Knowledge and Practice of Preventive Measures Against Communicable Diseases among Traders in Anambra State, Nigeria

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DOI: https://dx.doi.org/10.51244/IJRSI.2026.13010174

Received: 25 January 2026; Accepted: 30 January 2026; Published: 11 February 2026

ABSTRACT

Communicable diseases remain a major public health concern in Nigeria, especially among market traders who face daily exposure to infection risks. This study assessed the knowledge and practice of preventive measures against communicable diseases among traders in Anambra State, Nigeria. A descriptive cross-sectional study was conducted among 285 traders selected using a multistage sampling technique. Data were collected using a pre-tested, interviewer-administered, and validated questionnaire. Analysis was performed using IBM-SPSS version 27, employing descriptive statistics and chi-square tests at a 5% significance level. The respondents were predominantly between 25–44 years (mean age: 38±12 years), with males constituting 61.1%. Most were Christians (83.2%), married (47.7%), and educated up to the secondary level (39.3%). Awareness of communicable diseases was high (94.0%), with television (73.9%), friends (61.0%), and radio (60.7%) as major information sources. Although 91.3% knew about proper handwashing and 84.1% about environmental sanitation, only 7.4% demonstrated good knowledge. However, 88.8% practiced at least one preventive measure especially handwashing (90.5%) and body hygiene (71.5%). Poor practice was attributed to disbelief in preventive measures (61.1%) and ignorance (58.3%). Factors such as negligence (OR=0.380, p=0.038) and laziness (OR=0.308, p=0.025) significantly affected preventive practices. Marital status was significantly associated with practice levels (p=0.05), and males attended more health talks than females (p=0.004). Despite high awareness, there was a gap between knowledge and actual preventive practices, influenced by negligence, laziness, and misconceptions. Continuous health education, targeted seminars, and community-based interventions are recommended to improve compliance with preventive measures among traders.

Keywords: Knowledge, Preventive measures, Communicable diseases, Traders, Anambra State, Health practices.

INTRODUCTION

Communicable diseases remain a significant cause of morbidity and mortality globally, particularly in low and middle-income countries such as Nigeria, where socio-economic and environmental factors facilitate disease transmission. According to the World Health Organization (WHO), communicable diseases account for more than 60% of the total disease burden in sub-Saharan Africa, largely due to inadequate health education, poor

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue I January 2026

sanitation, and limited access to preventive services .[1] In Nigeria, outbreaks of preventable diseases such as cholera, tuberculosis, Lassa fever, and COVID-19 continue to highlight the gaps in knowledge and preventive health practices among various population groups .[2,3]

Traders in open markets represent a vulnerable population due to the nature of their occupation, which involves daily contact with numerous individuals and frequent exposure to unhygienic environments. Market settings often lack adequate sanitary infrastructure, making them potential hotspots for disease transmission .[4] Furthermore, the knowledge and perception of disease prevention among traders directly influence their health behaviours and compliance with preventive measures such as hand hygiene, use of protective devices, and environmental cleanliness. [5,6]

Some studies show that while awareness of communicable diseases is generally high, actual preventive practices remain suboptimal due to misinformation, cultural beliefs, negligence, and limited access to reliable health information .[7,8] A study in northern Nigeria revealed that over 80% of respondents had heard about tuberculosis, yet less than half engaged in consistent preventive actions such as proper cough etiquette and use of face masks .[9] Similarly, a study conducted among traders in Ghana found discrepancies between awareness and practice of hygiene measures, with socioeconomic and educational factors influencing compliance levels .[10] The COVID19 pandemic further emphasized the importance of behavioural adherence to preventive measures such as handwashing, use of face masks, and social distancing. However, these measures have been inconsistently adopted in informal markets, where economic necessity often overrides health consciousness .[11] Research also indicates that gender, educational level, and marital status significantly influence engagement in disease prevention practices .[12,13] For instance, males are more likely to attend health talks and seminars, while females often depend on informal sources such as peers for health information .[14] Despite the considerable awareness campaigns by the Nigerian Centre for Disease Control (NCDC) and local health agencies, there remains a wide gap between knowledge and the actual practice of preventive measures in many communities. Studies in southeastern Nigeria have suggested that misconceptions, negligence, and scepticism about the efficacy of preventive strategies hinder behavioural change.[15,16] Understanding these behavioural and socio-demographic dynamics is crucial for designing targeted health promotion interventions that address the unique needs of market traders. Therefore, this study aimed to assess the knowledge and practice of preventive measures against communicable diseases among traders in Nnewi, Anambra State, Nigeria. The findings are expected to contribute to public health planning by identifying barriers to preventive practices and informing evidence-based health education programs aimed at improving disease prevention at the community level.

CONCEPTUAL FRAMEWORK

This study adopts and adapts a socio-ecological conceptual framework consistent with public health models examining preventive health behaviours in low- and middle-income settings. [17,18,19] The framework explains how a complex of influence shape the knowledge and practice of preventive measures against communicable diseases among traders in Anambra State, Nigeria. The independent variables are grouped into four levels (See appendix1)

Individual factors – Age, sex, educational level, income, health beliefs, and personal risk perception.

Social factors – Peer influence, family support, cultural norms, and community interactions within the market.
Environmental factors – Sanitation conditions, availability of clean water, waste disposal systems, and level of crowding in markets.

Systemic factors – Access to health education, media exposure, healthcare services, and government public health interventions.

These independent variables influence knowledge of communicable diseases (causes, symptoms, and prevention), which in turn directly affects the practice of preventive measures such as proper handwashing, environmental sanitation, safe sexual practices, and personal hygiene. The framework assumes that while knowledge is a key mediator, contextual barriers within social, environmental, and systemic domains may modify the transition from knowledge to actual practice. This framework provides a structured basis for analysing the multidimensional determinants of preventive health behaviour among traders.

METHODOLOGY

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Study Area

The study was carried out in Anambra state which is located in the South-eastern region of the country. Anambra state was created on 27 August 1991 with Awka as a capital. Anambra state has 21 local government areas. Its estimated population projection in 2025 is estimated to be 6,358,311, with a growth of about 6.8% since 2022, when the population was projected at 5,953,500. Nnewi, the second-largest city in Anambra State in southeastern Nigeria, is renowned for its industrial prowess, particularly in transportation. The city, located in Nnewi North Local Government Area, consists of four quarters: Otolo, Uruagu, Umudim, and Nnewichi. It is well-known for fostering a diverse array of transportation entrepreneurs, from transporters to spare parts dealers and manufacturers.[20] Nnewi's economic landscape is characterized by a robust entrepreneurial spirit, with a significant presence in trading, farming, and manufacturing sectors. At the heart of Nnewi's commercial activity lies the renowned Nkwo Nnewi market, serving as a major import and export point for spare parts in Nigeria. Comprising various sectors including Ime Afia (Nkwo Nnewi General Market), Timber Shed Market, Motor Spare-Parts Market, New Auto Spare-Parts Market (Machine Parts Market), Building Materials Market, Generator Spare-Parts Market, and Electronics Market, the market hosts approximately 5000 shops and a population exceeding 10,000 people. [21]

Study Design

This study was an analytical cross-sectional study used to determine the level of knowledge and practice of preventive measures against communicable diseases among traders in Nkwo Nnewi.

Study Population

This study involved traders in Nkwo Nnewi market, in Anambra State. *Inclusion Criteria*

All traders including men and women in Nkwo Nnewi.

Exclusion Criteria

1.Traders who were away during the time of the study.

2.Traders who did not consent to the study.

Sample Size Determination

The sample size was determined using the Cochran's formula for descriptive studies. To arrive at the sample size, a percentage awareness of 79.8% was obtained in a study in Kano by Yaya et al.[22] Using Cochran's formula,

$$n = \frac{z^2pq}{d^2}$$

Where n = the minimum sample size,

z - the standard normal deviate = 95% i.e.; 1.96 (constant)

p - the estimated proportion of attributes that is present in a population = 0.798

q - the proportion of persons in the population without factors under study.

d = the degree of precision = 5% (0.05)

n= 247.70~ 248

Compensating for 10% non-response; the formula

$$nf = \frac{n}{}$$

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[1+(n/N)], was used.

The adjusted sample size = 275.55~ 276

The final sample size was 276

Sampling technique

Multistage sampling technique was employed which include-

Stage 1: A stratified random sampling technique in which Anambra state is stratified into three senatorial zones (Anambra Central, Anambra South and Anambra North). Anambra South was selected randomly.

Stage 2: Selection of Local government area.

The Anambra South Senatorial Zone comprises seven Local Government Areas (LGAs): Aguata, Ekwusigo, Ihiala, Nnewi North, Nnewi South, Orumba North, and Orumba South,

By simple random sampling method, Nnewi North was selected out of the selected sector.

Stage 3: Selection of market

The major markets in Nnewi North LGA include Nkwo Nnewi main market (ime afia), new motorcycle spare parts market, Agbọ-Edo motor spare parts market, electrical/electronics parts market, building materials market, nwagbala market (mgbuka machine parts), generator parts market, Nnewi timber dealers market (ọgbọ osisi), amuko market, and eke amaobi market. The Nkwo Nnewi main market was randomly selected.

Stage 4: Selection of participants

The participants were selected using the systematic sampling technique. The shops were already numbered. The total number of shops were noted. The K interval was calculated. The first shop/ participant was selected by simple random sampling method. After every K interval the next participant was selected until the ample size was completed.

Study Instruments

A semi-structured interviewer-administered questionnaire tailored to assess their knowledge and practices regarding preventive measures against communicable diseases was used. The questionnaire was divided into 6 sections.

Section A of the questionnaire focused on the socio-demographic information. Section B assessed the participants' level of knowledge regarding communicable diseases and their associated preventive measures. The level of knowledge on communicable diseases was assessed with 20 questions. Each question was assigned a score of 5 for the correct response and 0 for the wrong response. This amounted to a maximum total score of 100. The total scores of respondents were then calculated. A grading of poor or intermediate or good/high level of knowledge was then assigned with the following criteria: Poor Knowledge: 0-49%; intermediate Knowledge: 50-69%; and good/High Knowledge: 70-100%

Section C examined the traders' current practices concerning preventive measures against communicable diseases. Section D explored any potential association between traders' engagement in preventive measures and their knowledge levels. Section E investigated factors influencing traders' knowledge and practices regarding preventive measures against communicable diseases. Section F was the overall assessment. The questionnaire used in this study was adapted from relevant literature and underwent verification by our supervisors.

Data Collection Methods

Five research assistants were recruited for this study. These assistants were university students, all belonging to the Igbo ethnic group and fluent in both Igbo and English languages. They were trained for two days on mass

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administration, communication, organization, and on-the-spot screening of the questionnaire for errors before collection.

Pretesting

The instruments for this study were pretested amongst 20 traders in Main Market Onitsha in Anambra state to ascertain the clarity, suitability, and comprehensiveness of the questionnaire, time spent to answer, and the need for intervention points of the research assistants.

Data Collection

Interviewer-administered questionnaires were distributed to all eligible traders with the assistance of trained research assistants. Completed forms were then collected by the research assistants and assessed for errors and corrections.

Statistical Analysis

The data were analyzed using the International Business Machines-Statistical Package for Social Sciences (IBMSPSS) version 27. Descriptive and inferential statistics were done, frequency distributions of all variables were analyzed, and chi-square test was used to assess the association between independent variables (sociodemographic characteristics) and dependent variables (knowledge and practice of preventive measures). A pvalue<0.05 was set as level of statistical significance.

Ethical Considerations

Ethical approval was sought from the Ethical Committee of Nnamdi Azikiwe University Teaching Hospital (NAUTHEC), before the study began. The ethical approval reference number is NAUTH/CS/66/VOL.16/VER/158/2024/137 and dated 28th August, 2024. Permission and informed consent were obtained from the respondents. To ensure confidentiality, participants' names or any means of identification were omitted from the questionnaire.

RESULTS

In the study a total of 285 questionnaires were administered and the response rate was 100%.

Most of the participants were aged between 25 -44 years, with 25-34 years accounting for 33.7%. The mean age was 38 years, and the standard deviation was 12 years. More than half of the respondents were males, making up 61.1%. Rural and urban residence accounted for 47.7% and 52.3% respectively. Most of the respondents were educated with 39.3% attending secondary school while 34.0% attended primary school. continues with the sociodemographic characteristics of the respondents. Most of the respondents were Igbo (88.1%), and Christians

(83.2%). Married respondents accounted for 47.7% and singles accounted for 44.9% (See Table 1). Most of the respondents (94.0%) have heard about communicable diseases and preventive measures. Regarding the sources of information, television accounted for 73.9%, friends accounted for 61.0% and radio accounted for 60.7%. Health professionals accounted for 43% while the least was seminars, accounting for 11.4% (See Table 2). For a list of diseases, 90.2% of respondents identified chickenpox as a communicable disease, followed by tuberculosis (79.6%) and HIV (70.5%). 21.5% of respondents identified cancer as a communicable disease. Regarding causes of communicable diseases, most of the respondents, (83.4%) identified bodily fluid or contact with an infected person as one of the causes of communicable disease. This was closely followed by poor body hygiene (78.3%) and unprotected sexual intercourse (70.4%). Concerning signs and symptoms of communicable diseases, most of the respondents recognized fever (92.4%). This was followed by frequent cough (73.6%) then vomiting and stooling (71.5%). For preventive measures against communicable diseases, most of the respondents know about proper hand washing (91.3%). This was followed by strict environmental cleanliness/ sanitation (84.1%) and then using protective devices during sexual intercourse (63.9%) (See table 3). The Mean Score (Level of Knowledge) of respondents was 42 with a Standard deviation of 18. This is interpreted as poor level of knowledge of communicable diseases and its prevention. 81.1% of respondents had Poor Level of Knowledge, while 11.6% and 7.4% had Intermediate and Good/High Level of Knowledge respectively (See table 4). Among

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the respondents, 253 (88.8%) were practicing one form of preventive measure against communicable disease, and 229 (90.5%) of these respondents practice proper hand washing. This was followed by good body and personal hygiene (71.5%) and then strict environmental cleanliness/sanitation (69.6%). For those that don't practice any form of preventive measure against communicable diseases the commonest reason was that they did not believe in the potency of the measures listed (61.1%) (See Table 5). The result show that 89.8% of respondents think that their level of knowledge of communicable diseases directly influence their practice of preventive measures against it. It was found that 90.5 percent of respondents think that attending seminars or lectures pertaining to communicable diseases will influence strict adherence to preventive measures. As high as 64.2 percent of respondents have never attended any seminar or health talks geared towards communicable diseases and its preventive measures. More males attend health talks (70.7%) than females (54.1%) and the difference was statistically significant (p=0.004). Most of the respondents listed illiteracy as the commonest factor, which was closely followed by ignorance. Majority (77%) of respondents have received information about communicable diseases and its prevention from a health care provider. Most of the respondents (92%) have received information about communicable diseases and its preventive measures from other sources. Among the factors explored, Negligence (OR= 0.380; p-value= 0.038) and Laziness (OR=0.308; p-value=0.025) were statistically significant in relation to practice of preventive measures against communicable diseases. Respondents who were Negligent or Lazy were less likely to practice preventive measures against communicable diseases. See table 6. A statistically significant relationship was found between Marital status and practice of preventive measures against communicable diseases.

Table 1: Socio-demographic characteristics of the respondents (n= 285)

Variable	**Frequency**	**Percentage**
Age (Years)		
15-24	38	13.3
25-34	96	33.7
35-44	61	21.4
45-54	56	19.6
55-64	24	8.4
65-74	10	3.5
Mean ±SD	**38±12**	
Gender		
Female	111	38.9
Male	174	61.1
Place of Residence		
Rural	136	47.7
Urban	149	52.3
Level of Education		
None	9	3.2
Primary	97	34.0
Secondary	112	39.3
Tertiary	67	23.5

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Tribe		
Hausa	20	7.0
Igbo	251	88.1
Ika	1	0.4
Kalabari	1	0.4
Yoruba	12	4.2
Religion		
African Traditional Religion	21	7.4
Christianity	237	83.2
Islam	27	9.5
Marital Status		
Divorced	5	1.8
Married	136	47.7
Separated	10	3.5
Single	128	44.9
Widowed	6	2.1

Table 2: Awareness of Communicable Diseases and preventive measures

Variable	**Frequency**	**Percentage**
Have you ever heard of communicable diseases and its preventive measures?		
Yes	268	94.0
No	17	6.0
If yes, what was your source of information?		
Television	201	73.9
Radio	165	60.7
Newspaper	144	52.9
Church	141	51.8
Friends	166	61.0
Health professionals	119	43.8
Social media	81	29.8
Seminars	31	11.4

Table 3: Knowledge of Communicable Diseases and Preventive Measures

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Variable	Frequency	Percentage
The following are communicable diseases		
Chicken pox	248	90.2
Asthma	103	37.5
Tuberculosis	219	79.6
HIV	194	70.5
Cancer	59	21.5
The following are causes of communicable diseases		
Regular brushing of teeth	136	49.1
Poor body hygiene	217	78.3
Bodily fluid or contact with an infected person	231	83.4
Unprotected sexual intercourse	195	70.4
Lateness to Market	42	15.2
What are signs/symptoms of communicable diseases you know?		
Fever	256	92.4
Vomiting and stooling	198	71.5
Mental stability	105	37.9
Frequent cough	204	73.6
Weight gain	67	24.2
What preventive measures against communicable diseases do you know?		
Proper handwashing	253	91.3
Coming to market early	95	34.3
Strict environmental cleanliness/sanitation	233	84.1
Using protective devices during sexual intercourse	177	63.9
Taking herbal medications regularly	56	20.2

Table 4: Grading of Level of Knowledge of Communicable Diseases and Preventive Measures (n= 285)

Level of Knowledge	Frequency	Percentage
Poor	231	81.1
Intermediate	33	11.6
Good/High	21	7.4
TOTAL	285	100.0

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Mean ± S.D	**42 ± 18 (Poor Knowledge)**	

Table 5: Practice of Preventive Measures Against Communicable Diseases(n=285)

Variable	Frequency	Percentage
Are you practicing any preventive measures against communicable diseases?		
Yes	253	88.8
No	32	11.2
TOTAL	285	100
If yes, which of these		
Proper hand washing	229	90.5
Good body and personal hygiene	181	71.5
Strict environmental cleanliness/Sanitation	176	69.6
Use of protective devices during sexual intercourse	124	49.0
Abstinence	83	32.8
If No, why?		
Don't believe in the potency of the measures listed above	22	61.1
Ignorance	21	58.3
Religious reasons	14	38.9
Already battling with many communicable diseases	8	22.2
What do you do if you notice that your fellow market trader has communicable diseases		
Strict avoidance	237	83.2
Enlighten others on how to avoid being infected	177	62.1
Fast and pray for divine intervention	114	40.0
Rush to hospital	142	49.8
Take the person to a herbalist	97	34.0
Stay indifferent	58	20.4

Figure 2: Bar Chart Showing Factors Influencing Adoption of Preventive Measures Against Communicable Diseases

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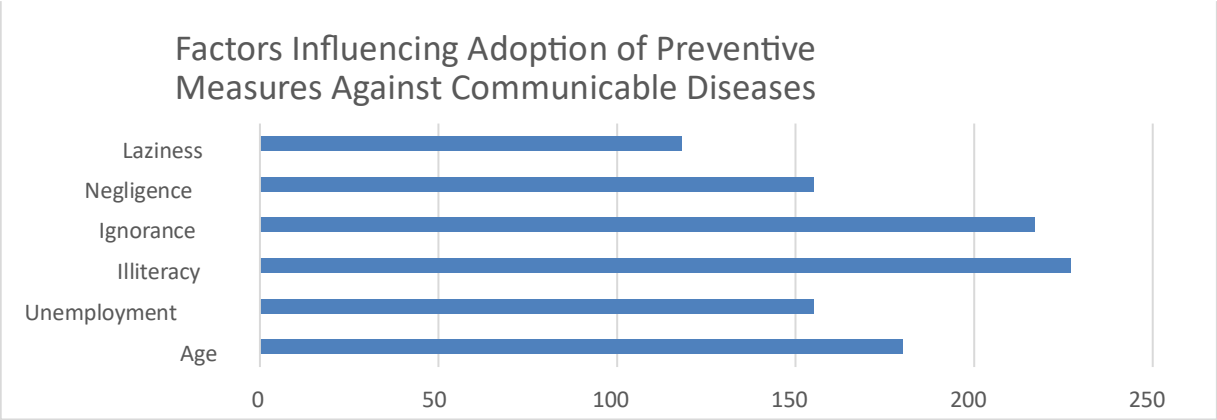

Table 6. Binary Logistic Regression Showing Factors Influencing Adoption of Preventive Measures

Factors Influencing Practice of Preventive Measures	**Are you practicing any preventive measures against communicable diseases**	
	Odd's Ratio	**p-value**
Age	0.457	0.063
Unemployment	1.653	0.215
Illiteracy	0.799	0.617
Ignorance	0.664	0.334
Negligence	0.380	**0.038****
Laziness	0.308	**0.025****

DISCUSSION

The findings in the study revealed a high level of awareness about communicable diseases (94.0%), yet only 7.4% demonstrated good knowledge, and 88.8% practiced at least one preventive measure. This discrepancy between awareness and practice underscores a persistent gap between theoretical understanding and practical health behaviours, a pattern consistent with findings across Nigeria and other developing countries.[3,4] The study found that most respondents recognized handwashing (91.3%) and environmental sanitation (84.1%) as key preventive measures. This aligns with the report by Yusuf et al. in Oyo State, Nigeria, where traders exhibited high awareness of hygiene practices but poor compliance.[5] Similarly, Adebisi et al. identified that while 93% of respondents understood the importance of hygiene in preventing communicable diseases, only 64% engaged in consistent preventive behaviours.[8] The inconsistency between knowledge and behaviour in both studies could be attributed to cultural beliefs, lack of reinforcement through community health education, and misconceptions about disease transmission. Negligence and laziness were identified in this study as predictors of poor preventive practice, corroborating the findings of Ezeudu et al. who reported that apathy and fatalism were major behavioural barriers to disease prevention in rural south-eastern Nigeria.[15] This behavioural tendency reflects a widespread public health challenge where individuals, despite adequate knowledge, fail to adopt protective measures due to low risk perception and habitual complacency.[12] The study also revealed a statistically significant relationship between marital status and preventive practices, with single traders practicing preventive measures more than their married counterparts (p=0.05). This finding is consistent with that of Akpan et al. who observed that single respondents demonstrated better compliance with hygiene protocols, possibly due to greater health consciousness and mobility.[6] Conversely, Akinyemi et al. reported higher adherence among married individuals in urban Ibadan, suggesting that marital status may interact with environmental and social factors in influencing behaviours.[7] Gender difference was also notable, with more males attending health talks than females.This contrasts with the findings of Osei et al. in Ghana, where women demonstrated higher participation in health education programs.[13] The difference could stem from socio-economic factors—Nigerian male traders may have greater exposure to public health outreach or prioritize information dissemination differently compared to female traders who may be constrained by domestic responsibilities .[14] Despite high awareness levels,

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misconceptions persisted. For example, 21.5% of respondents incorrectly identified cancer as a communicable disease. This finding mirrors the report of Ogbodo et al. in Enugu, Nigeria, where nearly one-fifth of participants misclassified non-communicable diseases as infectious, indicating the need for tailored health education to clarify disease categories.[4] Similarly, in a study by Asante et al. among traders in Kumasi, Ghana, 19% of respondents believed malaria was transmissible through physical contact, emphasizing the prevalence of misinformation in informal sectors across West Africa.[10] The present study also found that 90.5% of respondents believed that seminars or health talks could improve preventive practices, yet 64.2% had never attended one. This gap between perception and participation reflects structural barriers such as poor access to community based health education, as previously highlighted by Chukwuemeka et al.[11] Regular sensitization programs and partnerships between public health institutions and market associations could bridge this divide and promote sustained behavioural change. Moreover, the high rate (95%) of respondents expressing interest in receiving more information about communicable disease prevention suggests a readiness for behavioural improvement if supported with the right educational interventions. This finding is consistent with the observations of Umeh et al. who reported that interactive education and community engagement significantly enhanced disease prevention compliance in south eastern Nigeria.[16]

CONCLUSION

This study examined the knowledge and practice of preventive measures against communicable diseases among traders in Nnewi, Anambra State, Nigeria. The findings revealed that while awareness of communicable diseases was generally high, a significant gap existed between knowledge and practice. Most respondents were familiar with basic preventive measures such as handwashing and environmental sanitation; however, only a small proportion demonstrated good knowledge and consistent practice. Factors such as negligence, laziness, misconceptions, and disbelief in the effectiveness of preventive measures were found to hinder behavioural compliance. Socio-demographic factors, including marital status and gender, also significantly influenced preventive behaviours, with single and male respondents showing higher participation in preventive practices and health education programs, respectively. The study concludes that knowledge alone does not necessarily translate into effective preventive behaviours. Behavioral, cultural, and structural determinants play a crucial role in shaping adherence to disease prevention practices. Therefore, enhancing the capacity of traders through continuous community-based education and supportive health policies is essential for reducing the transmission of communicable diseases in market environments.

RECOMMENDATIONS

Regular, targeted health education programs should be organized for traders through market associations, local government health departments, and community health educators. These programs should emphasize correct information about communicable diseases, their transmission, and preventive measures. Behaviour change communication (BCC) strategies, including peer-led education, role modelling, and incentive-based participation, should be implemented to address negligence and misconceptions that hinder preventive practices. Market authorities and local governments should ensure the provision of adequate handwashing stations, clean water supply, and waste disposal systems within market environments to facilitate compliance with hygiene standards. Health sensitization sessions should be made mandatory during market association meetings, with collaboration between the Ministry of Health and market leadership to sustain participation. Given the observed gender disparities, female traders should be specifically targeted through flexible and accessible health programs that accommodate their schedules and socioeconomic realities.

Periodic assessments should be conducted to evaluate traders' knowledge and practices, measure program impact, and adjust interventions accordingly to sustain long-term behavioural change. The use of mass media, mobile health messaging, and social media platforms can improve the reach and frequency of health communication campaigns among traders.

Limitations

This study was subject to certain limitations that should be acknowledged. It is a cross-sectional design limits the ability to establish causality between knowledge, attitudes, and preventive practices; associations observed cannot be interpreted as direct cause-and-effect relationships. The data were collected using a self-reported

questionnaire, which may have introduced recall and social desirability biases—respondents might have overstated their knowledge or adherence to preventive measures to present themselves favourably. The study was conducted among traders in Nnewi, Anambra State, which may limit the generalizability of the findings to other populations with different socio-economic, cultural, or environmental contexts. The study setting—an urban and semi-urban commercial area—may not reflect the realities of traders in rural or peri-urban markets with fewer public health interventions.

Factors such as access to water supply, market sanitation systems, and enforcement of hygiene regulations were beyond the study's scope but could play a significant role in disease prevention behaviours. And the study relied on quantitative data only and did not include a qualitative component, which could have provided deeper insights into traders' perceptions, beliefs, and motivations regarding communicable disease prevention.

Future Directions

Building on the findings of this study, several avenues for future research are recommended which include employing longitudinal designs to examine how knowledge, attitudes, and preventive behaviours evolve over time and assess the long-term impact of health education interventions; and incorporating focus group discussions and in-depth interviews would provide a richer understanding of the socio-cultural and psychological factors that influence traders' preventive behaviours. Conducting similar research in different geopolitical zones of Nigeria or other sub-Saharan African countries would enable comparisons across cultural and socio-economic contexts, offering broader insights for regional public health planning. There is a need for intervention-based studies that evaluate the effectiveness of community-based education, peer-led awareness campaigns, and market-level sanitation initiatives in improving preventive practices. Future studies could assess the role of mobile health (mHealth) applications, SMS-based reminders, and social media platforms in improving knowledge dissemination and adherence to preventive measures among market populations. **Conflicts of Interest**: The authors declared that they have no conflict of interest.

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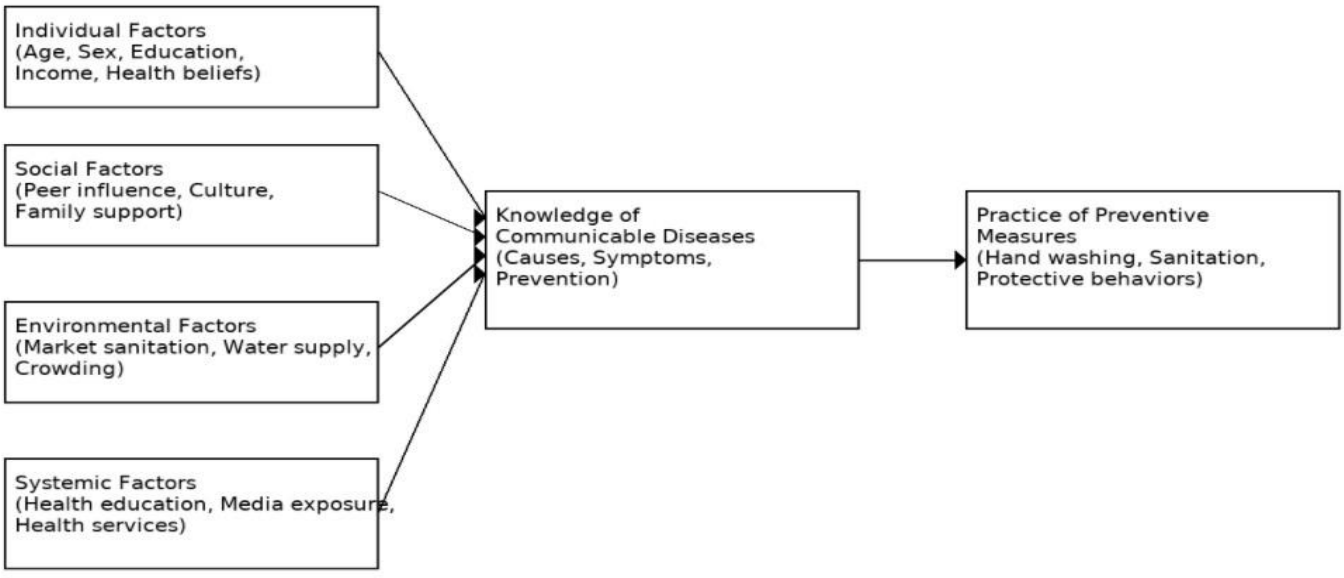
APPENDIX 1



ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue I January 2026

Conceptual framework: Knowledge and practice of preventive measures against communicable diseases.