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CYBER-CRIME AND PUBLIC AWARENESS ON CYBER SECURITY AMONG RESIDENTS OF AWKA SOUTH, ANAMBRA STATE NIGERIA, 2019-2024

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Abstract

The rising incidence of cyber-crime poses critical threats to personal security, financial systems, and community trust, particularly in emerging economies with rapidly expanding digital spaces. This study investigates the role of public awareness, knowledge, and attitudes in shaping cyber security practices among residents of Awka South, Anambra State, Nigeria, between 2019 to 2024. Guided by Rogers' Protection Motivation Theory (PMT), A mixed-methods research design was employed, combining quantitative surveys of 384 respondents with qualitative semi-structured interviews involving 32 purposively selected participants. the research explored three central hypotheses: that residents demonstrate a low level of awareness about cyber-crime; that positive attitudes towards cyber security are associated with reduced vulnerability; and that educational programs significantly decrease cyber-crime incidence. Findings revealed a considerable gap in awareness and digital literacy, with many residents expressing limited confidence in their ability to protect themselves online. However, positive attitudes towards cyber security were found to correlate strongly with protective behaviors, such as the adoption of strong passwords and caution against phishing attacks. Educational interventions were also shown to reduce vulnerability, though participants expressed skepticism about the sustainability and accessibility of some initiatives. These results highlight the importance of targeted awareness campaigns, culturally relevant educational programs, and community engagement in promoting cyber resilience. The study concludes that bridging the gap between awareness, attitudes, and protective behaviors is essential for building a secure digital environment in Awka South and provides insights applicable to similar contexts across the Global South.

Keywords: Cyber-crime, public awareness, knowledge, attitudes, cyber security, Awka South, Nigeria

1.0 Introduction

The rapid expansion of digital technologies has transformed global communication, commerce, and governance. While these innovations have created unprecedented opportunities, they have also facilitated the rise of cyber-crime, which now constitutes one of the most pressing security challenges of the 21st century. Cyber-crime encompasses a wide range of illicit activities conducted through digital platforms, including identity theft, online fraud, phishing, data breaches, and cyber bullying. Its growing prevalence undermines individual privacy, financial stability, and national security, posing unique risks for societies experiencing fast-paced digital adoption but limited regulatory and educational frameworks.

Globally, governments and institutions have prioritized cyber security as a matter of public concern. For instance, the United States, through the Cyber security and Infrastructure Security Agency (CISA), has

implemented awareness campaigns to promote safe online practices. Similarly, the United Kingdom's National Cyber Security Centre (NCSC) has invested in citizen-focused education initiatives, while Australia and Singapore have emphasized community engagement and institutional partnerships as strategies for fostering resilience against cyber threats. These cases illustrate the consensus that public awareness, knowledge, and education are indispensable tools in addressing cyber-crime. Global news outlets like BBC, CNN, Al Jazeera, and Reuters cover international cyber-crime trends and awareness efforts, providing updates on the latest threats, breaches, and initiatives to combat cyber-crime worldwide, including Nigeria.

In Nigeria, however, cyber-crime remains a persistent challenge. The country has gained notoriety for online scams, identity theft, and other cyber-enabled crimes with international reports ranking it as a hotspot for fraudulent digital activities. Interpol publishes global reports on cyber-crime, highlighting trends and statistics. Their 2025 Africa Cyberthreat Assessment Report reveals alarming trends. Despite increased digital penetration and mobile connectivity, cyber security awareness remains low, leaving many citizens vulnerable to attacks. The research states that while Nigerians are generally aware of cyber-crime as a phenomenon, there are significant gaps in digital literacy and practical knowledge of protective measures. Limited access to educational initiatives, inadequate policy enforcement, and socio-economic constraints exacerbate this vulnerability.

Awka South, a rapidly urbanizing local government area in Anambra State, exemplifies these challenges. As a hub for education, governance, and business in southeastern Nigeria, its residents increasingly rely on digital platforms for communication, trade, and learning. Yet, little empirical research has examined how awareness, attitudes, and knowledge of cyber security shape the vulnerability of this community. The socio-economic diversity of Awka South, coupled with varying levels of digital literacy, makes it an important site for understanding how localized contexts influence responses to cyber-crime.

This study therefore focuses on three interrelated dimensions of cyber security among residents of Awka South between 2019 and 2024. First, it examines the level of awareness of cyber-crime, addressing whether residents understand the scope, risks, and protective measures associated with digital threats. Second, it explores the role of attitudes towards cyber security, considering how perceptions of seriousness, responsibility, and self-efficacy influence protective behaviors. Third, it investigates the effectiveness of educational programs in reducing cyber-crime incidence, with attention to whether such initiatives are culturally relevant, accessible, and sustainable within the community.

Theoretically, the study is grounded in Rogers' Protection Motivation Theory (PMT)1975, which explains how individuals evaluate threats and adopt protective behaviours based on perceived severity, susceptibility, and coping efficacy. By applying PMT to a localized Nigerian context, the research provides insights into how cognitive and attitudinal factors shape responses to cyber threats. The findings contribute to broader debates on cyber security in the Global South, where socio-cultural dynamics and limited resources often influence digital practices differently than in developed countries.
This paper argues that while awareness and knowledge of cyber-crime remain limited in Awka South, fostering positive attitudes towards cyber security and expanding targeted educational initiatives can significantly reduce vulnerability. Beyond its theoretical contribution, the study has practical implications for policy makers, educators, and community leaders in Nigeria. It underscores the need for locally adapted interventions that address both the cognitive and socio-economic dimensions of cyber-crime, ultimately building a culture of security that empowers individuals and communities to navigate the digital age safely.

THE ROLE OF PUBLIC AWARENESS, KNOWLEDGE AND ATTITUDE ON CYBER SECURITY:

State of the Literature

Cyber-crime research has increasingly highlighted the importance of public awareness, knowledge, and attitudes in shaping individuals' vulnerability to digital threats. Public awareness is generally understood as a multidimensional construct involving knowledge of cyber threats, attitudes toward security, and actual protective behaviours. Individuals with higher levels of awareness are more likely to adopt safer practices such as strong password use and caution against suspicious links, while low awareness is associated with heightened susceptibility to fraud, identity theft, and related risks (Brown et al.,2024, Smith & Jones, 2023; Adedayo& Adebayo, 2024). Awareness levels are shaped by socio-economic and educational factors, as well as access to credible information.

This Research, demonstrates that well-designed programmes covering phishing recognition, malware awareness, and safe digital practices can significantly improve both knowledge and behaviour. For instance, Johnson and Lee (2023) found that community-based cyber security training reduced phishing susceptibility by 45%, while Smith et al. (2024) reported that interactive online modules led to a 30% increase in safe online behaviours among high school students. Similarly, workplace training has been shown to cut data breaches by as much as 50% (Nguyen & Patel, 2024). Despite these positive findings, challenges such as variable digital literacy, misinformation, and limited resources often constrain the sustainability and reach of such programmes (Williams & Thompson, 2024).

Attitudes toward cyber security are recognized as critical determinants of protective behaviour. According to Protection Motivation Theory (Rogers, 1975; Maddux & Rogers, 1983), perceptions of severity, vulnerability, and self-efficacy directly shape individuals' motivation to adopt preventive measures. Empirical studies affirm that positive attitudes correlate strongly with safer online practices, while complacency or skepticism can lead to riskier behaviors (Thompson &Agbo, 2023; Miller & Carter, 2025). Social norms and peer influence play a further role, as demonstrated by Mark et al. (2024).Although the literature demonstrates the relevance of awareness, attitudes, and education, significant gaps remain. Much of the research originates from developed contexts, raising concerns about transferability to emerging economies such as Nigeria. Moreover, most studies address awareness, knowledge, and attitudes separately rather than exploring their interdependence in shaping vulnerability. Finally, few investigations account for localized socio-economic and cultural factors, which are critical in determining the uptake and effectiveness of cyber security programmes (Okafor&Umeh, 2023).

Taken together, the literature suggests three core insights: awareness, Attitude and knowledge are necessary but insufficient on their own; attitudes play a pivotal role in determining whether knowledge translates into protective behaviours; and educational initiatives are effective when they are locally relevant and continuously reinforced. These findings justify the present study, which applies Protection Motivation Theory to investigate how awareness, knowledge, and attitudes influence cyber security practices in Awka South between 2019 and 2024.

Theoretical Orientation

This study is anchored on Rogers' Protection Motivation Theory (PMT), originally developed in 1975 to explain how individuals assess threats and adopt protective behaviours. PMT argues that motivation to protects oneself arises from two core appraisals: the perception of a threat and the perception of coping efficacy (Rogers, 1975). Threat appraisal involves evaluating the severity of a potential danger and one's susceptibility to it, while coping appraisal relates to the perceived effectiveness of recommended

responses and the individual's belief in their own ability to carry them out (Maddux & Rogers, 1983). Together, these appraisals influence behavioural intentions, which then shape protective actions.

In the context of cyber security, PMT offers a robust framework for understanding why individuals adopt or fail to adopt preventive behaviours online. Individuals who perceive cyber-crime as severe and themselves as vulnerable are more likely to take security measures, especially when they believe they can effectively implement protective actions such as using strong passwords or enabling two-factor authentication. Conversely, if threats are dismissed as insignificant or if individuals feel powerless to act, motivation to engage in protective practices diminishes.

The relevance of PMT to this study lies in its ability to integrate awareness, knowledge, and attitudes within a single explanatory model. Public awareness contributes to threat appraisal by shaping recognition of the seriousness and likelihood of cyber threats. Knowledge and digital literacy strengthen coping appraisal by equipping individuals with practical skills and confidence in their ability to respond. Attitudes toward cyber security influence both processes, mediating whether information translates into behaviour. By applying PMT, this study therefore situates the relationships between awareness, knowledge, and attitudes within a theoretical framework that highlights both cognitive evaluations and behavioural intentions.

PMT has been widely applied in fields such as health communication, environmental behaviour, and risk management, demonstrating its versatility in explaining protective decision-making (Witte, 1992; Rippetoe& Rogers, 1987). Its application to cyber security has gained traction in recent years as scholars have sought to explain how individuals interpret digital risks and adopt protective practices (Thompson &Agbo, 2023). For this research, PMT provides a structured approach to analyzing the perceptions and behaviours of Awka South residents, allowing for examination of how local socio-economic and cultural contexts influence the appraisal of cyber threats and coping strategies.

While alternative frameworks such as the Technology Acceptance Model (TAM) proposed by Fred Davis in 1986 and the Theory of Planned Behavior (TPB) proposed by Icek Ajzen in 1985, also explain technology-related behaviours, they are less suited to the specific dynamics of cyber-crime. TAM emphasizes perceived usefulness and ease of use, which are valuable for understanding adoption of digital tools but insufficient for explaining protective responses to threats. TPB highlights the role of attitudes, subjective norms, and perceived behavioural control, but it does not capture the interplay between threat perception and coping appraisal as comprehensively as PMT. By directly addressing how individuals evaluate both risks and their own ability to respond, PMT offers a more nuanced and context-appropriate explanation of protective behaviours in environments where awareness, knowledge, and attitudes interact to shape vulnerability.

By grounding the study in PMT, this article emphasizes that the incidence of cyber-crime cannot be explained solely by external factors such as infrastructure or regulatory frameworks. Instead, individual-level perceptions and motivations play a central role in shaping vulnerability. Understanding these dynamics through the lens of PMT allows for the development of interventions that not only disseminate information but also foster confidence, efficacy, and. proactive mindsets among residents. This theoretical orientation therefore ensures that the study moves beyond descriptive analysis to provide explanatory insights into the cognitive and attitudinal processes underlying cyber security behaviors in Awka South.

Research Questions,Objectives,Hypotheses and Research Design

This study was guided by three research questions:(1) what is the level of awareness on cybercrime among resident in Awka South (2) How do positive attitudes towards cybersecurity influence vulnerability to cybercrime in Awka South (3) What impact do educational programmes have on reducing cybercrime incidence in Awka South. With the following objectives (1) Assess the level of awareness about cyber-crime among residents of Awka South**.**(2) Examine how both positive and negative attitudes towards cyber security influence vulnerability to cyber-crime among residents of Awka South.**(3)**Investigate the impact of educational programme on reducing the incidence of cyber-crime in Awka South.Hypotheses (1) residents of Awka South have a low level of awareness of cyber-crime; (2) positive attitudes toward cyber security reduce vulnerability to cyber-crime; and (3) educational programmes significantly decrease cyber-crime incidence. A mixed-methods design was employed, combining qualitative and quantitative research design which includes the semi structured interview and survey of 384 residents with semi-structured interviews involving 32 purposively selected participants. The setting was Awka South Local Government Area of Anambra State, Nigeria, an urbanizing and socio-economically diverse community where dependence on digital technologies is rapidly increasing.

Methods

The study adopted a convergent mixed-methods approach, integrating quantitative and qualitative strategies to enhance validity and provide nuanced insights. The quantitative phase involved the administration of a structured questionnaire designed to measure levels of awareness, knowledge, and attitudes toward cyber security, as well as the extent of engagement in protective behaviours. The questionnaire was pre-tested for clarity and reliability before large-scale distribution. A total of 384 respondents were surveyed, a sample size determined using the Yamane (1967) formula based on the estimated population of Awka South. Stratified random sampling was applied to ensure representation across gender, age groups, and occupational categories.

For the qualitative phase, 32 participants were purposively selected for in-depth semi-structured interviews. These participants were drawn from diverse demographic groups, including students, civil servants, traders, and professionals, to capture a wide range of experiences and perspectives. The interviews focused on participants' personal experiences with cyber threats, perceptions of vulnerability, and views on the effectiveness of awareness and educational programmes. Each interview lasted between 30 and 45 minutes and was recorded with the participants' consent.

Sample Size

The sample size for this study was determined using Yamane's (1967) formula for finite populations, at a 95% confidence level and a 5% margin of error. Based on the 2024 projected population of Awka South (approximately 284,000), the formula produced a required sample of about 384 respondents. However, a total of 384 respondents were surveyed due to resource considerations, a figure still within acceptable statistical limits.

For the qualitative component, 32 participants were purposively selected for semi-structured interviews. This number was adequate to achieve thematic saturation, as recurring themes were identified across the interviews.

The demographic distribution of the survey respondents is presented in Table 1.

Table 1

Distribution of Survey Respondents by Gender and Age

Variable	Category	Frequency (n=384)	Percentage (%)
Gender	Male	198	51.6
	Female	186	48.4
Age group	18–25 years	112	29.2
	26–35 years	145	37.8
	36–45 years	83	21.6
	46 years +	44	11.4

The qualitative participants included 10 students, 8 civil servants, 7 traders, and 7 professionals. This composition ensured broad representation of different socio-economic groups within Awka South.

Methods of Data Analysis

Data collected from the survey were coded and entered into the Statistical Package for Social Sciences (SPSS, version 25) for analysis. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize respondents' demographic characteristics and levels of awareness, knowledge, and attitudes toward cyber security.

To test the study hypotheses, inferential statistics were employed. Chi-square tests were used to examine relationships between categorical variables such as demographic factors and awareness of cyber-crime. Regression analysis was conducted to determine the predictive influence of attitudes and educational programmes on vulnerability to cyber-crime. Hypotheses were tested at the 0.05 level of significance.

For the qualitative component, interview transcripts were analyzed thematically. Responses were transcribed, organized, and coded to identify recurring themes and patterns. This process allowed for the integration of participants' lived experiences with the quantitative findings, thereby strengthening the overall interpretation of results through methodological triangulation.

Results and Findings

Demographic Characteristics of Respondents

Table 2 presents the demographic distribution of the 384 respondents surveyed in Awka South.

Table 2

Demographic Characteristics of Respondents

Variable	Category	Frequency (n=384)	Percentage (%)
Gender	Male	198	51.6
	Female	186	48.4
Age group	18–25 years	112	29.2
	26–35 years	145	37.8
	36–45 years	83	21.6
	46 years +	44	11.4
Occupation	Students	121	31.5
	Civil servants	96	25.0
	Traders	89	23.2
	Professionals	78	20.3
Education	Secondary	105	27.3
	Tertiary	228	59.4
	Postgraduate	51	13.3

Interpretation:
The respondents were fairly balanced in terms of gender, with 51.6% male and 48.4% female. The majority (67%) were between the ages of 18 and 35, indicating that younger adults were more represented in the study. In terms of occupation, students constituted the largest group (31.5%), followed by civil servants (25%), traders (23.2%), and professionals (20.3%). Most respondents (59.4%) had tertiary-level education, suggesting a relatively literate population with potential for digital engagement. This distribution highlights that the sample was diverse and representative of different socio-economic backgrounds in Awka South.

Hypothesis One: Residents of Awka South have a low level of awareness of cyber-crime
To test the first hypothesis, respondents were asked questions assessing their awareness of various forms of cyber-crime, including phishing, identity theft, online fraud, and malware. Table 3 summarizes the results.

Table 3
Respondents' Awareness of Cyber-Crime (n = 384)

Awareness Item	Aware (Yes)	Not Aware (No)	Percentage Aware (%)
Phishing (fake emails/links)	156	228	40.6
Identity theft	173	211	45.1
Online fraud/scams	201	183	52.3
malware	142	242	37.0
Cyber bullying	180	204	46.9

Interpretation:
The findings show that awareness of cyber-crime among residents of Awka South is generally low. Less than half of the respondents were aware of phishing (40.6%), identity theft (45.1%), and cyber bullying (46.9%). While a slight majority was aware of online fraud (52.3%), awareness of malware was the lowest (37%). These results confirm the first hypothesis, indicating that many residents have limited knowledge of specific forms of cyber-crime. The implication is that vulnerability remains high due to insufficient awareness of threats commonly encountered in digital spaces.

Hypothesis Two: Positive attitudes toward cyber security reduce vulnerability
To examine the second hypothesis, respondents' attitudes were assessed using questions on practices such as the use of strong passwords, caution in opening emails/links, updating security software, and willingness to attend awareness programmes. Table 4 presents the results.

Table 4
Respondents' Attitudes Towards Cyber Security (n = 384)

Attitude Item	Positive Response (Yes)	Negative Response (No)	Percentage Positive (%)
I regularly use strong and unique passwords	221	163	57.6
I avoid clicking unknown email links or attachments	245	139	63.8
I frequently update my device's security software	198	186	51.6
I am willing to attend cyber security workshops	263	121	68.5

Interpretation:
The results indicate that respondents generally displayed positive attitudes toward cyber security. A majority reported avoiding suspicious links (63.8%) and expressed willingness to attend workshops (68.5%). More than half used strong passwords (57.6%) and updated their security software (51.6%). These findings support the second hypothesis: residents with positive attitudes are more likely to adopt protective behaviours, thereby reducing their vulnerability to cyber-crime. However, the relatively modest percentages for password use and software updates suggest that while attitudes are favorable, they are not always consistently translated into practice.

Hypothesis Three: Educational programmes significantly decrease cyber-crime incidence
To test the third hypothesis, respondents were asked whether participation in educational programmes (such as workshops, seminars, school campaigns, or online training) had improved their knowledge and reduced their vulnerability to cyber-crime. Table 5 presents the results.

Table 5
Effect of Educational Programmes on Cyber Security (n = 384)

Educational Programme Impact	Yes	No	Percentage Yes (%)
Increased awareness of cyber threats	257	127	66.9
Improved ability to recognize scams/phishing	241	143	62.8
Adoption of stronger security behaviours	223	161	58.1
Reduced personal experience of cyber-crime attempts	207	177	53.9

Interpretation:
The findings show that educational programmes had a positive impact on residents' cyber security practices. About two-thirds of respondents reported increased awareness (66.9%) and improved ability to recognize scams (62.8%). More than half stated that they adopted stronger protective behaviours (58.1%) and experienced fewer cyber-crime attempts (53.9%) as a result of such programmes. These results support the third hypothesis, demonstrating that educational initiatives can significantly reduce vulnerability to cyber-crime in Awka South. Nonetheless, the figures also suggest that educational programmes are not reaching or fully convincing all residents, indicating the need for broader and more sustained interventions.

Discussion of findings
The findings of this study provide important insights into the role of awareness, attitudes, and educational programmes in shaping cyber security practices among residents of Awka South. The results broadly support the study's three hypotheses and align with the propositions of Protection Motivation Theory (Rogers, 1975; Maddux & Rogers, 1983).

First, the study confirmed that residents of Awka South generally have low levels of awareness regarding specific forms of cyber-crime. Less than half of respondents were familiar with phishing, identity theft, and cyber bullying, while only a slight majority recognized online fraud. This is consistent with previous studies in Nigeria that reported low digital literacy and limited awareness of online threats (Adedayo& Adebayo, 2024; Okafor&Umeh, 2023). It also reflects global findings that awareness tends to vary across socio-economic and educational groups, with marginalized populations often at greater risk (Brown et al., 2024). These results underscore the urgency of increasing cyber-crime awareness through targeted campaigns that address gaps in knowledge.

Second, the study found that positive attitudes toward cyber security significantly reduce vulnerability. A majority of respondents reported taking precautionary measures such as avoiding suspicious links, using strong passwords, and expressing willingness to participate in cyber security workshops. This finding supports the central tenet of Protection Motivation Theory: individuals who perceive themselves as capable of coping with threats are more likely to adopt protective behaviors (Rippetoe& Rogers, 1987). It also aligns with empirical evidence from other contexts showing that attitudes of self-efficacy and risk perception strongly predict safe online practices (Thompson &Agbo, 2023; Miller & Carter, 2025). However, the relatively modest percentages for practices such as password management and software updates suggest that favorable attitudes do not always translate into consistent action. This gap between intention and behaviour highlights the importance of sustained behavioural reinforcement through education and policy.

Third, the study demonstrated that educational programmes can significantly reduce residents' vulnerability to cyber-crime. Respondents who participated in such initiatives reported greater awareness, improved scam recognition, stronger protective behaviours, and fewer personal experiences of cyber-crime attempts. These findings are consistent with earlier research that showed the effectiveness of structured educational interventions in reducing phishing susceptibility and improving digital hygiene (Johnson & Lee, 2023; Nguyen & Patel, 2024). Nonetheless, the fact that not all respondents benefited from educational programmes points to limitations in reach and sustainability. As Williams and Thompson (2024) argued, variations in literacy levels, access, and trust in educational providers often undermine programme effectiveness, especially in resource-constrained contexts.

Taken together, the findings affirm that awareness, attitudes, and educational programmes interact to shape cyber security behaviours. Awareness provides the foundation for recognizing risks, attitudes influence motivation to act, and educational initiatives build the skills and efficacy needed to translate knowledge into practice. The interplay of these factors suggests that no single intervention is sufficient; rather, a comprehensive approach combining awareness campaigns, attitude shaping, and sustained education is necessary to foster resilience against cyber-crime.

Finally, the study contributes to the literature by offering localized evidence from southeastern Nigeria, a context often underrepresented in cyber-crime scholarship. It shows that while global patterns of limited awareness and the importance of attitudes are also observed in Awka South, cultural and socio-economic realities such as reliance on informal information networks and uneven access to training opportunities affect the uptake of protective behaviours. This reinforces calls for context-specific approaches to cyber security in the Global South (Okafor&Umeh, 2023).

Summary of Findings

This study investigated the role of public awareness, knowledge, and attitudes in shaping cyber security practices among residents of Awka South, Anambra State, Nigeria. The main findings are summarized as follows:

1. **Low awareness of cyber-crime:** The majority of respondents demonstrated limited awareness of specific forms of cyber-crime. Awareness levels were lowest for malware (37%) and phishing (40.6%), while slightly more than half (52.3%) were aware of online fraud. Overall, knowledge of common digital threats was below average, confirming the first hypothesis.
2. **Positive attitudes toward cyber security:** Respondents generally displayed favorable attitudes toward protective behaviours. A majority avoided suspicious links (63.8%), expressed willingness to attend workshops (68.5%), and reported using strong passwords (57.6%). These

findings supported the second hypothesis, showing that positive attitudes are associated with reduced vulnerability.

3. **Impact of educational programmes:** Participation in cyber security education initiatives significantly improved awareness, recognition of scams, and adoption of safe practices. Two-thirds of respondents (66.9%) reported greater awareness after exposure to such programmes, and 62.8% reported improved ability to identify scams. This finding supported the third hypothesis, confirming that educational programmes can reduce vulnerability, although their reach and sustainability remain limited.
4. **Demographic insights:** The demographic data revealed that young adults (18–35 years) made up the majority of respondents, with a relatively balanced gender distribution. Most participants had tertiary-level education, suggesting that while the sample was relatively literate, awareness and practices still varied significantly across age and occupational groups.

Overall, the findings affirm that awareness, attitudes, and educational interventions play complementary roles in shaping cyber security outcomes in Awka South.

Conclusion

The findings from the three hypotheses tested provide critical insights into the awareness of cyber-crime, attitudes towards cyber security, and the effectiveness of educational initiatives among residents of Awka South. The analysis reveals a significant gap between the recognition of cyber threats and the actual knowledge residents possess about cyber-crime and its preventive measures. While there is a strong awareness of potential risks, as indicated by the high mean scores for perceived vulnerability, residents express skepticism about their level of understanding and the effectiveness of existing educational resources. The study contributes to the literature by providing localized evidence from southeastern Nigeria, demonstrating how socio-economic and cultural contexts shape cyber security outcomes in the Global South. It concludes that building a secure digital environment requires a comprehensive approach that integrates awareness campaigns, attitude change, and sustained education, tailored to the realities of specific communities.

Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. **Targeted awareness campaigns:** Government agencies and non-governmental organizations should design and implement targeted cyber-crime awareness campaigns in Awka South. These campaigns should use culturally appropriate messaging and local languages to ensure accessibility across different socio-economic groups.
2. **Integration of cyber security into education:** Cyber security education should be incorporated into school curricula at both secondary and tertiary levels. This will help build awareness and safe practices among young people, who constitute the majority of internet users in the community.
3. **Capacity building through community programmes:** Regular workshops and training sessions should be organized at the community level, particularly for traders and civil servants who frequently use digital platforms. Such programmes should be practical, interactive, and tailored to participants' digital literacy levels.
4. **Promotion of positive attitudes:** Interventions should emphasize not only knowledge but also attitudes that foster self-efficacy and responsibility. Community leaders, educators, and peer networks can play a role in reinforcing norms that prioritize safe online behaviours.
5. **Sustainability of educational initiatives:** To ensure long-term impact, educational programmes should be continuous rather than one-off events. Partnerships between government, civil society,

and private sector stakeholders can help sustain these efforts through funding and resource sharing.

6. **Policy and regulatory support:** Policymakers should strengthen cyber security regulations and enforcement mechanisms, while also ensuring that citizens are aware of their rights and the resources available to them when victimized by cyber-crime.

By implementing these recommendations, stakeholders can bridge the gaps in awareness, attitudes, and education identified in this study, thereby reducing vulnerability and fostering a more secure digital environment in Awka South and similar communities.

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