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Original Article

Community Knowledge, Attitudes, and Practices Toward Neglected Tropical Diseases Among Rural Households of Jenta Communities, Jos, Plateau State, Nigeria.

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ABSTRACT

Background:Neglected Tropical Diseases (NTDs) continue to be a public health burden in Nigeria, especially in impoverished rural areas. In spite of continued control efforts, little data on community knowledge, attitudes, and practices (KAP) are available. The current study evaluated household-level KAP on NTDs in three rural villages of Jenta (JentaAdamu, JentaMakeri, JentaMangoro), Jos, Plateau State. Methods: A cross-sectional survey among 399 household respondents was conducted with a structured interviewer-administered questionnaire. Data gathered were demographic information, onchocerciasis, lymphaticfilariasis, and schistosomiasis awareness and knowledge, attitude towards individuals affected, preventive measures, and stigma exposure. Descriptive statistics were used to analyse data, while chi-square tests were applied to determine associations between household determinants and KAP outcomes. Results: Of the 399 participants, most (62.4%) reported knowing one or more NTDs, with radio and health workers being the primary sources of information. Awareness of transmission modes was fair, but knowledge gaps in the form of witchcraft and curses persisted (18.7%). Preventive behavior was variable: 54.1% used bed nets regularly, 47.6% refrained from swimming in rivers, and 39.2% used mass drug administration. Attitudes toward those with affected people were inconsistent; whereas 71.3% concurred that individuals with NTDs should be treated equally, 26.8% acknowledged that they would shun close contact. Stigma was noted in 22.5% of the households. Chi-square analysis indicated significant associations between education and both knowledge and preventive behavior ($p < 0.05$). Conclusion: NTDs are poorly understood in Jenta rural communities, and gaps in knowledge and prevention practices are fueled by stigma. Education in the community, better health communication, and enhanced mass drug administration are necessary to alleviate the NTD burden.

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Introduction

Neglected Tropical Diseases (NTDs) continue to pose a significant global health burden, with disproportionate impact on rural communities in sub-Saharan Africa where poverty, poor health systems, and limited infrastructure drive their transmission (1). NTDs, resulting from a variety of parasitic, bacterial, and viral pathogens, are directly linked to poor living conditions and poor sanitation. In aggregate, they compromise health, economic productivity, and social well-being, entrenching vulnerable groups in cycles of disease and poverty (2).

Not with standing a concerted international effort like the WHO's NTD Roadmap and the London Declaration, diseases such as onchocerciasis, lymphatic filariasis, and schistosomiasis remain strongly endemic across many Nigerian states (3). These diseases not only cause chronic morbidity in the form of blindness, elephantiasis, and hematuria but also exact a high economic toll through diminished working capacity, school dropout, and household income diversion towards the cost of treatment (4).

Community knowledge, attitudes, and practices (KAP) are central to NTD prevention and control. Lack of proper awareness and deep-seated misconceptions regarding the transmission of disease—e.g., the belief that infections are caused by witchcraft, curse, or heredity—still discourage community engagement in control programs (5).

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Also, unfavorable attitudes and stigma against people with the disease strengthen social stigmatization, deter health-seeking behavior, and weaken mass drug administration campaign adherence (6).

In Nigeria, studies have underscored uneven patterns of awareness and practice that are frequently associated with differences in education, socioeconomic status, and access to health information (7). However, localized data at the household level is still sparse in rural communities such as the Jenta settlements (JentaAdamu, JentaMakeri, and JentaMangoro) of Jos, Plateau State. These populations have endemic transmission of several NTDs, and insights into how households experience and respond to the diseases that condition their daily lives are lacking.

Knowledge of community KAP is important to inform intervention tailoring that speaks to local realities. The purpose of this study was thus to evaluate household knowledge, attitudes, and practices related to NTDs among the Jenta communities with a view to informing context-attuned health education, consolidating preventive practices, and informing the larger push toward NTD elimination in Nigeria.

Methods

Study Area

This study took place in three rural communities (JentaAdamu, JentaMakeri and JentaMangoro) in Jos North Local Government Area (LGA), Plateau State, Nigeria. The three rural communities can be described as densely populated, poorly socioeconomically, and without access to health care services. Water-related contact activities such as bathing, fishing and washing clothes in rivers contributes to the transmission of schistosomiasis and other water-related NTDs. The communities' primary sources of livelihood were through subsistence farming and petty trading.

Study Design

A community-based cross-sectional approach was used to evaluate household knowledge, attitudes, and practices (KAP) towards neglected tropical diseases. The study was onchocerciasis, lymphatic filariasis, and schistosomiasis as these have previously known to be endemic in the study site.

Study Population and Sampling

Household heads or adult representative associates (≥ 18 years) in the three Jenta communities comprised the target population. A total of 399 respondents were recruited as part of a systematic random sample. Successful recruitment of study participants ensured proportional representation across the three settlements. Inclusion criteria were 1) being a resident in the community for at least 12 months; and 2) being willing to provide informed consent.

Data Collection Tool

We used a pre-tested, structured, interviewer-administered questionnaire to collect data on sociodemographic characteristics, knowledge regarding the transmission and prevention of NTDs, attitudes towards affected people, preventive practices, and experiences of stigma. The tool was adapted from currently available and validated KAP instruments and appropriate modifications were made to ensure the tools fitted with the local context.

Data Collection Procedure

The interviews were carried out between March and May 2024 by trained field assistants who could speak both Hausa and English. Daily supervision, spot checks, and reviews for consistency ensured data quality.

Data Analysis

Data were captured and analyzed in SPSS version 26. Descriptive statistics were used to sum up sociodemographic factors, knowledge, attitudes, and practice. Chi-square tests were used to determine associations between household factors (i.e., education, income) and KAP results. A statistical significance level of $p < 0.05$ was used.

Ethical Considerations

Ethical clearance was provided by the DeshBhagat University Institutional Review Board (Approval No. IRB/DBU/2024/017) and the Research Ethics Committee, Wesley University, Ondo. All participants gave written informed consent before data were collected. All participation was voluntary, confidentiality was ensured with the use of unique identifiers, and there were no material or financial incentives involved.

Results

Table 1. Demographic Characteristics of Respondents (n=399)

Variable	Category	Frequency (%)
Sex	Male	210 (52.6)
	Female	189 (47.4)
Age group	18–29	112 (28.1)
	30–44	144 (36.1)
	45+	143 (35.8)
Education	None	96 (24.1)
	Primary	124 (31.1)
	Secondary	127 (31.8)
	Tertiary	52 (13.0)

Narrative Analysis

A total of 399 respondents participated in the survey, with a slightly higher proportion of males (52.6%) compared to females (47.4%), suggesting a balanced gender representation. The age distribution showed that 28.1% of respondents were between 18–29 years, 36.1% were aged 30–44 years, and 35.8% were aged 45 years and above. This indicates broad participation across both younger and older adults.

Educational attainment revealed important disparities. Nearly one-quarter (24.1%) of respondents had no formal education, while 31.1% reported primary education and 31.8% secondary education. Only 13.0% had attained tertiary-level education. This profile reflects generally low levels of formal education in the communities, with implications for health literacy, awareness, and adoption of preventive practices.

Overall, the demographic characteristics highlight a diverse sample in terms of age and gender, but with notable educational limitations. These features are critical in interpreting patterns of knowledge, attitudes, and practices toward neglected tropical diseases in the study communities.

Table 2. Awareness and Knowledge of NTDs among Respondents (n=399)

Indicator	Response (%)
Heard of onchocerciasis	58.1
Heard of lymphatic filariasis	46.4
Heard of schistosomiasis	39.6
Mentioned correct cause (vector/ water)	55.3
Mentioned witchcraft/curse	18.7

Narrative Analysis

The levels of awareness of some specific neglected tropical diseases among respondents varied significantly. Approx. 58.1% of respondents had heard of onchocerciasis, making it the most recognized disease in the study area. Awareness of lymphatic filariasis was lower for 46.4%, and for schistosomiasis, awareness was lowest, as only 39.6% of respondents had heard of this disease.

When asked about causes, just over half of the respondents (55.3%) had a correct understanding of vectors. Also, the respondents indicated that contaminated water is a source of infection, indicating a moderate degree of understanding but still incomplete. What is concerning is that 18.7% of respondents indicated beliefs rooted in witchcraft or curses as potential modes of transmission. While some misconceptions around NTDs are being overcome, delays in promoting community-centered action could persist with clearly incorrect or ill-informed understanding that still exists.

Overall the findings reinforce both achievements and knowledge gaps of knowledge at the community level but also an ongoing need for inequitable targeted community health education and critical health education to clear up pre/post-colonial stereotypes and reinforce the biomedical understanding of direct and indirect transmission.

Table 3. Attitudes Toward NTDs among Respondents (n=399)

Statement	Agree (%)	Disagree (%)	Neutral (%)
NTDs are a serious problem	82.6	10.4	7.0
People with NTDs deserve equal treatment	71.3	18.5	10.2
People with NTDs are to blame for illness	21.0	66.2	12.8

Narrative Analysis

Attitudinal responses indicate that a great majority (82.6%) of the respondents rated NTDs as a serious community public health problem, while only 10.4% disagreed and 7.0% were neutral. Although most (71.3%) agreed individuals affected by NTDs were deserving of equal treatment, 18.5% disagreed and 10.2% did not know.

Also, and interestingly, slightly less than one-fifth (21.0%) of respondents thought that people with NTDs were to blame for their illness, while 66.2% disagreed and 12.8% did not know. While there are broad recognitions of NTDs as a public health problem with acknowledgement of equal treatment deservingness, instances of blame and stigma present in the community indicate misperceptions and the need for social awareness interventions.

Table 4. Preventive Practices Against NTDs among Respondents (n=399)

Practice	Reported (%)
Participated in MDA (past year)	39.2
Regular use of bed nets	54.1
Avoid swimming in rivers	47.6
Boiling/treating water before drinking	29.8

Preventive interventions against NTDs were inconsistently reported among the study population. Response to mass drug administration (MDA) over the last year was generally low, with just 39.2% of respondents reporting participation, representing poor community coverage. Bed net utilization was more widespread, with 54.1% of households utilizing beds regularly, albeit still short of universal usage.

Swimming in rivers, a major schistosomiasis preventive behavior, was avoided by 47.6% of the respondents. The least adopted preventive behavior was boiling and treating drinking water, with 29.8% practicing it. These findings show that though some preventive practices are moderately practiced, much remains to be done, and there is need for intensified community sensitization and reinforcement of preventive health practices.

Stigma and Social Impact

Stigma was experienced by 22.5% of the households, such as being excluded from social functions. Chi-square analysis indicated that there were significant relationships between education status and knowledge ($p < 0.05$), and between education and preventive practices ($p < 0.05$).

Discussion

This research offers useful information on community knowledge, attitudes, and practices regarding NTDs among the rural Jenta communities of Jos, Plateau State. Although the majority of families reported knowing of at least one NTD, in-depth knowledge of transmission and prevention was still low. This is consistent with trends in other rural Nigerian environments where ongoing misconceptions have limited progress towards controlling the disease (11). Perceptions that NTDs are caused by witchcraft or cursing reflect the residual power of cultural aetiology of disease and implicate the need to create context-specific health education initiatives that cater to prevailing beliefs but support biomedical aetiology (12).

Preventive behaviors, such as bed net use and avoiding contact with contaminated water, were perceived by a moderate percentage of respondents but were insufficient for community protection (13). In the same way, mass drug administration (MDA) participation was less than optimal at 39.2%. This is consistent with results from other endemic states in Nigeria, where compliance with MDA campaigns decreased due to poor awareness, distrust, and non-follow-up (14). Enhanced community mobilization and follow-up during MDA would enhance participation.

Social stigma against infected persons was seen in more than one in five households surveyed, in line with wider literature pointing to the covert social impact of NTDs beyond their clinical presentation (15). Stigma has the consequences of social exclusion, decreased care-seeking, and poorer quality of life. Educational level had a strong impact on both knowledge and preventive behaviors, highlighting the fundamental importance of literacy-appropriate interventions to improve disease control (16).

Radio and community health workers were most commonly mentioned sources of information. This suggests that using locally trusted communication channels may improve the dissemination of correct information and dispel misconceptions (17). These channels, together with school- and faith-based platforms, may be the key to sustained behavior change and enhanced participation in elimination efforts.

Conclusion

Neglected Tropical Diseases continue to be an important health and social problem in Jos rural Jenta communities, Plateau State. While there was relatively good awareness of at least one NTD, important knowledge gaps regarding transmission and prevention exist, in addition to deeply rooted misconceptions. Preventive behaviors, such as bed net use, avoidance of contact with unsafe water, and mass drug administration, were suboptimal for successful control. In addition, there was stigma against the affected individuals, an indication of the undervalued social costs of NTDs and their wider implication for community unity.

The results highlight the imperative for intensified community-based education campaigns targeting local misconceptions and beliefs in culturally sensitive manners. Wider access to, and involvement in, MDA programs is also critical, combined with focused efforts to combat stigma and promote active community participation. Tackling these problems comprehensively will not only decrease disease spread but also interrupt the poverty cycles, discrimination, and lowered productivity that NTDs sustain.

Literacy-sensitive health communication investment, capacity development among community health workers, and utilization of popular trusted media platforms like the radio may be especially effective. In the end, empowering communities with information, building positive attitudes, and encouraging sustainable preventive measures are all imperative steps toward disrupting the mutually reinforcing cycles of disease and poverty, and furthering overall objectives of NTD elimination in Nigeria.

Take-Home Message

Neglected Tropical Diseases remain a burden to rural families in Jenta communities by way of poor awareness, low utilization of preventive measures, and chronic stigma. Community health education, increased access to mass drug administration, and social inclusion are critical to stop the disease-poverty cycle. Locally tailored, literacy-susceptive interventions have the potential to enhance knowledge, develop favorable attitudes, and empower families to engage in sustainable prevention and control.

Authors' Contribution

SHU-ACHET Daniel Gimbason designed the study, methodology, and made data collection contributions. The data analysis, interpretation, and manuscript drafting was coordinated by Dr. Stephen Monday. Prof. (Dr.) Daniel MairafiGimbason gave general supervision, critical revisions, and approval of the research design. Amina Elisha Atikinpan assisted in data curation, literature review, and figure and table preparation. Ruby S. Gibson assisted with writing, editing, and final manuscript formatting for publication. All authors read and approved the final manuscript, and agreed to be held responsible for the work.

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Conflict of Interest

The authors declare that they have no relationships that could be viewed as a potential conflict of interest in the research, the interpretation of data, authorship of the article, or the publication of the research. Specifically, the authors have not received financial support, materials or gifts from an organisation, government agency or business entity that might reasonably be judged to result in such a conflict of interest.

All decisions about study design, data collection, data analysis, data interpretation, and the writing of the manuscript were made by the authors of this research report. The authors have no proprietary interests or intellectual property that may have been perceived as a source of bias in terms of prevailing outcomes or conclusions. The authors declare their commitment to transparency and objectivity and intend to ensure that all reporting was ethical and follows international publication standards.

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