Innovations

Knowledge, Attitude and Practice of Residents towards the Prevention of Exposure to Noise Pollution in Egbejila Community, Nigeria

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Abstract

Background: Noise pollution is an increasingly significant environmental health concern in rapidly urbanizing communities of Nigeria. This study aimed to assess the knowledge, awareness, and practices regarding noise pollution prevention among residents of Egbejila community in Kwara State, Nigeria. Methods: A community-based cross-sectional study was conducted among 385 randomly selected residents of Egbejila using a structured questionnaire. Data on demographics, knowledge about noise pollution, awareness of regulations, and preventive practices were collected and analyzed using descriptive statistics and chi-square tests. Results: The study revealed moderate knowledge levels (mean score: 3.2±1.1 out of 5) but limited awareness (mean score: 2.3±1.4 out of 7) regarding noise pollution among residents. Only 37.4% of respondents were aware of national regulations on noise control. Preventive practices were generally poor (mean score: 3.5±2.1 out of 12), with significant associations observed between educational level and knowledge scores ($\chi^2 = 21.53$, df = 3, p < 0.001), as well as between duration of residence and preventive practices ($\chi^2 = 16.27$, df = 3, p = 0.001). Generator use (38.7%) and religious activities (27.8%) were identified as the major sources of noise pollution in the community. Conclusion: This study highlights significant gaps in knowledge, awareness, and practices regarding noise pollution prevention in Egbejila community. There is an urgent need for community-based educational interventions and enforcement of existing noise regulations to mitigate the growing health risks associated with noise pollution.

Keywords: Noise pollution; Environmental health; Knowledge; Awareness; Prevention practices; Nigeria; Community health; Urban health

Introduction

Noise pollution represents one of the most pervasive yet underappreciated environmental health concerns in developing countries (WHO, 2018). Defined as unwanted or harmful sound, noise pollution has been linked to numerous adverse health outcomes including hearing impairment, sleep disturbance, cardiovascular diseases, cognitive impairment, and psychological stress (Basner et al., 2014; Münzel et al., 2018). The World Health Organization (WHO) has identified noise pollution as the second most impactful environmental factor affecting human health after air pollution, with an estimated 12% of the global population at risk of noise-induced hearing loss (WHO, 2018).

In Nigeria, rapid urbanization, population growth, and industrialization have exacerbated noise pollution, particularly in peri-urban communities like Egbejila in Kwara State (Oyedepo, 2013; Ibhadode et al., 2018). Egbejila community, located approximately 15 kilometers from Ilorin, the capital city of Kwara State, has experienced significant demographic and infrastructural changes over the past decade due to its proximity to the city center. This transition from a rural to a peri-urban settlement has brought challenges including increased noise levels from various sources such as traffic, commercial activities, power generators, and religious establishments (Akintunde et al., 2020).

Despite the existence of national environmental regulations that specify maximum permissible noise levels in Nigeria (National Environmental Standards and Regulations Enforcement Agency [NESREA], 2009), enforcement remains weak, and public awareness about noise pollution and its effects appears limited. The National Environmental (Noise Standards and Control) Regulations of 2009 stipulate maximum permissible noise levels of 45 dB(A) during the day and 35 dB(A) at night for residential areas, yet compliance with these standards is rarely monitored or enforced, particularly in peri-urban communities (NESREA, 2009).

Research on noise pollution in Nigeria has predominantly focused on major urban centers such as Lagos, Ibadan, and Port Harcourt (Oyedepo, 2013; Baloye&Palamuleni, 2015), with limited attention to rapidly transforming peri-urban communities like Egbejila. Moreover, while several studies have measured noise levels and their sources, fewer have examined community knowledge, awareness, and preventive practices regarding noise pollution (Ibhadode et al., 2018; Akintunde et al., 2020).

Understanding the level of knowledge, awareness, and practices regarding noise pollution among residents is crucial for developing effective interventions and policies. This study therefore aims to assess the knowledge, awareness, and practices on noise pollution prevention among residents of Egbejila community in Kwara State, Nigeria. Specifically, the study seeks to:

Assess residents' knowledge about noise pollution, its sources, and health effects
Evaluate awareness of existing noise regulations and control measures

Examine current practices related to noise prevention and mitigation

Determine the association between socio-demographic characteristics and knowledge, awareness, and practices regarding noise pollution prevention

The findings from this study will contribute to the limited body of literature on community perspectives regarding noise pollution in peri-urban Nigerian settings and inform targeted interventions to reduce noise pollution and its associated health risks in Egbejila and similar communities.

Materials and Methods
Study Design and Setting

This research employed a community-based cross-sectional study design conducted between January and March 2023 in Egbejila community, Kwara State, Nigeria. Egbejila is a peri-urban settlement located approximately 15 kilometers southwest of Ilorin, the capital city of Kwara State. The community has an estimated population of about 12,000 residents (based on projected growth from the 2006 national census) and has experienced rapid urbanization in recent years due to its proximity to Ilorin metropolis.

Sample Size Determination and Sampling Technique

The sample size was calculated using the Cochran formula for cross-sectional studies:

$n = Z^2pq/d^2$

Where:

n = sample size

Z = standard normal deviate at 95% confidence level (1.96)

p = assumed proportion of residents with adequate knowledge of noise pollution (0.5, as no previous similar study was available)

q = 1-p (0.5)

d = precision level (0.05)

$n = (1.96)^2 \times 0.5 \times 0.5/(0.05)^2 = 384.16$

The calculated sample size was rounded up to 385.

A multi-stage sampling technique was employed:

Egbejila community was divided into four geographical clusters based on existing administrative boundaries.

Proportionate allocation was used to determine the number of households to be selected from each cluster.

Systematic random sampling was used to select households within each cluster.

In each selected household, one eligible respondent (aged 18 years and above who had resided in the community for at least six months) was selected using a simple random sampling method.

Data Collection Instrument

A structured questionnaire was developed based on previous literature and adapted to the local context. The questionnaire was divided into four sections:

Socio-demographic characteristics (age, gender, education level, occupation, duration of residence)

Knowledge about noise pollution (5 items)

Awareness of noise pollution regulations and control measures (7 items)

Practices related to noise prevention (12 items)

The questionnaire was initially developed in English and translated to Yoruba (the predominant local language in the community) by a language expert. It was then back-translated to English by another independent translator to ensure consistency. The instrument was pre-tested among 20 residents of a neighboring community with similar characteristics to evaluate its clarity, cultural appropriateness, and reliability. The questionnaire's internal consistency was assessed using Cronbach's alpha, yielding coefficients of 0.78, 0.82, and 0.75 for the knowledge, awareness, and practices sections, respectively.

Data Collection Procedure

Ten research assistants, who were graduate students in environmental health sciences, were trained on the objectives of the study, questionnaire administration, ethical considerations, and data quality control. These research assistants administered the questionnaires through face-to-face interviews in either English or Yoruba, depending on the respondent's preference. Each interview lasted approximately 20-30 minutes. Data collection was conducted primarily during evenings and weekends to ensure wider participation.

Measurement of Variables

Knowledge about Noise Pollution

Knowledge was assessed using five items addressing the definition of noise pollution, health effects, harmful noise levels, major sources, and awareness of regulations. Each correct response was scored 1 point and incorrect or "don't know" responses were scored 0, yielding a maximum possible score of 5. Knowledge levels were categorized as poor (0-1), moderate (2-3), and good (4-5).

Awareness of Noise Pollution

Awareness was measured using seven items concerning perceived seriousness of noise pollution, information exposure, perceived changes in noise levels, awareness of community initiatives, perceived impact on quality of life, awareness of legal noise limits, and knowledge of responsible authorities. Positive responses ("Yes") were scored 1 point and negative responses ("No" or "Don't know") were scored 0, giving a

maximum possible score of 7. Awareness levels were classified as low (0-2), moderate (3-5), and high (6-7).

Practices on Noise Prevention

Practices were evaluated using twelve items addressing various actions to prevent or reduce noise pollution. Each positive practice was scored 1 point and negative practices were scored 0, resulting in a maximum possible score of 12. Practice levels were categorized as poor (0-4), fair (5-8), and good (9-12).

Data Analysis

Data were entered, cleaned, and analyzed using Statistical Package for Social Sciences (SPSS) version 25.0. Descriptive statistics including frequencies, percentages, means, and standard deviations were used to summarize socio-demographic characteristics and knowledge, awareness, and practice scores. Chi-square tests were employed to examine associations between socio-demographic variables and knowledge, awareness, and practice categories. A p-value < 0.05 was considered statistically significant.

Ethical Considerations

Ethical approval was obtained from the Ethics Review Committee of the Faculty of Clinical Sciences, Afe-Babalola University, Ado-Ekiti. Permission was also sought from the community leader (Baale) of Egbejila. Informed consent was obtained from all participants after explaining the purpose of the study, assuring confidentiality, and emphasizing the voluntary nature of participation. All data were anonymized during analysis and reporting.

Results

Socio-demographic Characteristics of Respondents

A total of 385 respondents participated in the study. Table 1 presents their socio-demographic characteristics. The mean age of respondents was 37.6 ± 12.3 years, with the largest proportion (31.7%) in the 26-35 age group. There were slightly more male respondents (52.5%) than females (47.5%). Regarding educational status, 44.2% had secondary education, 28.8% had tertiary education, 17.1% had primary education, and 9.9% had no formal education. The most common occupation was trading/business (34.0%), followed by artisans (22.3%), civil servants (18.7%), students (12.5%), farmers (7.8%), and others (4.7%). Most respondents (39.5%) had resided in the community for 6-10 years.

Table 1: Socio-demographic characteristics of respondents (N=385)

Characteristics	Frequency	Percentage (%)
Age (years)		
18-25	61	15.8
26-35	122	31.7
36-45	97	25.2
46-55	64	16.6
Above 55	41	10.7
Gender		
Male	202	52.5
Female	183	47.5
Educational level		
No formal education	38	9.9
Primary	66	17.1
Secondary	170	44.2
Tertiary	111	28.8
Occupation		
Student	48	12.5
Civil servant	72	18.7
Trader/Business	131	34.0
Artisan	86	22.3
Farmer	30	7.8
Others	18	4.7
Duration of residence (years)		
< 1	37	9.6
1-5	114	29.6
6-10	152	39.5
> 10	82	21.3

Knowledge about Noise Pollution

Table 2 summarizes respondents' knowledge about noise pollution. A large majority (78.2%) correctly identified noise pollution as "any unwanted or excessive sound that harms humans or environment." Regarding health effects, 64.9% correctly identified hearing loss as a health effect of noise pollution. However, only 41.6% correctly identified harmful noise levels (above 85dB). Generator use (38.7%) was identified as the most significant contributor to noise pollution in the community, followed by religious activities (27.8%), entertainment/events (17.9%), traffic (12.5%), and

industrial activities (3.1%). Only 37.4% of respondents were aware of national regulations on noise control in Nigeria.

The mean knowledge score was 3.2 ± 1.1 out of a maximum of 5 points. Based on the categorization, 13.2% of respondents had poor knowledge, 54.3% had moderate knowledge, and 32.5% had good knowledge about noise pollution.

Table 2: Knowledge about noise pollution among respondents (N=385)

Knowledge items	Frequency	Percentage (%)
Definition of noise pollution		
Any unwanted or excessive sound that harms humans or environment*	301	78.2
Music from events	45	11.7
Natural sounds	14	3.6
Don't know	25	6.5
Health effect of noise pollution		
Hearing loss*	250	64.9
Improved concentration	36	9.4
Better sleep	24	6.2
Don't know	75	19.5
Harmful noise level (in decibels)		
Above 85dB*	160	41.6
Above 40dB	57	14.8
Above 120dB	62	16.1
Don't know	106	27.5
Major contributor to noise pollution in community		
Generator use	149	38.7
Religious activities	107	27.8
Entertainment/events	69	17.9
Traffic	48	12.5
Industrial activities	12	3.1
Awareness of national		

regulation on noise control		
Yes	144	37.4
No	186	48.3
Not sure	55	14.3
Knowledge level		
Poor (0-1)	51	13.2
Moderate (2-3)	209	54.3
Good (4-5)	125	32.5

*Correct response

Awareness of Noise Pollution

Table 3 presents respondents' awareness regarding noise pollution. About 35.6% perceived noise pollution as a very serious problem in their community, while 41.8% considered it moderately serious. Only 28.6% had received information about noise pollution control, primarily through radio/TV (43.6%), community meetings (27.3%), and social media (20.0%). More than half (59.2%) of the respondents had noticed an increase in noise levels over the past 5 years. However, awareness of community initiatives for noise control (18.4%), legal noise limits for residential areas (21.6%), and authorities responsible for noise control (24.9%) was generally low.

The mean awareness score was 2.3 ± 1.4 out of a maximum of 7 points. Based on the categorization, 52.7% had low awareness, 43.4% had moderate awareness, and only 3.9% had high awareness regarding noise pollution.

Table 3: Awareness of noise pollution among respondents (N=385)

Awareness items	Frequency	Percentage (%)
Perceived seriousness of noise pollution		
Very serious	137	35.6
Moderately serious	161	41.8
Not serious	63	16.4
Don't know	24	6.2
Received information about noise pollution control		
Yes	110	28.6
No	275	71.4
Source of information (n=110)		

Radio/TV	48	43.6
Social media	22	20.0
Community meeting	30	27.3
Government campaign	8	7.3
Other	2	1.8
Noticed increase in noise levels in past 5 years		
Yes	228	59.2
No	86	22.3
Don't know	71	18.5
Aware of community initiatives for noise control		
Yes	71	18.4
No	314	81.6
Perceives noise affects quality of life		
Yes	246	63.9
No	72	18.7
Don't know	67	17.4
Aware of legal noise limits for residential areas		
Yes	83	21.6
No	302	78.4
Aware of authority responsible for noise control		
Yes	96	24.9
No	289	75.1
Awareness level		
Low (0-2)	203	52.7
Moderate (3-5)	167	43.4
High (6-7)	15	3.9

Practices on Noise Prevention

Table 4 presents respondents' practices regarding noise prevention. The most common action taken when disturbed by noise was "do nothing" (46.8%), followed by

"confront the noise maker" (32.7%) and "report to authorities" (12.5%). Only 23.6% of respondents used noise-reducing materials in their homes. While a majority (65.5%) reported turning down the volume of electronic devices during late hours, only 37.9% considered noise levels when purchasing household equipment. Only 15.1% had ever reported noise violations to authorities, and among those who did, only 36.2% reported that action was taken. However, 64.7% expressed willingness to support stricter noise control measures, and 56.1% were willing to participate in noise awareness campaigns.

The mean practice score was 3.5 ± 2.1 out of a maximum of 12 points. Based on the categorization, 68.3% had poor practices, 29.1% had fair practices, and only 2.6% had good practices related to noise prevention.

Table 4: Practices on noise prevention among respondents (N=385)

Practice item	Frequency	Percentage (%)
Frequency of complaining about noise		
Very often	43	11.2
Sometimes	98	25.5
Rarely	112	29.1
Never	132	34.2
Action taken when disturbed by noise		
Report to authorities	48	12.5
Confront the noise maker	126	32.7
Do nothing	180	46.8
Other	31	8.0
Use of noise-reducing materials		
Yes	91	23.6
No	294	76.4
Type of noise-reducing materials used (n=91)		
Sound-absorbing curtains	32	35.2
Weather stripping	14	15.4
Double glazed	27	29.7

windows		
Other	18	19.7
Participation in community meetings on environmental issues		
Very often	36	9.4
Sometimes	82	21.3
Rarely	107	27.8
Never	160	41.5
Turning down volume of devices during late hours		
Always	113	29.4
Often	139	36.1
Sometimes	91	23.6
Never	42	10.9
Consider noise levels when purchasing equipment		
Yes	146	37.9
No	166	43.1
Sometimes	73	19.0
Ever reported noise violations to authorities		
Yes	58	15.1
No	327	84.9
Action taken after reporting (n=58)		
Yes	21	36.2
No	27	46.6
Don't know	10	17.2
Observe quiet hours in neighborhood		
Yes	102	26.5
No	138	35.8
There are no designated quiet	145	37.7

hours		
Support for stricter noise control measures		
Yes	249	64.7
No	53	13.8
Not sure	83	21.5
Willing to participate in noise awareness campaigns		
Yes	216	56.1
No	76	19.7
Maybe	93	24.2
Practice level		
Poor (0-4)	263	68.3
Fair (5-8)	112	29.1
Good (9-12)	10	2.6

Association between Socio-demographic Characteristics and Knowledge, Awareness, and Practices

Tables 5, 6, and 7 present the associations between socio-demographic characteristics and knowledge, awareness, and practices regarding noise pollution, respectively.

Chi-square analysis revealed significant associations between educational level and knowledge scores (χ^2 = 21.53, df = 3, p < 0.001), with higher education associated with better knowledge. Age was also significantly associated with knowledge (χ^2 = 16.21, df = 4, p = 0.003), with middle-aged adults (36-45 years) having the highest proportion of good knowledge.

Table 5: Association between socio-demographic characteristics and knowledge levels (N=385)

Characteristics	Knowledge level			χ^2	p-value
	Poor (n=51)	Moderate (n=209)	Good (n=125)		
	n (%)	n (%)	n (%)		
Age (years)				16.21	0.003*
18-25	12 (19.7)	36 (59.0)	13 (21.3)		
26-35	17 (13.9)	71 (58.2)	34 (27.9)		
36-45	7 (7.2)	50 (51.5)	40 (41.3)		

46-55	7 (10.9)	32 (50.0)	25 (39.1)		
Above 55	8 (19.5)	20 (48.8)	13 (31.7)		
Gender				0.87	0.647
Male	24 (11.9)	112 (55.4)	66 (32.7)		
Female	27 (14.8)	97 (53.0)	59 (32.2)		
Educational level				21.53	<0.001*
No formal education	11 (28.9)	22 (57.9)	5 (13.2)		
Primary	13 (19.7)	36 (54.5)	17 (25.8)		
Secondary	20 (11.8)	94 (55.3)	56 (32.9)		
Tertiary	7 (6.3)	57 (51.4)	47 (42.3)		
Occupation				15.41	0.118
Student	8 (16.7)	28 (58.3)	12 (25.0)		
Civil servant	5 (6.9)	37 (51.4)	30 (41.7)		
Trader/Business	20 (15.3)	67 (51.1)	44 (33.6)		
Artisan	12 (14.0)	50 (58.1)	24 (27.9)		
Farmer	5 (16.7)	18 (60.0)	7 (23.3)		
Others	1 (5.6)	9 (50.0)	8 (44.4)		
Duration of residence (years)				7.28	0.295
< 1	7 (18.9)	21 (56.8)	9 (24.3)		
1-5	16 (14.0)	64 (56.1)	34 (29.8)		
6-10	19 (12.5)	84 (55.3)	49 (32.2)		
> 10	9 (11.0)	40 (48.8)	33 (40.2)		

*Statistically significant (p < 0.05)

For awareness, significant associations were observed with educational level (χ^2 = 18.72, df = 6, p = 0.005) and occupation (χ^2 = 22.85, df = 10, p = 0.011). Civil servants and those with tertiary education demonstrated higher awareness levels.

Table 6: Association between socio-demographic characteristics and awareness levels (N=385)

Characteristics	Awareness level			χ²	p-value
	Low (n=203)	Moderate (n=167)	High (n=15)		
	n (%)	n (%)	n (%)		
Age (years)				10.78	0.215
18-25	37 (60.7)	22 (36.1)	2 (3.3)		
26-35	67 (54.9)	51 (41.8)	4 (3.3)		
36-45	46 (47.4)	47 (48.5)	4 (4.1)		
46-55	30 (46.9)	30 (46.9)	4 (6.3)		
Above 55	23 (56.1)	17 (41.5)	1 (2.4)		
Gender				2.91	0.233
Male	100 (49.5)	94 (46.5)	8 (4.0)		
Female	103 (56.3)	73 (39.9)	7 (3.8)		
Educational level				18.72	0.005*
No formal education	28 (73.7)	10 (26.3)	0 (0.0)		
Primary	38 (57.6)	27 (40.9)	1 (1.5)		
Secondary	90 (52.9)	75 (44.1)	5 (2.9)		
Tertiary	47 (42.3)	55 (49.5)	9 (8.1)		
Occupation				22.85	0.011*
Student	28 (58.3)	18 (37.5)	2 (4.2)		
Civil servant	24 (33.3)	42 (58.3)	6 (8.3)		
Trader/Business	73 (55.7)	55 (42.0)	3 (2.3)		
Artisan	50 (58.1)	34 (39.5)	2 (2.3)		
Farmer	20 (66.7)	9 (30.0)	1 (3.3)		
Others	8 (44.4)	9 (50.0)	1 (5.6)		
Duration of residence (years)				8.42	0.209
< 1	26 (70.3)	10 (27.0)	1 (2.7)		
1-5	62 (54.4)	49 (43.0			

Discussion

This study assessed knowledge, awareness, and practices regarding noise pollution prevention among residents of Egbejila community in Kwara State, Nigeria. The findings reveal moderate knowledge levels but limited awareness and poor preventive practices among respondents, highlighting significant gaps that require attention.

Knowledge about Noise Pollution

While most respondents (78.2%) correctly identified the definition of noise pollution and recognized hearing loss as a potential health effect (64.9%), fewer respondents (41.6%) could accurately identify harmful noise levels. This finding is consistent with studies conducted in other Nigerian communities where basic awareness of noise pollution exists, but detailed knowledge about specific aspects remains limited (Oyedepo, 2013; Ibhadode et al., 2018). The moderate knowledge score (mean: 3.2 ± 1.1 out of 5) indicates that while residents have some understanding of the concept of noise pollution, there are still important knowledge gaps that need to be addressed. The significant association between educational level and knowledge scores ($p < 0.001$) aligns with expectations and previous research which suggests that education enhances environmental literacy (Akintunde et al., 2020). Similarly, the association between age and knowledge scores ($p = 0.003$), with middle-aged adults (36-45 years) showing better knowledge, may reflect their increased exposure to environmental information through various media and life experiences.

Generator use (38.7%) and religious activities (27.8%) were identified as the major sources of noise pollution in the community. This reflects the reality of many Nigerian communities where unreliable power supply necessitates generator use, and where religious establishments with amplified sound systems are prevalent (Baloye & Palamuleni, 2015). This finding highlights the need for targeted interventions that address these specific sources.

Awareness of Noise Pollution Regulations and Control Measures

The study revealed particularly low awareness levels regarding noise pollution regulations and control measures (mean score: 2.3 ± 1.4 out of 7). Only 37.4% of respondents were aware of national regulations on noise control, which reflects inadequate public education and information dissemination about environmental regulations in Nigeria. This finding is concerning as awareness of regulations is a prerequisite for compliance.

The low awareness of legal noise limits for residential areas (21.6%) and authorities responsible for noise control (24.9%) further underscores the information gap regarding regulatory frameworks. This mirrors findings from studies in other parts of

Nigeria where regulatory awareness remains persistently low despite the existence of national standards (NESREA, 2009; Oyedepo, 2013).

The significant associations between educational level and occupation with awareness levels suggest that information about environmental regulations tends to be concentrated among more educated individuals and certain occupational groups, particularly civil servants. This points to potential social inequalities in access to environmental information, which could impede community-wide engagement in noise control efforts.

Practices on Noise Prevention

Perhaps the most concerning finding of this study is the generally poor level of preventive practices (mean score: 3.5±2.1 out of 12). The most common response to noise disturbance—"do nothing" (46.8%)—indicates a sense of resignation or normalization of noise pollution among residents. This passive response might stem from perceived lack of agency, limited awareness of reporting mechanisms, or skepticism about enforcement actions.

The significant association between duration of residence and preventive practices (p = 0.001) suggests that longer-term residents may develop more effective coping strategies or greater investment in community well-being. Nevertheless, the overall poor practice scores across all demographic groups indicate that knowledge is not necessarily translating into action. This knowledge-behavior gap is a common challenge in environmental health promotion (Basner et al., 2014).

Despite poor current practices, the willingness expressed by most respondents (64.7%) to support stricter noise control measures and to participate in noise awareness campaigns (56.1%) provides a foundation for intervention. This finding suggests that residents recognize the problem and may be receptive to community-based initiatives.

Implications for Public Health

The findings of this study have significant implications for public health in rapidly urbanizing communities like Egbejila. The moderate knowledge but poor practices regarding noise pollution prevention suggest that health education alone may be insufficient without accompanying structural and policy interventions.

The identified major sources of noise pollution—generator use and religious activities—present complex challenges that intersect with broader issues of infrastructure (reliable electricity) and cultural practices. Addressing these will require multi-sectoral approaches that go beyond simple awareness campaigns.

The significant associations between socio-demographic factors and knowledge, awareness, and practices highlight the need for targeted interventions that address the specific needs and characteristics of different community segments. Moreover, the

generally low level of awareness about regulations points to deficiencies in environmental governance and enforcement mechanisms.

Recommendations

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

Community-based education programs: Develop and implement comprehensive educational interventions that focus not only on basic awareness but also on specific aspects such as harmful noise levels, health effects, and regulatory frameworks. These programs should be tailored to different educational levels and utilize culturally appropriate communication channels.

Strengthen regulatory awareness and enforcement: Increase public awareness about existing noise regulations through community forums, local media, and religious institutions. Simultaneously, strengthen enforcement mechanisms by training environmental health officers and ensuring regular monitoring of noise levels in the community.

Address specific noise sources: Develop targeted strategies for the major sources of noise pollution identified in the study:

For generator noise: Promote noise-reducing enclosures for generators, encourage communal generator arrangements to reduce the number of units, and advocate for improved electricity supply.

For religious establishments: Engage religious leaders in noise reduction efforts, promote the use of soundproofing materials, and establish community agreements on acceptable amplification practices.

Enhance reporting mechanisms: Establish accessible and effective channels for reporting noise violations and ensure timely responses to complaints to build public confidence in regulatory systems.

Multi-stakeholder engagement: Foster partnerships among community leaders, religious organizations, business owners, educational institutions, and local government to develop comprehensive and sustainable noise control strategies.

Infrastructure development: Advocate for improved electricity supply to reduce dependence on generators, which were identified as the primary source of noise pollution.

Regular monitoring and evaluation: Conduct periodic assessments of noise levels in different areas of the community and evaluate the effectiveness of interventions to guide ongoing efforts.

Integration into urban planning: Advocate for the integration of noise considerations into urban planning and development processes for Egbejila and similar peri-urban communities.

Conclusion

This study has revealed significant gaps in knowledge, awareness, and practices regarding noise pollution prevention among residents of Egbejila community in Kwara State, Nigeria. While there exists moderate knowledge about the basic concept of noise pollution, awareness of regulations and preventive practices remain inadequate. Generator use and religious activities were identified as the major sources of noise pollution, reflecting the unique challenges faced by rapidly urbanizing communities in Nigeria.

The significant associations observed between educational level and knowledge, as well as between duration of residence and preventive practices, highlight the importance of socio-demographic factors in shaping environmental health behaviors. The findings underscore the need for comprehensive interventions that combine education, regulatory enforcement, infrastructure improvement, and community engagement to effectively address noise pollution in Egbejila and similar communities. As Egbejila continues to experience rapid urbanization, proactive measures to manage noise pollution are essential to safeguard public health and environmental quality. Future research should focus on evaluating the effectiveness of various intervention strategies and exploring the interactions between noise pollution and other environmental health challenges in peri-urban Nigerian communities.

Knowledge, Awareness and Practices on Noise Pollution Prevention among Residents of Egbejila Community, Kwara State, Nigeria: A Community-Based Cross-Sectional Study

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