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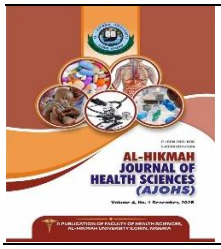

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Original Article

Assessment of Primary Healthcare Workers' Awareness, Attitudes, and Practices Regarding Neglected Tropical Disease Control in Ilorin Metropolis, Kwara State, Nigeria

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ABSTRACT

Background: Neglected tropical diseases (NTDs) remain an important public health concern, and primary healthcare workers have key roles in prevention, detection, reporting, and control.

Objective: This study assessed healthcare workers' awareness, attitudes, and practices regarding NTD control in Ilorin Metropolis, Kwara State, Nigeria.

Methods: A descriptive cross-sectional survey was conducted among 296 healthcare workers using a structured, pretested questionnaire. Data were summarized using descriptive statistics, and regression analyses were reported for the study hypotheses.

Results: Overall, 75.0% of respondents had heard of NTDs and 72.6% knew of Nigeria's national NTD control programme. Attitudes were generally favourable, with 100.0% endorsing community involvement. However, 60.5% reported no involvement in listed NTD-control activities. Lack of drugs (44.6%) and inadequate training (40.9%) were commonly reported challenges. The reported regression analyses did not show statistically significant associations.

Conclusion: Despite awareness and favourable attitudes, participation in NTD-control activities was limited. Practical training, reliable supplies, and integration of NTD activities into routine primary healthcare services may help address this gap.

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Introduction

Neglected tropical diseases (NTDs) disproportionately affect populations experiencing poverty, inadequate sanitation, and limited access to healthcare. They include schistosomiasis, lymphatic filariasis, onchocerciasis, soil-transmitted helminthiases, trachoma, and other parasitic and bacterial infections (World Health Organization [WHO], 2012).

More than one billion people are affected by NTDs globally, with a substantial burden in sub-Saharan Africa (WHO, 2021). Nigeria is endemic for several priority NTDs, including schistosomiasis, onchocerciasis, lymphatic filariasis, soil-transmitted helminths, trachoma, leprosy, and rabies (Federal Ministry of Health [FMoH], 2015).

Nigeria's NTD response has included mass drug administration (MDA), disease mapping, vector management, surveillance, and health education. National strategic plans provide a framework for reducing transmission and progressing towards elimination (FMoH, 2015; Etokwudo & Oleribe, 2022). However, NTDs persist in many communities,

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where health services may have limited resources and trained personnel (Molyneux et al., 2017).

International roadmaps and commitments, including the 2012 London Declaration, have encouraged endemic countries to accelerate NTD control and elimination (WHO, 2012; Hotez et al., 2014). Effective implementation depends on sustained community engagement and accessible prevention and treatment services.

Health workers support NTD control through early detection, diagnosis, treatment, reporting, community mobilization, and preventive chemotherapy. Their knowledge and practices can influence the implementation of control programmes (Liese et al., 2010; Aerts et al., 2017; Oluwole et al., 2019). Vector management can also reduce transmission of diseases such as lymphatic filariasis and onchocerciasis (Pam et al., 2017).

Progress has been reported across the WHO African Region, including elimination of at least one NTD in several countries (WHO, 2023). In Nigeria, collaboration among government, WHO, and the Expanded Special Project for Elimination of Neglected Tropical Diseases supports efforts to reach affected communities (FMoH, 2021). Continued implementation at primary healthcare level remains important.

Statement of the Problem

Despite the availability of effective interventions, NTDs persist in Nigeria. Challenges include gaps in health workers' knowledge of NTDs and national guidelines, as well as weaknesses in reporting and surveillance (Emeto et al., 2021; Adje & Dambo, 2023). These gaps may contribute to missed diagnoses, underreporting, delayed treatment, and continued transmission.

Primary healthcare centres in Ilorin Metropolis are an important first point of contact for community members. However, locally relevant evidence on health workers' awareness, attitudes, and practices regarding NTD control is limited. Such evidence is needed to guide training, supervision, and resource allocation.

This study therefore assessed health workers' awareness, attitudes, and practices regarding NTD control in Ilorin Metropolis, Kwara State.

Methods

A descriptive cross-sectional study was conducted among health workers in public primary healthcare facilities across Ilorin West, Ilorin East, and Ilorin South Local Government Areas (LGAs), Kwara State, Nigeria.

Eligible participants were doctors, nurses/midwives, community health officers, and community health extension workers employed in public PHCs, with at least one year of experience and who provided consent. Temporary staff and staff not involved in disease-control activities were excluded.

A multistage sampling approach was used. PHCs were stratified by LGA, facilities were selected proportionately, and respondents were selected randomly. The sample size was 296, calculated using Cochran's formula with $p = 0.26$.

Data were collected using a researcher-designed, pretested questionnaire covering sociodemographic characteristics, awareness, attitudes, and practices. Public health experts reviewed the instrument, and test–retest reliability was assessed using Pearson correlation. Trained research assistants administered questionnaires after permission was obtained. Data were analysed in SPSS version 23 using descriptive statistics and the reported regression analyses. Ethical approval was obtained from the Kwara State Ministry of Health; informed consent and confidentiality were maintained.

Results

Sociodemographic Characteristics of Participants

Of the 296 respondents, 73.0% were female and 35.5% were aged 45–54 years. Most were married (64.5%) and community health extension workers (35.5%). Tertiary education was reported by 98.0%, and 43.9% had more than 15 years of experience.

Table 1. Sociodemographic characteristics of respondents (n = 296)

Variables		Frequency	%
Age of respondents	18-24	19	6.4
	25 - 34 years	55	18.6
	35-44	55	18.6
	45-54	105	35.5
	55 above	62	20.9
Gender	Male	80	27.0
	Female	216	73.0
Marital Status	Single	49	16.6
	Married	191	64.5
	Divorced	31	10.5
	Widowed	25	8.4

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Professional Cadre	EHO	74	25.0
	CHEW	105	35.5
	CHO	55	18.6
	Nurse/Midwife	62	20.9
Level of Education	No formal education	0	0.0
	FSLC	6	2.0
	Secondary	0	0.0
	Tertiary	290	98.0
Years of Experience	< 5years	68	22.9
	5 – 9 years	49	16.6
	10 – 15 years	49	16.6
	> 15 years	130	43.9

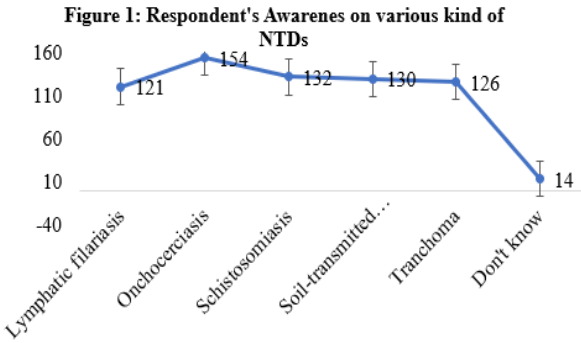
Note: EHO: Environmental Health Officer; CHEW: Community Health Extension Worker; CHO: Community Health Officer; FSLC: First School Leaving Certificate.

General Awareness of NTDs

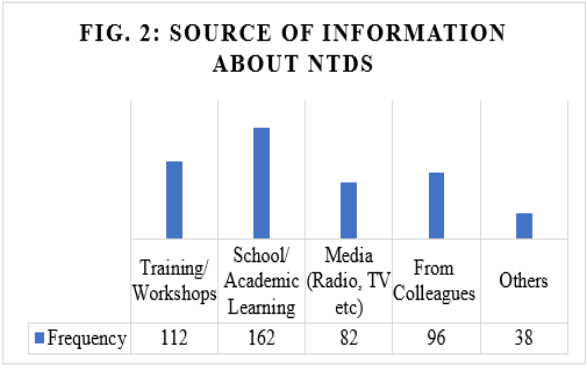
Overall, 75.0% had heard of NTDs and 72.6% were aware of Nigeria's national NTD control programme. Nearly half (48.0%) identified rural areas as the main setting for NTDs, while 37.5% identified both urban and rural areas. A total of 70.9% selected poor sanitation and hygiene, vector bites, and contaminated water as contributing factors.

Table 2. General awareness of NTDs among respondents in Ilorin Metropolis (n = 296)

Variables		Frequency	%
Have you ever heard of Neglected Tropical Diseases (NTDs)?	Yes	222	75.0
	No	74	25.0
NTDs are mostly common in which area?	Urban areas	12	4.1
	Rural areas	142	48.0
	Both Urban and Rural areas	111	37.5
	Don't know	31	10.5
	Poor sanitation and hygiene	31	10.5
	Vector bites	12	4.1
	Contaminated water	6	2.0
	All of the above	210	70.9
	Don't know	37	12.5
Are you aware of any national NTD Control Programme in Nigeria?	Yes	215	72.6
	No	81	27.4



Onchocerciasis was the most frequently recognized NTD (154 respondents), followed by schistosomiasis (132), soil-transmitted helminths (130), trachoma (126), and lymphatic filariasis (121). Fourteen respondents reported that they were unaware of any listed NTD.



School or academic learning was the most frequently reported information source (162 respondents), followed by training/workshops (112), colleagues (96), media (82), and other sources (38).

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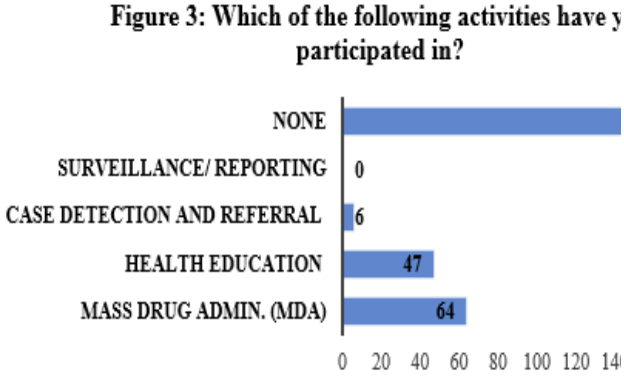
Attitudes Towards NTD Control

Attitudes were generally favourable. Agreement or strong agreement that NTDs are a major public health problem was 64.6%. Almost all respondents agreed that health workers have a critical role (95.9%), MDA is effective (95.9%), NTD control should be prioritized in facilities (95.9%), and they would participate in NTD programmes if given the opportunity (95.9%). All respondents endorsed community involvement.

Table 3. Respondents' attitudes towards NTD control

SN	Statement	SA (%)	A (%)	D (%)	SD (%)
1.	**NTDs are a major public health problem**	**49 (16.6)**	**142 (48.0)**	**80 (27.0)**	**25 (8.4)**
2.	Health workers play a critical role in the control of NTDs	148 (50.0)	136 (45.9)	0 (0.0)	12 (4.1)
3.	Community Involvement is essential for effective NTD control	148 (50.0)	148 (50.0)	0 (0.0)	0 (0.0)
4.	Mass Drug Administration (MDA) is effective in controlling NTDs	111 (37.5)	173 (58.4)	0 (0.0)	12 (4.1)
5.	NTD control should be given priority in health facilities	111 (37.5)	173 (58.4)	0(0.0)	12 (4.1)
6.	I am willing to participate in NTD control programmes if given opportunity	130 (43.9)	154 (52.0)	6 (2.0)	6 (2.0)

Practices Regarding NTD Control



Most respondents (60.5%) reported no involvement in the listed NTD-control activities. Among activities reported, 21.6% participated in MDA, 15.9% in health education, and 2.0% in case detection and referral; none reported surveillance/reporting involvement in the activity checklist

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Table 5. Respondents' practices and experience with NTD control

SN	Questions	Options	Freq. (n)	%
1.	Do you routinely educate patients on prevention of NTDs?	i. Always ii. Sometimes iii. Rarely iv. Never	111 117 43 25	37.5 39.5 14.5 8.5
2.	Do you report suspected NTD cases to appropriate authorities?	1. Yes 2. No 3. Sometimes	130 123 43	43.9 41.6 14.5
3.	Have you received any formal training on NTD control.	i. Yes ii. No	154 142	52.0 48.0
4.	What challenges do you face in NTD control?	• Inadequate training • Poor funding • Lack of drugs • Poor community acceptance • Heavy workload • Other(s)	121 98 132 54 88 25	40.9 33.1 44.6 18.2 29.7 8.5

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For routine patient education, 37.5% reported 'always' and 39.5% 'sometimes'. A total of 43.9% said they reported suspected cases, 41.6% did not, and 14.5% did so sometimes. Just over half (52.0%) had received formal NTD-control training. Frequently reported challenges included lack of drugs (44.6%), inadequate training (40.9%), poor funding (33.1%), heavy workload (29.7%), and poor community acceptance (18.2%).

Exploratory analysis of years of experience and awareness

	Df	***SS***	***MS***	***F***	***p – value***
Regression	1	4912.917	4912.917	1.451	0.352
Residual	2	6773.083	3386.541		
Total	3	11686			

Exploratory analysis of NTD-control practices

	df	***SS***	***MS***	***F***	***p – value***
Regression	1	25.5362	25.5362	0.331	0.623
Residual	2	154.4638	77.2319		
Total	3	180			

Exploratory analysis of sociodemographic and professional factors

	df	***SS***	***MS***	***F***	***p – value***
Regression	1	1.594152	1.594152	0.001	0.979
Residual	10	20987.32	2098.732		
Total	11	20988.92			

The reported analyses found no statistically significant associations: years of experience and awareness ($F = 1.451$, $p = .352$); the model related to NTD-control practices ($F = 0.331$, $p = .623$); and sociodemographic/professional factors and awareness/practices ($F = 0.001$, $p = .979$). These results should be interpreted cautiously because the underlying dataset, model specifications, and assumptions were not available for independent verification.

Discussion

In this study, 75.0% of respondents had heard of NTDs and 72.6% knew of the national control programme. Onchocerciasis, schistosomiasis, and soil-transmitted helminths were among the most recognized diseases. Academic learning and training/workshops were the leading information sources. These findings support the importance of formal education and continuing professional development, although the cited literature and local findings should not be assumed to be directly comparable.

Attitudes towards NTD control were generally positive: all respondents endorsed community involvement, and 95.9% supported the role of health workers, MDA, prioritization of NTD control, and participation in programmes. Positive attitudes alone, however, do not demonstrate that services are routinely delivered.

A gap was evident between favourable attitudes and reported participation. Although 60.5% reported no involvement in the listed activities, some respondents reported MDA (21.6%) or health education (15.9%); only 2.0% reported case detection/referral, and none selected surveillance/reporting in the activity checklist. Reported barriers—particularly lack of drugs, inadequate training, and poor funding—may constrain implementation.

None of the three reported regression analyses was statistically significant at the .05 level. The results do not establish that the examined factors have no relationship; rather, the analyses did not detect statistically significant associations in the reported models. The small residual degrees of freedom in the first two analyses and absence of model details warrant checking the original output before publication.

The findings suggest that awareness and willingness need to be supported by practical training, supplies, supervision, and clear reporting pathways. Because the analysis could not be independently reproduced from the manuscript alone, conclusions about predictors should remain cautious.

Conclusion

Health workers in Ilorin Metropolis demonstrated baseline awareness of NTDs and generally favourable attitudes, but reported participation in specific control activities was limited. Strengthening practical training, ensuring availability of medicines and diagnostic resources, and integrating surveillance and health education into routine PHC work may help address this implementation gap. The reported regression findings require verification against the original statistical output before publication.

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References

Adegoke, A. O., Samson-Akpan, P. E., & Offiong, D. A. (2021). Primary healthcare workers' knowledge and readiness toward neglected tropical disease elimination in endemic settings. *Journal of Community Health Care*, 46(3), 215–224. https://doi.org/10.1007/s10900-020-00912-x

Adje, D. U., & Dambo, E. D. (2023). Knowledge of tropical diseases and response capabilities of healthcare providers in Kaduna State, Nigeria. International Health, 16(1), 45–53. https://doi.org/10.1093/inthealth/ihad019

Aerts C, Sunyoto T, Tediosi F, Sicuri E. (2017) Are public-private partnerships the solution to tackle neglected tropical diseases? A systematic review of the literature. *Health Policy.* 121(7):745–54.

Emeto, D. C., Salawu, A. T., Salawu, M. M., & Fawole, O. I. (2021). Recognition and reporting of neglected tropical diseases by primary health care workers in Ibadan, Nigeria: A cross-sectional study. *Pan African Medical Journal,* 38, 224. https://doi.org/10.11604/pamj.2021.38.224.26633

Etokwudo SO, Oleribe OO. (2022) Why Nigeria must care for, eliminate and eradicate neglected tropical diseases (NTDs). *Int J Public Health Pharm Pharmacol.* 7(2):29–33.

Federal Ministry of Health (FMoH). (2015). Neglected tropical diseases Nigeria multi-year master plan 2015–2020. Abuja, Nigeria: Federal Ministry of Health.

Federal Ministry of Health (FMoH). (2021). Nigeria neglected tropical diseases programme strategic plan 2021–2025. Abuja, Nigeria: Federal Ministry of Health.

Hotez, P. J., Alvarado, M., Basáñez, M. G., Bolliger, I., Bourne, R., Boussinesq, M., ... Murray, C. J. L. (2014). The global burden of disease study 2010: Interpretation and implications for the neglected tropical diseases. PLoS Neglected Tropical Diseases, 8(7), e2865. https://doi.org/10.1371/journal.pntd.0002865

Hotez, P. J., Aksoy, S., Brindley, P. J., &Kamhawi, S. (2020). What constitutes a neglected tropical disease? *PLoS Neglected Tropical Diseases*, 14(1), e0007904. https://doi.org/10.1371/journal.pntd.0007904

Liese B, Rosenberg M, Schratz A. (2010) Programmes, partnerships, and governance for elimination and control of neglected tropical diseases. *Lancet.* 375(9708):67–76.

Molyneux, D. H., Savioli, L., & Engels, D. (2017). Neglected tropical diseases: Progress towards addressing the chronic pandemic. The Lancet, 389(10066), 312–325. https://doi.org/10.1016/S0140-6736(16)30171-4

Okorie, P. N., Davies, E., & Molyneux, D. H. (2018). Capacity building and operational realities of neglected tropical disease control in Nigeria. *International Health*, 10(4), 231–239. https://doi.org/10.1093/inthealth/ihy024

Oluwole, A. S., Ekpo, U. F., &Mafiana, C. F. (2019). Assessment of healthcare capacity and baseline knowledge of neglected tropical diseases among health personnel in Nigeria. *Parasites & Vectors*, 12(1), 142–151. https://doi.org/10.1186/s13071-019-3398-4

Pam DD, de Souza DK, D'Souza S, Opoku M, Sanda S, Nazaradden I, et al. (2017) Is mass drug administration against lymphatic filariasis required in urban settings? The experience in Kano, Nigeria. *PLoSNegl Trop Dis.* 11(10):e0006004.

World Health Organization. (2012). Accelerating work to overcome the global impact of neglected tropical diseases: A roadmap for implementation. Geneva, Switzerland: WHO.

World Health Organization. (2021). Ending the neglect to attain the Sustainable Development Goals: A roadmap for neglected tropical diseases 2021–2030. Geneva, Switzerland: WHO.

World Health Organization. (2022). *Ending the neglect to attain the Sustainable Development Goals: A road map for neglected tropical diseases 2021–2030*. World Health Organization. https://www.who.int/publications/i/item/9789240010352

World Health Organization. (2023). Neglected tropical diseases: Global progress report. Geneva, Switzerland: WHO.