



Knowledge, Attitudes, and Perception of Uptake of Preventive Healthcare Services among Health Workers and Rural Residents in Benue State, Nigeria

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ABSTRACT

Preventive healthcare services are a critical component, utilized to improve the health outcomes of population. This study assessed the knowledge, attitudes, and perception of uptake of preventive healthcare services among health workers and rural residents in Benue State, Nigeria. The study adopted a descriptive survey design and a positivist research paradigm. The study adopted a multistage sampling technique from rural communities and primary healthcare centres in the state. A structured questionnaire was used to collect data, from 411 respondents. The data obtained were analyzed using the Statistical Package for the Social Sciences (SPSS) version 23.0. Descriptive statistics such as frequencies, percentages, and means were used to answer the research questions, while Pearson's correlation coefficient was used to test the hypotheses at the 0.05 level of significance. Results of the study showed that respondents demonstrated a relatively high level of awareness and good knowledge of preventive healthcare services, with counselling services, cholesterol testing, and routine vaccinations being the most recognized. The findings further revealed that respondents exhibited a generally positive attitude toward preventive healthcare services, as indicated by a cluster mean above the decision benchmark. However, despite this positive disposition, the uptake of preventive healthcare services was only moderately high. The study also established that knowledge and attitude had a weak but statistically significant positive relationship with the uptake of preventive healthcare services. Based on the findings of the study, it was recommended that health authorities and community health workers should intensify health education campaigns to bridge the gap between knowledge and actual utilization of preventive services. Continuous training programmes should be implemented to strengthen the capacity of health workers in promoting preventive practices, while community-based strategies involving local leaders should be adopted to improve perception and encourage consistent uptake of preventive healthcare services among rural populations.

INTRODUCTION

One of the most vital social objectives globally is the attainment of the possible best health prestige. This is because health is a human right as well as an important endowment needed for better-quality productivity (Awiti, 2014). Health is an extremely valued asset, essential for improved productivity. Also, uptake of preventive health services is key to a healthy society and the possibility of an improved workforce with a longer life expectancy (Ofoli et al., 2020). Regarding poor health, an individual is confronted with an extensive diversity of actions that he or she can accept to advance health. Seeking health provision is among the many steps that an individual may commence.

The two major types of health are mental and physical health. Mental health connotes to a person's emotional and psychological wellbeing; and is not merely the lack of depression, worry or another disorder. It also depends on the ability to enjoy life, recoil back after hard experiences, achieve balance, adapt to adversity, feel secure and safe as well as achieve full potential (Jones, 2003). Mental health is as vital as physical health to a full, active life style. Physical and mental health are related. Invariably, a person who experiences physical health has his/her

bodily roles working at top presentation, due to not only lack of disease, but also frequent exercise, balanced nutrition and sufficient rest. Physical health help decrease the danger of health issues (WHO, 2017; Iorver, 2020).

Disease and infirmity are active procedures which starts before the affected individuals even know they are affected. Thus, avoidance of diseases mostly depends on pre-emptive actions which are termed preventive care (Bulliard and Chiolero, 2015). It comprises of actions taken for preventing disease, in contrast to disease treatment. Preventive healthcare services covers a wide spectrum of healthcare actions involving daily check-ups, disease screenings, blood pressure screening, dietary counselling, chemoprophylaxis, health education, use of insecticides, alcohol and drug misuse counselling, depression counselling, cancer screening for example mammography and X-ray and immunizations, which can be accepted to avoid the existence of disease and notice disease care (Liu et al., 2016; Vaidya et al., 2011; Obi et al., 2021).

Preventive health services consist screening for diseases mostly, chronic non-communicable diseases and other abnormal diseases that patients are most at danger of having. It also provides counselling services on implementation of healthy habits and disease prevention (Akinyemi et al., 2021). Repetitive or sporadic health investigation is a kind of preventive health services commonly embraced in many work-related health services to preserve the health of workers and improve their productivity. Routine or periodic health test is an avenue through which staffs receive endorsed health screening and mediations which support them to remain in a condition of fitness throughout their period of employment (Asuke et al., 2017). The rate of repetitive health test normally differs in the range of yearly or biannual based on the nature of workplace and their strange hazards (Asuke et al., 2017).

The attitudes of health workers and residents significantly impact the uptake of preventive healthcare services. Health workers in rural Benue State often grapple with challenges related to their own access to healthcare, which in turn affects their ability to effectively advocate for preventive measures effectively (Akinyemi et al., 2021). These practitioners may exhibit ambivalence towards preventive services due to inadequate training, limited resources, or scepticism about their effectiveness. Similarly, residents in rural areas may hold traditional beliefs or lack awareness about the importance of preventive health, leading to reluctance or resistance towards engaging with such services. Understanding these attitudes is critical for identifying potential areas of intervention to improve healthcare practices and acceptance (Akinyemi et al., 2021).

Preventive healthcare services are crucial for reducing disease burden and promoting long-term health, especially in rural settings where healthcare resources are often limited (Fufaa, 2024). In Benue State, Nigeria, the uptake of these services among health workers and residents in rural areas is notably low, despite the critical need for such interventions (Emmanuel & Ekoja, 2020). Thus, understanding the knowledge, attitudes, and perception of both health workers and residents and how they influence this low uptake is essential for developing effective strategies to enhance preventive care and improve health outcomes. By identifying and analysing these factors, the study aims to provide insights into the factors that impact the uptake of preventive healthcare practices in these communities. Therefore, this study aims to assess the knowledge, attitudes, and perception of uptake of preventive healthcare services among health workers and rural residents in Benue State, Nigeria.

METHODOLOGY

Research Philosophy and Research Design

This study adopted the positivist research paradigm, which is grounded in the belief that reality is objective and can be observed and measured independently of the researcher's influence (Ali, 2024; Pretorius, 2024). Furthermore, this study adopted a descriptive to investigate the uptake of preventive healthcare services among health workers and residents of rural areas in Benue State.

Area of the Study and Study Population

The study was conducted in some parts of Benue State of Nigeria among rural residents and healthcare workers



Sample Size and Sampling Technique

The study examined 411 for health workers employed at primary healthcare centres and residents of rural areas in Benue State. A Multi-stage sampling was employed to select participants for the study

Instrument of Data collection

Data was collected using a structured questionnaire designed to capture the determinants and uptake of preventive healthcare services among health workers and residents in rural areas of Benue State.

Validity of the Instrument

Validation of the survey instrument was assessed by experts from academia and practitioners from the field or industry (Elangovan & Sundaravel, 2021; Kania et al., 2024). A sample of the questionnaire was submitted to experts who validated the instrument for content accuracy and relevance. Knowledge score <4 was ranked as poor while score of 4 and above was ranked as good.

Reliability of the Instrument.

The reliability of the study was assessed using Cronbach's alpha, a statistical measure that evaluated the internal consistency of the research instrument (Park, 2021). This method determined how well the items in each construct were correlated and whether they collectively measured the intended concept (Muhamad et al., 2015; Taber, 2018). Cronbach's alpha values were calculated for each section of the instrument based on data collected during the pilot study. A threshold of 0.7 or higher was considered acceptable, with values above 0.8 indicating good reliability. The process allows the researcher to identify potential issues in the questionnaire design, language clarity, and overall feasibility of the data collection process (Muasya and Mulwa, 2023).

Pilot Study

The pilot study involved a small sample of participants drawn from a population similar to the main study's target group, ensuring relevance and applicability of the feedback obtained (Moore et al., 2011). The primary focus of piloting is to assess the reliability and psychometric properties of the items in the instrument (Schroder et al., 2011). Participants were requested to complete the research instrument. Preliminary analysis of pilot data assessed the reliability of the analytical methods, while ethical considerations were upheld. Reliability testing was conducted using Cronbach's alpha to measure the internal consistency of the items. Necessary adjustments were made based on the pilot results to refine the instrument and enhance its effectiveness for the main study. The completed questionnaires were ascertained from participant and arranged out for comfort of calculation.

Method of Data Analysis

Descriptive and inferential statistics were used. The facts gotten from the study were probed using simple percentages and means. Comparative analysis of the research was done by subjecting the data obtained to chi-square analysis using statistical package for social sciences (SPSS), version 23. Also, knowledge score <4 was ranked as poor while score of 4 and above was ranked as good. For Likert scale scoring, cluster mean which is the average of all the means of the items was computed. A cluster means below 3.0 indicates a negative attitude of participants while a cluster means of 3.0 and above signifies a positive attitude of participants in the study.

Ethical Consideration

Ethical approval was obtained from the university's Research Ethics Committee to enable conduct of studies on human subjects. Also, permission to give questionnaires to patients were gotten from the patients themselves using an informed consent form. Participation was made voluntary.

RESULTS

Table 1 shows the demographic characteristics of respondents. Results obtained revealed that the majority of the respondents were males (54.0%) who were married (52.3%). Majority of the participants (31.4%) were between the age range of 41–50 years and were Christians (53.3%). Higher frequency was observed for participants with tertiary education (49.4%) and among participants were artisans (41.4%). In terms of monthly income, majority of the participants were within the income bracket of ₦101,000–₦150,000 monthly (42.8%). Also, majority of the participants were from families with family size of 3–5 (45.0%).

Table 2 shows the presence of chronic illness among health workers and residents of rural areas in Benue State. Results obtained revealed that 16.5% of the participants were obese. This was followed by those with arthritis (15.1%), hypertension (7.1%), stroke (4.4%), diabetes (3.9%), heart disease (3.6%), liver disease (0.7%) and cancer (1.2%) and kidney disease (0.2%).

Table 3 shows the knowledge of preventive health services among health workers and residents of rural areas in Benue State. Results obtained revealed higher knowledge on counselling services (21.5%), followed by cholesterol testing (17.5%), routine vaccinations (16.2%), hypertension screening (15.7%), diabetes screening (13.7%), cancer screening (8.4%) and colonoscopy (7.0%).

The knowledge of adult vaccinations among health workers and residents of rural areas in Benue State is presented in Table 4. Results showed that yellow fever vaccine (13.8%), COVID-19 vaccine (13.1%), and meningitis vaccine (12.8%) were the most recognized adult vaccines among the respondents. Hepatitis vaccine (11.7%), HPV vaccine (10.7%), and measles, mumps and rubella vaccine (10.6%), BCG vaccine (7.3%), pneumococcal conjugate vaccine (6.8%), influenza vaccine (5.2%), pneumococcal polysaccharide vaccine (3.3%), flu vaccines (3.1%), and varicella zoster vaccine (1.6%) were also recognised by participants.

The awareness of preventive health services among health workers and residents of rural areas in Benue State is presented in Figure 1. Findings revealed that the majority of the respondents (80.8%) were aware of preventive health services, 15.6% were not aware while 49.9% of the respondents demonstrated good knowledge of preventive health services in Benue State.

The general knowledge of preventive health services among health workers and residents of rural areas in Benue State is presented in Figure 2. Findings revealed that the majority of the respondents (66.9%) had good knowledge of preventive health services, while 33.1% demonstrated poor knowledge of preventive health services in Benue State.

Table 1: Socio-demographic Information of Participants

Variables	Frequency	Percentage (%)
Gender		
Male	222	54.0
Female	189	46.0
Age (years)		
<20	44	10.7



20-30	97	23.6
31-40	109	26.5
41-50	129	31.4
>50	32	7.8
Marital Status		
Single	157	38.2
Married	215	52.3
Divorced	21	5.1
Separated	18	4.4
Religion		
Christianity	219	53.3
Islam	43	10.5
Traditional Worshiper	92	22.4
Others	57	13.9
Education		
No formal	12	2.9
Primary	61	14.8
Secondary	135	32.8
Tertiary	203	49.4
Occupation		
Civil Servant	85	20.7



Farmer	90	21.9
Trader	63	15.3
Artisan	170	41.4
Others	3	0.7
Monthly Income		
<50, 000	64	15.6
50 – 100,000	104	25.3
101 – 150, 000	176	42.8
>150, 000	67	16.3
Family Size		
<2	43	10.5
3-5	185	45.0
6-9	109	26.5
>9	74	18.0

Source: Field Survey, (2026)

Table 2: Presence of Chronic Illness among Health Workers and Residents of Rural Areas in Benue State

Chronic Illness	Frequency	Percentage (%)
Stroke	18	4.4
Diabetes	16	3.9
Hypertension	29	7.1
Arthritis	62	15.1
Obesity	68	16.5



Heart disease	15	3.6
Cancer	5	1.2
Kidney Disease	1	0.2
Liver Disease	3	0.7

Source: Field Survey, (2026)

Table 3: Knowledge of Preventive Health Services among Health Workers and Residents of Rural Areas in Benue State

Knowledge of Preventive Health Services	Frequency	Percentage (%)
Hypertension Screening	270	15.7
Diabetes screening	236	13.7
Cancer screening	144	8.4
Routine vaccinations	279	16.2
Cholesterol testing	302	17.5
Colonoscopy	121	7.0
Counselling services	371	21.5

Source: Field Survey, (2026)

Table 4: Knowledge of Adult Vaccinations among Health Workers and Residents of Rural Areas in Benue State

Counselling Services	Frequency	Percentage (%)
COVID-19 Vaccine	313	13.1
Flu vaccines	73	3.1
Yellow fever	329	13.8
HPV vaccines	256	10.7
Meningitis vaccine	304	12.8
Hepatitis vaccine	280	11.7
BCG	173	7.3
Pneumococcal polysaccharide vaccine	78	3.3

Pneumococcal conjugate vaccine	163	6.8
Measles, Mumps and Rubella vaccine	253	10.6
Influenza vaccine	123	5.2
Varicella zoster	39	1.6

Source: Field Survey, (2026)

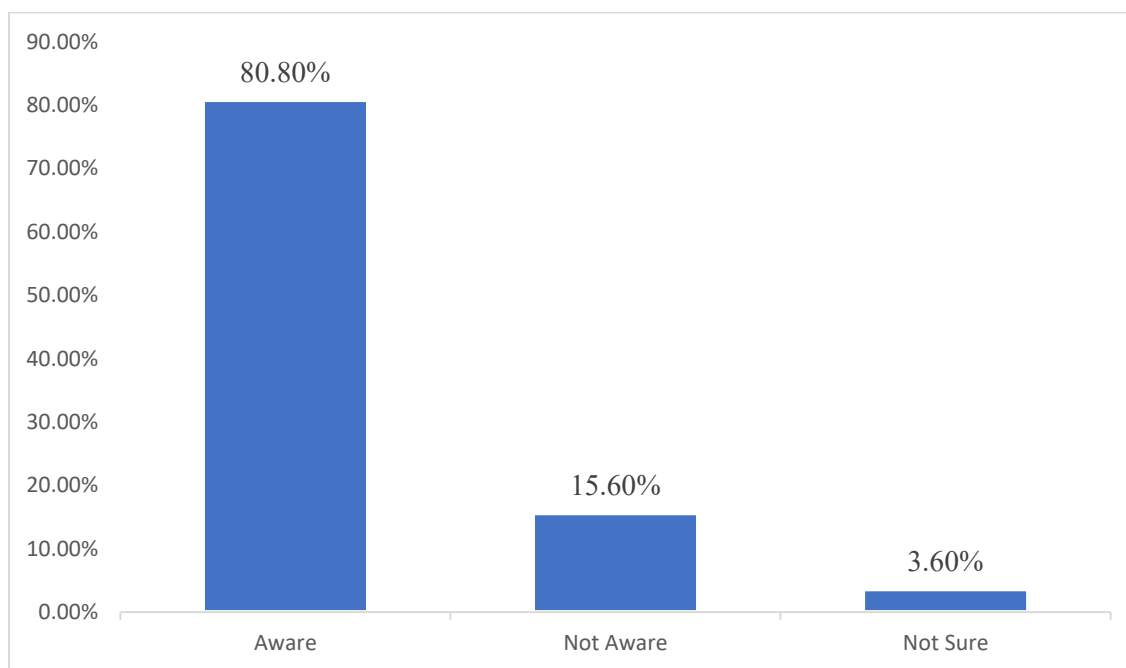


Figure 1: Awareness of Preventive Health Services in Benue State

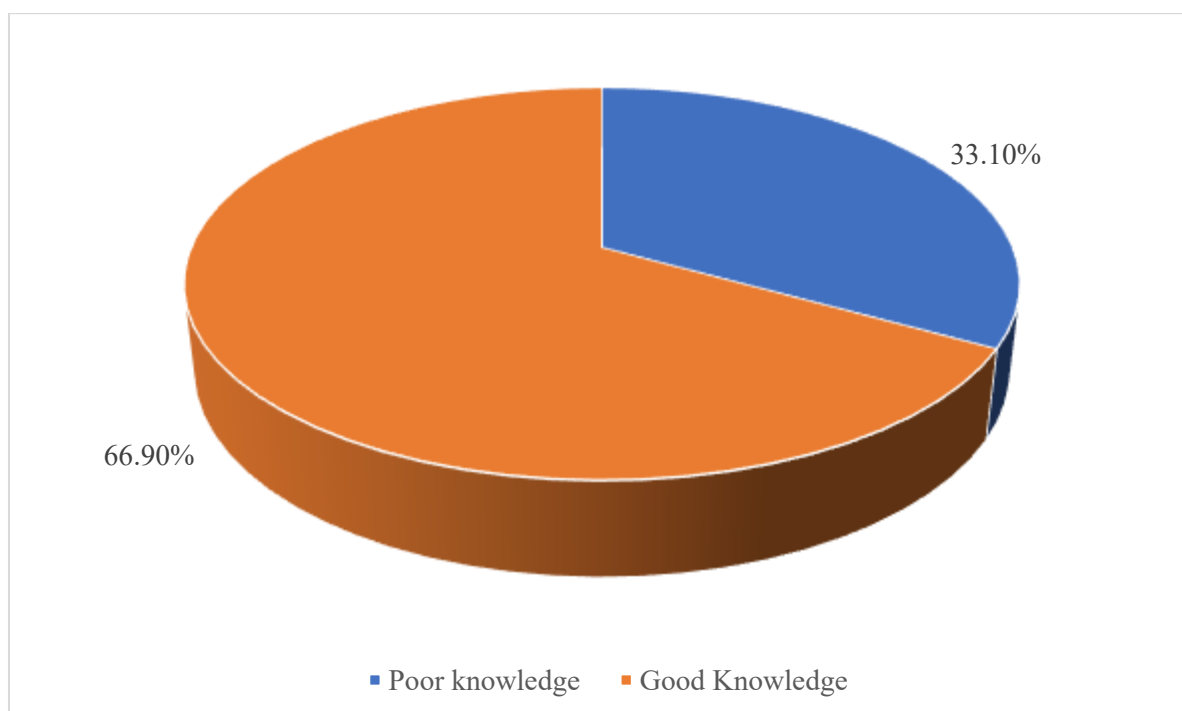


Figure 2: General Knowledge of Preventive Health Services in Benue State

The mean analysis of the attitude towards preventive health services among health workers and residents of rural areas in Benue State is shown in Table 5. Results obtained show that items 1–9 had mean scores of 4.09, 3.93, 3.85, 2.37, 4.19, 4.05, 3.67, 3.97, and 2.12 respectively with a cluster mean of 3.21. Since the cluster mean score is above the decision point of 3.0, it implies that respondents generally have a positive attitude towards preventive health services in Benue State.

The rating of uptake of preventive health services among health workers and residents of rural areas in Benue State is presented in Table 6. Findings revealed that the majority of the respondents (63.3%) perceived the uptake of preventive health services to be good, 24.6% rated it as average while (12.2%) rated their uptake of preventive health services being poor.

Table 5: Attitude towards Preventive Health Service in Benue State

S/N	Attitudes	Mean	Std. D
1	Preventive health services are for maintaining good health	4.09	1.08
2	It is important to visit a healthcare worker/doctor when it is necessary	3.93	0.83
3	It is good to get tested routinely to ensure am healthy	3.85	1.22
4	Accessing preventive health services is only necessary when one is already sick	2.37	1.41
5	It is important to seek care often to prevent spontaneous diseases	4.19	2.69
6	General check-up on a regular basis is best for everyone	4.05	1.11
7	I get more sleep and rest well only when I am sick	3.67	1.25
8	I abstain from smoking and alcohol only when I am on medication	3.97	1.21
9	Uptake of preventive health services is less important than uptake of treatment services	2.12	1.21
	Cluster Mean	3.58	3.87

Std. D = Standard Deviation

Source: Field Survey, (2026)

Table 6: Perceptions on Uptake of Preventive Health Services among Heath Works and Residents of Rural Areas in Benue State

Uptake of PHS	Frequency	Percentage (%)
Good	260	63.3
Average	101	24.6
Poor	50	12.2
Total	411	100.00

Source: Field Survey, (2026)

The result in the table 7 shows the relationship between knowledge of preventive health services and the uptake of such services among health workers and residents in rural areas of Benue State. The Pearson correlation coefficient ($r = 0.144$) indicates a weak positive relationship between knowledge and uptake of preventive health services. This implies that as knowledge of preventive health services increases, the uptake of these services also tends to increase, although the strength of the relationship is low. The p-value (0.004) is less than 0.01, indicating that the relationship is statistically significant at the 1% level. Therefore, the null hypothesis stating that there is no significant relationship between knowledge and uptake of preventive health services is rejected.

Table 8 presents the relationship between attitude towards preventive health services and their uptake among health workers and residents in rural areas of Benue State. The Pearson correlation coefficient ($r = 0.151$) indicates a weak positive relationship between attitude and uptake of preventive health services. This implies that respondents with more positive attitudes towards preventive health services are slightly more likely to utilize such services. The p-value (0.002) is less than 0.01, indicating that the relationship is statistically significant at the 1% level. Therefore, the null hypothesis stating that there is no significant relationship between attitude and uptake of preventive health services is rejected.

Table 7: Correlation between Knowledge of Preventive Health Services and Uptake

Variables	Knowledge (r)	Uptake (r)
Knowledge of Preventive Health Services	1	0.144**
Uptake of Preventive Health Services	0.144**	1
Sig. (2-tailed)	—	0.004

Source: SPSS Output, (2026).

Table 8: Correlation between Attitude Towards Preventive Healthcare Services and Uptake

Variables	Attitude (r)	Uptake (r)
Attitude towards Preventive Health Services	1	0.151**
Uptake of Preventive Health Services	0.151**	1
Sig. (2-tailed)	—	0.002

Source: SPSS Output, (2026)

DISCUSSION OF FINDINGS

The study was conducted to assess the knowledge, attitudes, and perception of uptake of preventive healthcare services among health workers and rural residents in Benue State, Nigeria. Findings from the study revealed that obesity (16.5%) and arthritis (15.1%) were the most prevalent chronic illnesses among the respondents. These conditions remain the leading contributors to morbidity and mortality globally. These conditions are known to increase the risk of cardiovascular diseases and reduce overall quality of life. Chronic illnesses often impact physical health, psychological wellbeing, and functional capacity. Therefore, the relatively lower prevalence recorded in this study may suggest a potentially healthier population. However, it may also reflect inadequate detection due to poor uptake of preventive health services. Improving access to screening and preventive healthcare will be essential for early detection and effective management of chronic illnesses in rural Benue

State. This finding agrees with Faronbi et al. (2020), Ahmed et al. (2025), Jenewari and Tolulope (2025), and Idris et al. (2020) who reported these chronic illnesses in their studies.

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Findings from the study revealed that majority of the respondents (80.8%) were aware of preventive health services. The higher awareness recorded for hypertension screening and vaccination may be attributed to the frequent public health campaigns and community health outreach programmes that focus on these conditions in Nigeria. These findings are similar to the report of Ofoli et al. (2020), whose study revealed that a majority of respondents had good awareness of preventive healthcare services such as blood pressure checks and vaccination. It is also consistent with the study of Brisibe et al. (2014) which reported that about 76.3% of respondents were aware of at least one form of preventive healthcare services. The relatively high awareness observed in the present study could be attributed to increasing public health campaigns and community-based health education programmes in Nigeria, particularly those carried out through primary healthcare centres and mass media.

In contrast to the findings of this study, Akinyemi et al. (2021) who reported that less than half of their study participants were aware of preventive healthcare services. The discrepancy between the two studies may be attributed to differences in the study population and geographical settings. While the study by Akinyemi et al. (2021) focused largely on community residents with limited access to health information, the present study included health workers alongside rural residents, thereby increasing the likelihood of higher awareness levels.

The study also revealed that the majority of respondents (66.9%) showed good knowledge of preventive health services while 33.1% had poor knowledge. This finding is consistent with the report of Ofoli et al. (2022) who observed that more than 90% of respondents were knowledgeable about the benefits of preventive healthcare services. The similarity between the findings indicates that awareness of preventive healthcare services is gradually improving in Nigeria. Similarly, Bhattacharya et al. (2013) reported relatively high knowledge of recommended preventive vaccines among young adults in the United States.

In terms of knowledge of adult vaccination, the study found that yellow fever vaccine, COVID-19 vaccine and meningitis vaccine were the most recognised vaccines among the respondents. Vaccines such as influenza and varicella zoster were less recognised. This pattern may be explained by the fact that diseases such as yellow fever and COVID-19 have received considerable attention through national and global vaccination campaigns in recent years. This finding aligns with the study of Bhattacharya et al. (2013) which reported that awareness and willingness to ask physicians about vaccines were relatively high among young adults, although actual vaccination rates remained low. This suggests that although individuals may be aware of vaccines, other factors such as cost, perceived risk, or accessibility may influence their decision to receive vaccination.

The findings of this study showed that respondents generally had a positive attitude toward preventive health services. This indicates that most health workers and residents recognize the importance of preventive healthcare in maintaining good health and preventing diseases. This finding is consistent with the study of Akinyemi et al. (2021) which reported that about 92.4% of respondents had positive attitudes toward preventive healthcare services. It is also similar to the report of Belete et al. (2021) whose findings revealed a positive attitude of respondents towards preventive health service. Brisibe et al. (2014) also reported that most participants believed preventive healthcare services were effective in preventing diseases, indicating a generally favourable attitude towards such services. A possible reason for the positive attitude towards preventive health services can be

attributed to their high awareness rate on preventive health services making them have a positive drive towards it. The similarity between the findings suggests that individuals generally recognize the importance of preventive healthcare in maintaining good health. A positive attitude toward preventive health services may therefore serve as a foundation for improving the adoption of such services when other barriers are addressed.

CONCLUSION AND RECOMMENDATION

In conclusion, the study demonstrates that while health workers and rural residents in Benue State exhibit relatively high awareness and good knowledge of preventive healthcare services, alongside a generally positive attitude toward such services, the actual uptake remains only moderately strong and is influenced by multiple underlying factors. The presence of common chronic conditions such as obesity and arthritis further underscores the need for improved preventive practices and early detection strategies. Importantly, the statistically significant but weak positive relationships between knowledge and uptake, and between attitude and uptake, suggest that knowledge and favourable attitudes alone are insufficient to drive optimal utilization of preventive healthcare services.

The findings, grounded in the positivist paradigm, demonstrate measurable relationships between knowledge, attitudes, and the uptake of preventive healthcare services among health workers and rural residents. The results highlight that although awareness exists, utilization remains suboptimal due to attitudinal and structural barriers.

Based on the findings of the study, it was recommended that health authorities and community health workers should intensify health education and awareness campaigns on the importance of preventive health services to increase awareness of preventive healthcare services among rural populations, continuous training and capacity building programmes should be organized for health workers to enhance their ability to educate, influence attitudes, and encourage community members to utilize preventive healthcare services, and community leaders, religious leaders, and other stakeholders should be actively involved in promoting preventive health practices in order to address cultural and social perceptions that may hinder the uptake of preventive health services.

LIMITATIONS

This study relied on self-reported data, which may be subject to recall errors and reporting bias. Respondents may also have provided socially desirable answers, particularly regarding their knowledge and use of preventive healthcare services. In addition, the cross-sectional design of the study limits the ability to establish causal relationships between knowledge, attitudes, and uptake of preventive healthcare services. These limitations may affect the generalizability and interpretation of the findings.

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