthy life expectancy in low- and lower-middle-income nations, the model provided outlines the fundamental nature of the connection between the variables as follows;

$$LE = f(Traditional\ Medicine) \quad (3.2)$$

Where: LE = Life Expectancy.

This study however modified the equation (3.3) above to suit this work. Thus, the model is specified as;

$$LEA = \beta_0 + \beta_1 TM + \beta_2 FITM + e_i \quad (3.3)$$

$$UTM = \beta_0 + \beta_1 ITM + e_i \quad (3.4)$$

$$MDC = \beta_0 + \beta_1 NTM + e_i \quad (3.5)$$

$$LSE = \beta_0 + \beta_1 TM + e_i \quad (3.6)$$

Where: β_0 is the intercept where X is zero;$\beta_1$isthe slope where changes in X occur, and; ε = error term or residuals.

3.0. Results and Interpretation

3.1. Socioeconomic Characteristics of Respondents

The study's respondents' socioeconomic characteristics are shown in Table 3.1. Male respondents made up the majority (53%) of the sample, indicating that a large portion of the population included in this research is male. A significant proportion of the overall respondents, 87% and 56%, were below 50 years old and in the low-income class, respectively, suggesting that the bulk of the respondents under investigation were young and had rather modest incomes. 53% were married, and all had one form of formal education, suggesting that most of the respondents were educated and married.

Table 3.1. Socioeconomic Characteristics of Respondents.

Gender	Frequency	Percentage
Male	190	53
Female	167	47
Age		
20-30	167	47
30-40	48	13
40-50	95	27
50-60	47	13

Socio-economic Status		
Low Income	201	56
Middle Income	112	31
High Income	44	13
Education		
Primary Education	26	7
Secondary Education	128	36
Tertiary Education	204	57
Marital Status		
Single	167	47
Married	190	53
Total	**357**	**100**

Source: Field Survey (2023)

3.2. Perception of Respondents on Traditional Medicine

With a percentage index of 67%, Table 3.2 shows that a sizable proportion of respondents acknowledge using traditional medicine, but only around 33% of the sample as a whole do not. This suggests that the majority of respondents use traditional medicine. Additionally, with an index of 47%, of the respondents preferred Orthodox medical care over alternative kinds of care. Just a sizable 27% of people seem to favour traditional medicine as a mode of care. This suggests that, despite the fact that the majority of respondents do use traditional medicine—possibly when necessary—the majority of people prefer the orthodox approach to traditional medical therapy.

Table 3.2. Perception of Respondents on Traditional Medicine.

Usage of Traditional Medicine	Frequency	Percentage
Yes	238	67
No	119	33
Preferred Treatment Option		
Self-Medication	95	27
Orthodox treatment	167	47
Traditional Healing Methods	95	27
Total	**357**	**100**

Source: Field Survey (2023).

3.3. Effect of Traditional Medicine on Life Expectancy

The impact of conventional medicine and enhanced conventional medicine on life expectancy is seen in Table 3.3. According to the findings, a 1% rise in TM and FITM would result in a 1.7% and 114.5% reduction in life expectancy age (LEA), respectively. This indicates a negative relationship between TM, FITM, and LEA. Nonetheless, as shown by the likelihood t-values of 0% and 64%, respectively, TM is statistically unimportant at the 5% level, but FITM is statistically significant at that level. Thus, traditional medicine's impact on the life expectancy of people living in Keffi, LG, and Nasarawa states may be improved if the right policies are implemented to support and advance it. Furthermore, the coefficient of determination (R2) indicates that traditional medicine (TM) and variables impacting the improvement of traditional medicine (FITM) together account for 86% of the total variance in LEA. This suggests that in Keffi, Nasarawa State, both TM and FITM have an impact on life expectancy, either directly or indirectly. The statistical importance of the total impact is evident from the F-statistics probability values of 0.000, which fall far below the 5% significance threshold.

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This further implies that more work has to be done to raise the quality and efficacy of traditional medicine while also making it more widely available and reasonably priced. The multicollinearity test was also performed to evaluate the model's regressors' strength. Given that the centred VIF values for the independent variables are less than 10, Table 3.4's conclusion shows that there were no instances of multicollinearity in the model. Stated differently, the model does not exhibit substantial multicollinearity.

Table 3.3. Effect of Traditional Medicine on Life Expectancy.

Variable	Coefficient	Std. Error	t-Statistic
C	6.073713	0.134096	45.29382
TM	-0.017227	0.037785	-0.455924
FITM	-1.144763	0.028989	-39.48945***
R-squared	0.815051		
Adjusted R-squared	0.814006		
F-statistic	780.0224***		

Source: Field Survey (2023)

Table 3.4. Multicollinearity Test Result Variance Inflation Factors.

	Coefficient	Uncentered	Centered
Variable	**Variance**	**VIF**	**VIF**
C	0.017982	27.38727	NA
TM	0.001428	12.19446	1.000073
FITM	0.000840	16.41684	1.000073

Source: Field Survey (2023)

3.4. Discussion of Findings

Based on the aforementioned, it has been determined that the majority of the respondents under study are married, relatively young, and make a relatively modest salary. They also have tertiary-level educational qualifications. Additionally, it was shown that although the majority of respondents consume traditional medicine, they prefer conventional medical care to traditional medical care. Furthermore, even though the majority of respondents said it would be simple to access or attend traditional treatment centres, a sizable percentage of the population could not have the same level of luxury. When choosing a treatment option, the majority of respondents are influenced by factors such as the time and distance between their place of residence and typical treatment facilities, as well as the cost of medications and treatments. The majority of respondents believe that conventional therapy is the most expensive and efficient. This result is comparable to that of Golam et al. (2013). Descriptive statistics findings indicate a high degree of possibility that traditional medicine influences life expectancy; however, it is generally accepted that traditional medicine has facilitated life expectancy in most societies. Traditional medicine may not really only have complications for the health of the growing population; it may not really have facilitated improvement in the wellbeing of the study area population. Given that conventional medicine is used to enhance life expectancy in Nasarawa State, the essence of traditional medicine may not really be limited to making people live longer.

Furthermore, traditional health practices may not really raise more questions than they answer regarding life expectancy, cultural beliefs may not really prevent traditional practices that promote healing and shorten citizens' lives, and food taboos may not really prevent traditional medicine consumption that promotes client healing. This result is consistent with Sofia and Natalia (2017) findings. Traditional medicine (TM) and factors that contribute to the advancement of traditional

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medicine (FITM) have a negative impact on life expectancy, according to the regression analysis. On the other hand, TM has no statistically significant impact on life expectancy, despite FITM having a statistically significant effect at the 5% level. All available data, however, indicates that TM and FITM have an impact on life expectancy, either directly or indirectly. This result is consistent with Nyahunda et al. (2017). Furthermore, advances in conventional medicine (ITM) have been shown to positively and statistically significantly affect life expectancy. This suggests that educating the public about recent advancements in conventional medicine might enhance its acceptability, use, and, ultimately, life expectancy. This discovery is consistent with Nahida and Feroz (2016) findings. Additionally, it was discovered that one element influencing life expectancy is medical treatment and that conventional medicine's (NTM) character has a statistically significant negative impact on it. This suggests that raising awareness of the effectiveness of traditional medicine might help inhabitants of Keffi, LG, embrace it as a viable option for medical care and, over time, extend life expectancy in the study region. This result runs counter to Nyahunda et al. (2017). Ultimately, it was shown that traditional medicine (TM) significantly and favourably affects the factors that determine life expectancy (LSE). This suggests that raising awareness of traditional medicine among the general public and enhancing its quality—particularly in terms of how affordable it is in comparison to orthodox medicine—can increase its acceptability and usage and, over time, raise life expectancy among those who live in the study area. This result conflicts with Omoleke's (2013) findings.

3.5. Policy Implementation

The research's conclusions have significant policy ramifications. This is because, based on the findings, it is imperative to enhance traditional medicine's therapeutic efficacy and quality while also making it more widely available to the general public. Stakeholders in the health sector, especially those with expertise in the manufacture of traditional medicine and government bodies overseeing its regulation in Nasarawa State and, therefore, Nigeria, should take notice of this significant discovery. In this manner, a greater number of people will become aware of the advantages of enhanced health and a longer life expectancy that come with the manufacturing of traditional medicine. The necessity for promotion and informing the general public of every new advancement and breakthrough made in traditional medicine, as this will increase its acceptance among a larger portion of the public in the study area, are other areas that demand the attention of traditional medicine policy regulators, health personnel, producers, marketers, and other stakeholders. The public has to be made more aware of the effectiveness of traditional medicine, as this will help citizens of the state embrace it as a viable option for medical care. Additionally, more work has to be done to raise public awareness of the value of traditional medicine because doing so may encourage individuals in Keffi, Nasarawa State, and therefore Nigeria's middle- and upper-class neighbourhoods to use it.

4.0. Conclusion and Recommendations

4.1. Conclusion

Based on the results, this study concluded that traditional medicine has the potential to significantly increase life expectancy in Nasarawa State and throughout Nigeria. However, many people have not chosen traditional medicine as their first option for medical care, possibly because most traditional healing and medical centres are located far away from low-income individuals who could find it easier to take advantage of their low cost. This has also been linked to the gradual promotion of orthodox medicine's benefits for longer life expectancies and the underreporting of important advancements and improvements in traditional medicine. These factors could have greatly increased public trust in traditional medicine's effectiveness and, consequently, its use. Additionally, it has been noted that producers of officially regulated modern traditional medicine frequently place exorbitant price tags on their products, making them relatively more expensive for low-income individuals who seek traditional medical care but are unwilling to use local traditional medicine due

to potential drawbacks and the relative lack of scientific sophistication of the methods used by local traditional healers.

4.2. Recommendations

The following recommendations were based upon the findings:

(i) Traditional health professionals, stakeholders and concerned government agencies should put efforts in place to improve and promote modern traditional medicine among the people most especially its effectiveness and medicinal quality, increase its accessibility to people and efficiently regulate its prices to increase its affordability for low-income earners.

(ii) Also, more needs to be done by traditional health professionals, other stakeholders, and concerned government to promote and inform the public more on every new improvement and breakthrough made in traditional medicine as this will increase its acceptance and utilization/usage among larger portion of the public.

(iii) There is crucial need to sensitize the general public on the efficacy of traditional medicine towards strengthening its acceptance as choice of medical treatment and by large public particularly among low- and middle-income earners.

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