

# Statistical Analysis of Noise Pollution Awareness and its Effects on Health in Oja-Oba Market, Ado Ekiti.

Oluwayomi Kayode Elisha, Ogunetimoju Abolaji Moses

Department of Statistics Ekiti State University Ado Ekiti, Nigeria

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## ABSTRACT

Noise pollution, a significant environmental challenge in urban areas worldwide, arises from human-generated outdoor sounds. This study investigates the impact of noise pollution on the urban market of Oja-Oba in Ado Ekiti, Nigeria, through the lens of a healthy city concept. Using a Cross-sectional survey design that utilizes a quantitative approach through the administration of structured questionnaires we examined residents' understanding and experiences of noise pollution in this bustling market area and insights were obtained from in-depth interviews with residents and traders. A sample of 200 households was randomly selected using simple random sampling (SRS) to provide insights into demographic variables and perceptions of noise pollution. The study reveals a paradox: although 89% of residents know the harmful effects of noise pollution (including its role in causing tinnitus), 59% still report experiencing tinnitus. Interestingly, Chi-square analysis shows no significant link between understanding noise pollution and experiencing its effects ( $p=0.820 > 0.05$ ), indicating that knowledge alone may not reduce the impact. Traffic was identified as a significant noise source by 51% of respondents, highlighting the complex relationship between urban development, commerce, and environmental health in Nigeria's rapidly growing cities. The findings reveal a community struggling with urban noise, where awareness and experience of noise pollution exist in a delicate balance. The study recommends targeted noise reduction strategies and educational campaigns to bridge knowledge and action gaps. It emphasizes the connection between urban soundscapes and community well-being, providing valuable insights for environmental health research. This sets the stage for future studies on sustainable acoustic management and policy development in similar urban settings across Nigeria and beyond.

**Keywords:** Health Impacts, Noise Pollution, Perception, Robust Analysis, Simple Random Sampling.

## INTRODUCTION

Noise is any unwelcome or disruptive sound that hampers everyday activities or lowers environmental quality (Olukanni et al., 2022). Unlike harmonious or indifferent sounds, noise is usually intrusive, potentially causing discomfort, stress, and adverse health effects (Onuu & Onuu, 2020). This auditory disruption can come from numerous sources, such as traffic, industrial operations, and social interactions. Its impact is often magnified in densely populated urban settings where sound levels can become harmful (Eze et al., 2021). In rapidly urbanizing regions, especially in developing countries, the lack of effective noise control measures exacerbates the problem, leading to severe public health consequences (Olukanni et al., 2022). Noise pollution, characterized by unwanted or harmful sounds from human activities, is increasingly recognized as a critical environmental issue in urban areas. It affects both auditory health and general well-being, cognitive functions, and quality of life. Previous research indicated that exposure to high noise levels in market areas can lead to various health issues, including stress, cardiovascular problems, and sleep disturbances. These health risks underline the necessity of addressing noise pollution through targeted interventions and policies (Onuu & Onuu, 2020).

Furthermore, understanding local perceptions of noise pollution is crucial for developing effective noise management strategies that are culturally and contextually appropriate (WHO, 2018). Research on noise pollution in urban marketplaces highlights the variability and intensity of noise sources. (Eze et al., 2021)

investigated noise levels in Enugu Urban, Nigeria, focusing on market areas and identifying vehicular traffic and commercial activities as significant contributors. Their study emphasized the importance of monitoring and regulating noise sources to reduce environmental health risks (Eze et al., 2021).

Understanding residents' and traders' perceptions of noise pollution in urban markets is essential for assessing its effects on daily life and well-being. Olukanni et al. (2022) examined public awareness and attitudes towards noise pollution in a Nigerian city, uncovering significant concerns among residents regarding its health impacts. The research highlighted the disconnect between public perception and policy action, advocating for community engagement and targeted measures to address noise pollution effectively. The health effects of noise pollution in urban areas are well-known. High noise levels, especially in market areas, are linked to increased stress, sleep problems, and heart issues (Onuu&Onuu, 2020).

Furthermore, Onuu and Onuu (2020) emphasized these health risks in their study on noise pollution in Nigerian cities, calling for public health strategies to focus on reducing noise to improve the quality of life for urban residents. Effective noise control needs strong policies and local implementation. The World Health Organization's guidelines on environmental noise offer a thorough framework for policymakers, highlighting the need for integrated urban planning and public health measures (WHO, 2018). Akinyemi and Agbaje (2023) studied the impact of urbanization on noise pollution in southwestern Nigeria. They emphasized the importance of sustainable urban development that reduces noise and improves public health.

Economic and cultural factors influence perceptions of noise pollution, which affects how people and communities react to noise. According to Olukanni et al. (2022), residents in Nigerian cities interpret noise pollution differently depending on their economic status and cultural heritage. Recognizing these aspects is vital for developing inclusive noise management plans and effective ways to encourage people to adopt practices that reduce noise. Advancements in technology offer promising solutions for noise control in urban environments. From noise barriers and acoustic insulation to innovative urban design strategies, these technological innovations aim to reduce noise levels and mitigate its adverse effects on human health and well-being (WHO, 2018). However, the adoption and effectiveness of these solutions depend on their integration into urban planning frameworks and the involvement of stakeholders in their implementation.

The long-term health implications of noise pollution underscore the need for proactive public health interventions. Chronic exposure to high noise levels has been linked to cardiovascular diseases, cognitive impairments, and mental health disorders (Onuu&Onuu, 2020). Public health strategies should prioritize noise reduction measures alongside other environmental health initiatives to create healthier and more sustainable urban environments. Effective policy frameworks and urban planning strategies are essential for addressing noise pollution in urban marketplaces. Akinyemi and Agbaje (2023) emphasize the role of sustainable urban development practices in mitigating noise pollution and promoting urban resilience. These frameworks should integrate land use zoning, transport planning, and building regulations to minimize noise emissions and protect residents from excessive noise exposure.

Ado-Ekiti, the capital of Ekiti State in Nigeria, presents a typical example of an urban center facing significant noise pollution challenges. The Oja-Oba Market, a central hub for economic activities, is the city's primary source of noise. The market's vibrancy, characterized by the constant movement of people, vehicular traffic, and the activities of traders, creates a boisterous environment. This situation reflects the broader urban noise issues across many developing countries, where market areas often lack effective noise management strategies (Akinyemi&Agbaje, 2023). This study aims to comprehensively analyze noise pollution perception and its impact in the Oja-Oba Market area. By employing quantitative and qualitative research methods, the study will measure noise levels, gather residents' and traders' perceptions of noise pollution, and assess its health and social impacts. Such a comprehensive approach allows a deeper understanding of how noise pollution affects urban dwellers' daily lives and overall health (Eze et al., 2021). Furthermore, this study aims to identify effective strategies for controlling noise pollution in the area. High noise pollution levels can significantly disrupt residents' lives, potentially leading to temporary hearing loss, tinnitus, discomfort, increased blood pressure, and other health issues.

The primary objective of this research is to assess the residents' perception and awareness of noise pollution in the Oja-Oba market area of Ado-Ekiti, Ekiti State, Nigeria. Specifically, this study aims to:

- i. Investigate the awareness and perceptions of noise pollution among residents and traders in the Oja-Oba market.
- ii. Examine the current environmental state of the market area about noise pollution.
- iii. Identify the challenges residents and traders face due to noise pollution in the market area.
- iv. Determine the impact of noise pollution on the health of individuals living and working in and around the Oja-Oba market, including specific health issues such as tinnitus.

This study contributes to the academic discourse on environmental noise and provides valuable insights for environmental health research. The findings are expected to benefit residents by identifying noise sources, educating them on the impacts, and suggesting ways to minimize noise pollution. The study aims to improve residents' health and prolong life expectancy by effectively addressing noise pollution challenges.

## MATERIALS AND METHODS

This research utilized primary data collected by directly administering questionnaires to residents and shop owners in Oja-Oba Ado Ekiti, Nigeria. The questionnaire was designed based on variables identified from previous studies and a systematic review of the literature on noise pollution, its perception, impacts, and control strategies. This approach ensured the inclusion of relevant and well-established variables for the study.

The questionnaire consisted of sections that gathered information on:

**Demographic Details:** Age, gender, occupation, and duration of residence or business in the area.

**Perception of Noise Pollution:** Awareness levels, noise sources, perceived severity, and understanding of noise pollution.

**Impacts of Noise Pollution:** Health effects experienced, such as tinnitus, stress, and sleep disturbances.

**Control Strategies:** Awareness and effectiveness of existing noise control measures, and suggestions for improvement.

The study employed a simple random sampling method, ensuring equal selection opportunities among all individuals in the area. A total of 200 households were randomly chosen for participation.

### Chi-Square (Test Statistic)

The Chi-Square statistic is commonly used for testing relationships between categorical variables. The null hypothesis of the Chi-Square test is that no relationship exists between the categorical variables in the population: they are independent. The test statistic is given below:

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

$O_i$  = Observed value (actual value)

$E_i$  = Expected value

We then compare the test statistic to the critical Chi-square value corresponding to our chosen alpha value and the degrees of freedom for our data.

## Pearson Correlation

Pearson  $r$  correlation is the most widely used correlation statistic to measure the degree of the relationship between linearly related variables.

## RESULTS AND DISCUSSION

**Table 1: Respondent Demographic Frequency Distribution**

	Categories	Frequency	Percentage
<b>Sex</b>	Male	102	51.0%
	Female	98	49.0%
<b>Age</b>	11-20	38	19.0%
	21-30	110	55.0%
	31-40	39	19.5%
	41 and above	13	6.5%
<b>Marital Status</b>	Single	109	54.5%
	Married	71	35.5%
	Divorced	20	10.0%
<b>Occupation</b>	Traders	91	45.5%
	Students	78	39%
	Civil servants	31	15.5%

**Data Source:** Oja-Oba Market Survey, Ado Ekiti Nigeria Survey.

The results in Table 1 indicate that the questionnaire survey conducted at Oja-Oba Market in Ado-Ekiti, Nigeria, reveals a balanced gender distribution, with a slight predominance of males (51%) over females (49%). The survey primarily includes young adults, with 55% of respondents aged 21-30. Many respondents are single (54.5%), corresponding to the younger demographic. Regarding occupation, traders (45.5%) and students (39%) are the most prominent groups, reflecting the market environment and the proximity of educational institutions. This demographic profile suggests that the study captures the perspectives on noise pollution predominantly from young, economically active individuals in and around Oja-Oba Market. Consequently, the findings are most relevant for understanding the noise impacts on traders and students, with lesser representation from older age groups and other professions.

**Table 2: Respondent Perception On Noise Pollution**

Variables	Categories	Frequency	Percentage
<b>Being open to noise for a long time causes ringing in the ears</b>	Strongly Agree	95	47.5
	Agree	83	41.5
	Disagree	14	7.0

	Strongly Disagree	8	4.0
<b>Inability to hear soft and high sounds</b>	Strongly Agree	33	16.5
	Agree	77	38.5
	Disagree	84	42.0
	Strongly Disagree	6	3.0
<b>Trouble in understanding conversations at a distance or in a crowd</b>	Strongly Agree	52	26
	Agree	76	38.0
	Disagree	42	21.0
	Strongly Disagree	30	15.0
<b>Listening to music or watching television in higher volume affect hearing</b>	Strongly Agree	63	31.5
	Agree	69	34.5
	Disagree	47	23.5
	Strongly Disagree	21	10.5
<b>Finding it difficult to tell which direction noise comes from</b>	Strongly Agree	48	24.0
	Agree	58	29.0
	Strongly Disagree	70	35.0
	Disagree	24	12.0
<b>Regularly feeling tired to concentrate while listening</b>	Strongly Agree	41	20.5
	Agree	83	41.5
	Strongly Disagree	61	30.5
	Disagree	15	7.5
<b>Feeling nervous about understanding others</b>	Strongly Agree	47	23.5

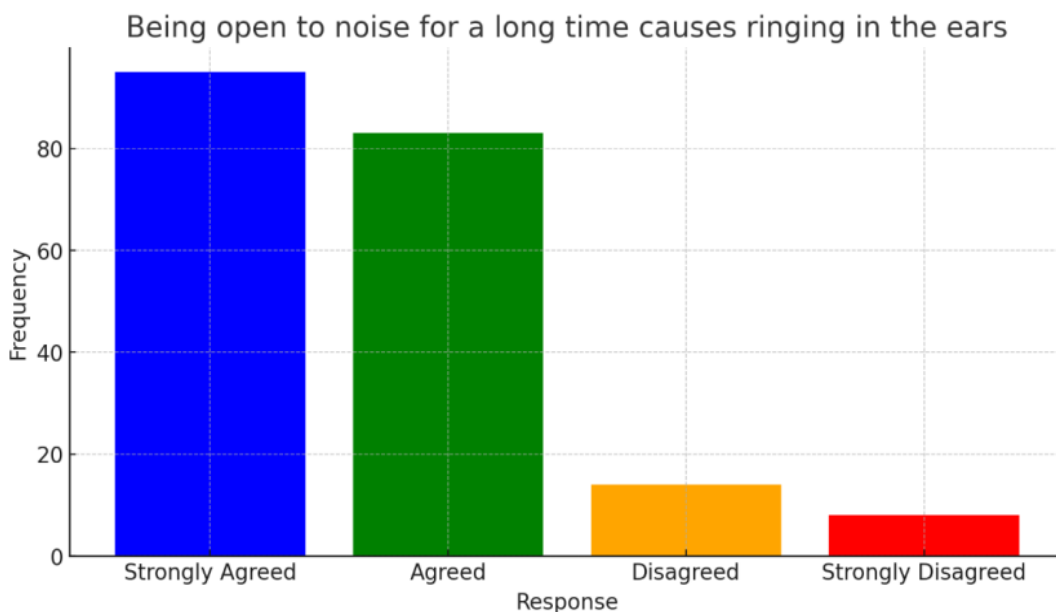
	Agree	79	39.5
	Strongly Disagree	56	28.0
	Disagree	18	9.0
<b>Noise pollution can strain our mental state</b>	Strongly Agree	70	35.0
	Agree	86	43.0
	Disagree	35	17.5
	Strongly Disagree	9	4.5

**Data Source:** Oja-Oba Market Survey, Ado-Ekiti Nigeria.

From Table 2, The study reveals strong concerns about the impact of noise on hearing and mental well-being. Most respondents (89%) agree that prolonged exposure to noise causes ringing in the ears, with 47.5% strongly agreeing and 41.5% agreeing. Opinions are mixed on the ability to hear soft and high sounds, with 16.5% strongly agreeing, 38.5% agreeing, 42.0% disagreeing, and 3% strongly disagreeing. Additionally, 63.6% of respondents struggle to understand conversations in noisy environments, with 25.6% strongly agreeing and 38.0% agreeing. Furthermore, 66% believe high volumes negatively affect hearing, with 31.5% strongly agreeing and 34.5% agreeing. About 53% find it challenging to determine the direction of noise, with 24.0% strongly agreeing and 29% agreeing, while 62% feel tired concentrating while listening, with 20.5% strongly agreeing and 41.5% agreeing.

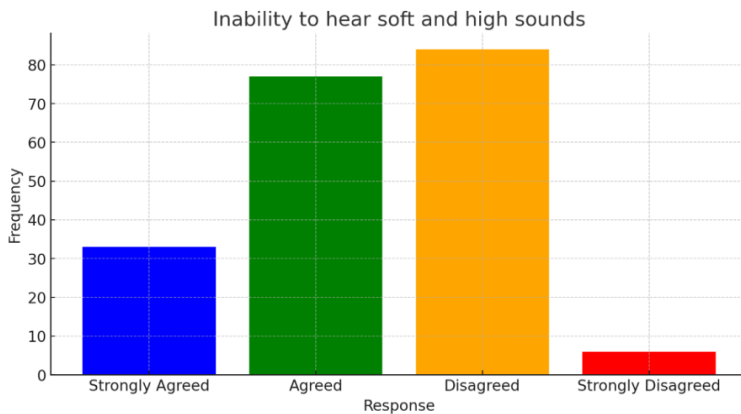
Anxiety about understanding others is split, with 63% feeling nervous (23.5% strongly agreeing and 39.5% agreeing) and 37% not feeling nervous (28% disagreeing and 9% strongly disagreeing). Lastly, a significant majority (78%) agree that noise pollution strains mental well-being, with 35% strongly agreeing and 43% agreeing. These results underscore widespread concern about noise's detrimental effects on hearing and mental health.

### Bar Chart Representation Of Respondents' Understanding Of The Respondents On Noise Pollution



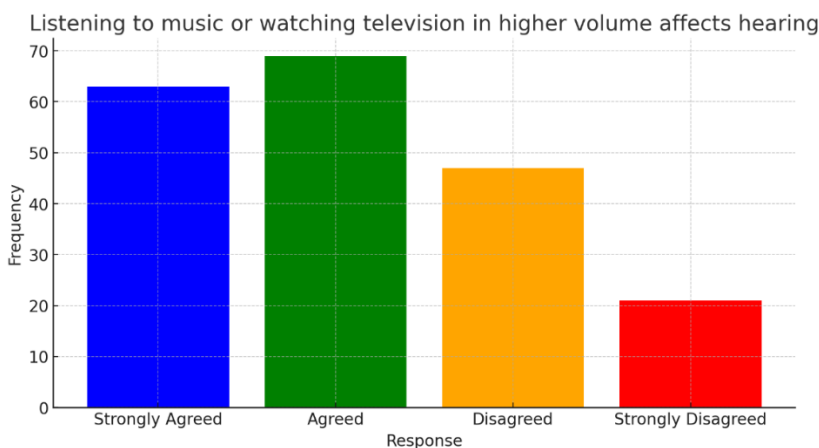
**Figure 1**

Figure 1 reveals responses to the statement: "Being exposed to noise for a long time causes ringing in the ears." Most respondents strongly agreed (approximately 85) or agreed (around 80) with the statement. A smaller number of respondents disagreed (around 25) or strongly disagreed (about 10). This indicates a consensus that prolonged noise exposure can cause ear ringing.



**Figure 2**

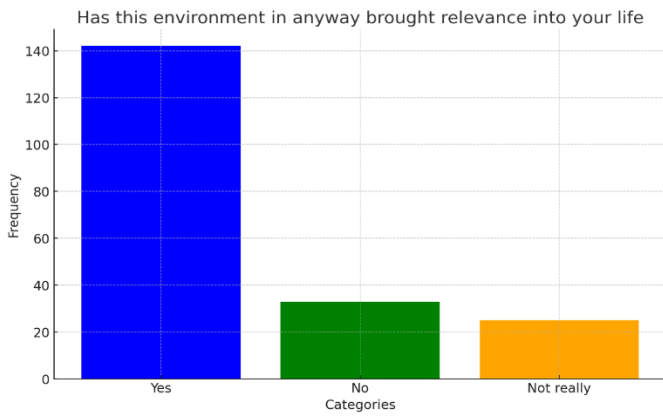
The result from Figure 2 shows responses to the statement: "Inability to hear soft and high sounds." The majority of respondents either disagreed (approximately 80) or agreed (around 75) with the statement, while fewer strongly agreed (about 35) or strongly disagreed (around 10). This indicates mixed opinions on the inability to hear soft and high sounds.



**Figure 3**

Figure 3 shows responses to the statement: "Listening to music or watching television in higher volume affects hearing." The majority of respondents either strongly agreed (about 65) or agreed (around 70), while fewer disagreed (approximately 45) or strongly disagreed (about 25). This indicates a general consensus that listening to music or watching television at higher volumes can affect hearing.

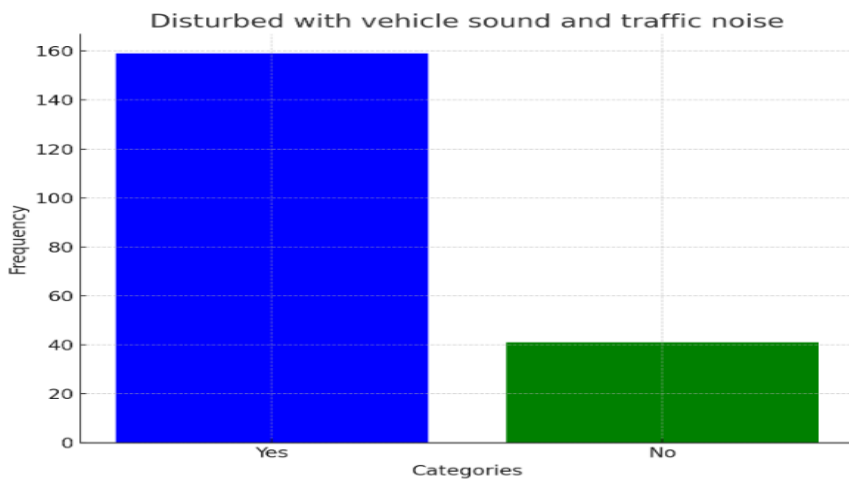
**Bar Chart Representation Of Quality Of The Environment To The People’s Health**



**Figure 4**

Figure 4 shows a strong positive impact of the environment on respondents' lives. Out of 200 responses, a significant majority (142 or 70.3%) answered "Yes" to the environment, which brought relevance to their lives. Only 34 (16.8%) responded "No," while 26 (12.9%) chose "Not really."

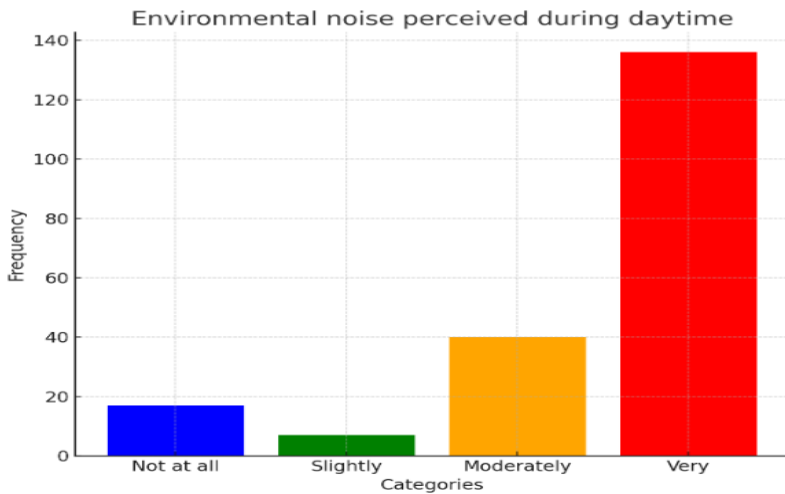
This data suggests that the environment in question has been meaningful and influential for most participants, with a small minority feeling neutral or unaffected.



**Figure 5**

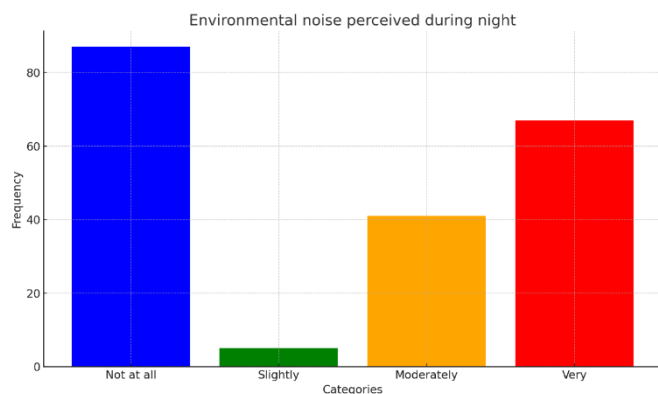
Figure 5 vividly demonstrates the widespread effect of vehicle and traffic noise on residents. A large majority, comprising 158 respondents (79%), indicate being disturbed by these noises, contrasting sharply with the 42 respondents (21%) who report no disturbance. This stark contrast underscores traffic noise as a prominent urban issue, underscoring the pressing need for urban planning and transportation policies to prioritize noise mitigation strategies. These efforts are crucial for enhancing the quality of life for the majority affected by urban noise pollution.





**Figure 6**

Based on Figure 6, the graph illustrates a pronounced gradient in daytime noise perception. A significant majority of respondents (136) describe their environment as "Very" noisy, contrasting with 40 respondents who perceive it as "Moderately" noisy. Only a minority report experiencing "Slight" noise (8 respondents) or no noise at all (18 respondents). This skewed distribution, where 88% of participants indicate moderate to high noise levels, highlights a substantial urban acoustical issue. It emphasizes the critical necessity for promptly implementing noise reduction strategies to enhance daytime living conditions.



**Figure 7**

In Figure 7, a notable proportion of residents indicate minimal impact from nighttime noise, while a significant number acknowledge its presence and disturbance.

**Table 3: The Impact Of Noise Pollution On The Resident**

Variables	Categories	Frequency	Percentage
Do you know that excessive noise can be harmful to your health	Yes	179	89.5
	No	21	10.5
Do you feel any sickness at the end of your work days	Yes	86	43.0
	No	114	57.0
Do you have any difficulty hearing what people say	Yes	100	50
	No	100	50

Do you have high blood pressure	Yes	65	33.5
	No	135	67.5
Do you experience tinnitus (sounds in your ear) regularly	Yes	118	59.0
	No	82	41.0
Do you experience difficulty in sleeping at night	Yes	93	46.5
	No	107	53.0
Do you experience memory problems	Yes	83	41.5
	No	117	58.5
Do you sleep late at night	Yes	109	54.5
	No	91	45.5
Due to the noise in this environment, can you still carry out some complex tasks efficiently	Yes	157	78.5
	No	43	21.5
Do you have difficult to tell which direction noise coming from	Yes	73	36.5
	No	127	63.5
Do you feel nervous about trying to hear and understand others	Yes	113	56.5
	No	87	43.5
Before you understand people, do you try to read lips or more intently watching people's faces during conversations	Yes	89	44.5
	No	111	55.5
Do you experience answering and responding inappropriately in conversations	Yes	133	66.5
	No	67	33.5

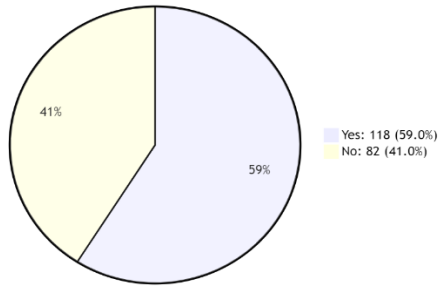
**Data Source:**Oja-Oba Market Survey, Ado-Ekiti Nigeria.

Table 3 shows the survey results that provide significant insights into the impact of noise on health and daily functioning. A large majority (89.5%) know that excessive noise can harm health. 43% feel sick at the end of their workdays, and half (50%) report difficulty hearing what people say. Additionally, 33.5% have high blood pressure and 59% regularly experience tinnitus. Sleep issues are prevalent, with 46.5% having difficulty sleeping and 54.5% sleeping late at night. Memory problems affect 41.5% of respondents. Despite the noise, 78.5% can still carry out complex tasks efficiently. However, 36.5% have difficulty determining the direction of noise, and 56.5% feel nervous about trying to hear and understand others. 44.5% try to read lips or watch faces intently during conversations, and 66.5% sometimes answer or respond inappropriately in conversations. These results highlight the broad impacts of noise on health, hearing, sleep, and communication, indicating a need for strategies to mitigate these effects in noisy environments.

### Visual Depiction of Noise Pollution's Effect

#### Do you experience tinnitus (sounds in your ear) regularly?

Tinnitus (Sounds in the Ear) Regularly



**Figure 8**

Figure 8 depicts a pie chart highlighting a prevalent occurrence of tinnitus among respondents, with 59% (118 individuals) reporting regular experiences of ear sounds, while 41% (82 individuals) do not. This substantial majority affected by tinnitus underscores widespread concerns about auditory health, potentially influenced by environmental noise exposure. The findings emphasize the urgency of investigating underlying causes and developing interventions to address this common condition, which significantly impacts community well-being.

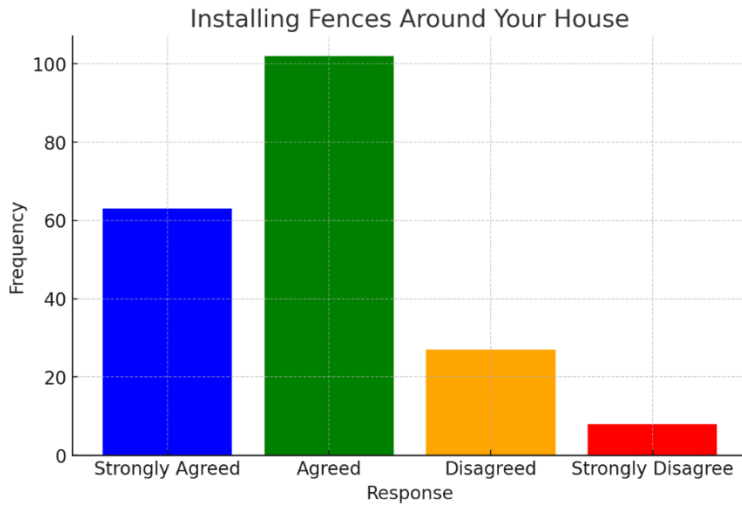
**Table 4: Effective Noise Control Strategies**

Variables	Categories	Frequency	Percentage
Installing fences around your house	Strongly Agree	63	31.5
	Agree	102	51.0
	Disagree	27	13.5
	Strongly Disagree	8	4.0
Invest in sound proofing	Strongly Agree	56	28.0
	Agree	68	34.0
	Disagree	60	30.0
	Strongly Disagree	16	8.0
Moving away from the source of the noise	Strongly Agree	58	29.0
	Agree	66	33.0
	Disagree	50	25.0
	Strongly Disagree	26	13.0
Planting trees around dwelling place	Strongly Agree	60	30.0
	Agree	63	31.5
	Disagree	59	29.5
	Strongly Disagree	18	9.0
Government intervention in reducing the number of market days in the area	Strongly Agree	60	30.0
	Agree	65	32.5
	Disagree	56	28.0

	Strongly Disagree	19	9.5
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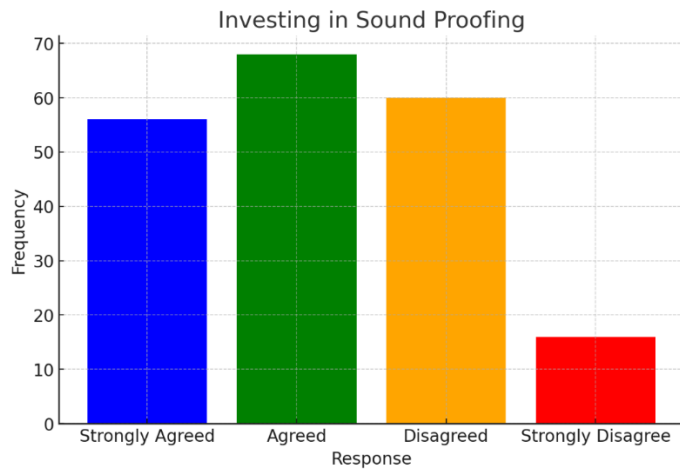
**Data Source:** Oja-Oba Market Survey, Ado-Ekiti Nigeria.

### Bar Charts Representation Of Effective Noise Control Strategies



**Figure 9**

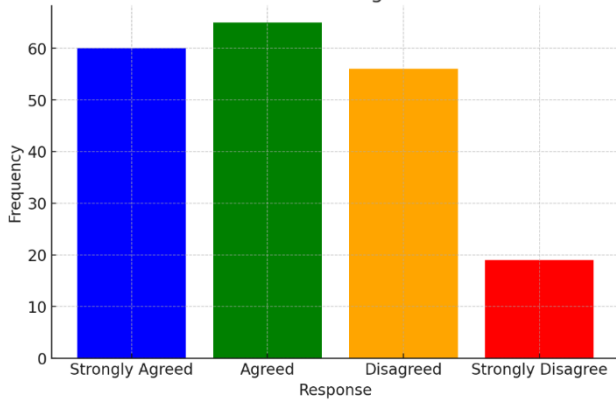
Figure 9 illustrates the frequency of responses to the statement "Installing Fences Around Your House." About 60 respondents strongly agreed, 100 agreed, 25 disagreed, and ten strongly disagreed. Most respondents agreed or strongly agreed, indicating a generally favorable opinion toward installing fences around their houses.



**Figure 10**

Figure 10 illustrates the frequency of responses to the statement "Investing in Sound Proofing." About 55 respondents strongly agreed, 65 agreed, 60 disagreed, and 20 strongly disagreed. The majority are divided between agreeing and disagreeing, with a slight inclination towards agreement.

Government Intervention in Reducing the Number of Market Days



**Figure 11**

Figure 11 illustrates the frequency of responses to the statement "Government Intervention in Reducing the Number of Market Days." About 60 respondents strongly agreed, 60 agreed, 50 disagreed, and 20 strongly disagreed. The responses are fairly balanced, with a slight majority agreeing or strongly agreeing with government intervention in reducing the number of market days.

**Cross Tabulation Of Resident’s Understanding Of Noise Pollution And Its Impacts On People In This Area**

**When you are at home, how much does noise from traffic irritate you \* Do you have any difficulty hearing what people say Cross tabulation**

Count	Do you have any difficulty hearing what people say
	No
When you are at home, how much does noise from traffic irritate you	
Not at all	20
Slightly	24
Moderately	39
Very	102
Extremely	15
<b>Total</b>	<b>200</b>

**Descriptive Statistics**

	N	Mean	Std. Deviation
When you are at home, how much does noise from traffic irritate you	200	3.24	1.178
Do you have any difficulty hearing what people say	200	1.51	.501

**Chi-Square Tests**

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.515a	4	.000

Likelihood Ratio	33.237	4	.000
Linear-by-Linear Association	22.774	1	.000
N of Valid Cases	200		

**Conclusion:** since the p value < alpha value ( $\alpha$ ), we reject the  $H_0$ . There is significant association between the two variables. In other word the noise irritation from the environment is dependent on the difficulty of resident on hearing what people say.

### Correlations

When you are at home, how much does noise from traffic irritate you	Do you have any difficulty hearing what people say
Pearson Correlation	1
Sig. (2-tailed)	
N	200
Pearson Correlation	-.338**
Sig. (2-tailed)	.000
N	200

**Conclusion:** Since the p-value < alpha value ( $\alpha$ ), we reject  $H_0$ , and there is a significant relationship between the variables. Therefore, since the correlation value is -0.338, the two variables have a weak negative correlation.

### Chi-Square Test

The Chi-Square test results are as follows:

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.923	3	0.820
Likelihood Ratio	0.925	3	0.819
Linear-by-Linear	0.385	1	0.535
N of Valid Cases	200		

**Decision Rule:** Reject  $H_0$ (Null hypothesis) if P-value is less than alpha value (0.05) otherwise accept the  $H_1$  (Alternative hypothesis).

**Conclusion:** Since the P-value (**0.820**) is greater than the alpha value (0.05), we do not reject the null hypothesis ( $H_0$ ). This indicates that there is no significant association between the two variables. In other words, residents' understanding that prolonged noise exposure causes ringing in the ears is not significantly associated with their regular experience of tinnitus.

### Cross Tabulation Of Quality Of The Environment And The Impact Of Noise Pollution On People In The Area

## Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.671	1	<b>0.196</b>		
Continuity Correction (b)	1.224	1	0.269		
Likelihood Ratio	1.627	1	0.202		
Fisher's Exact Test				0.199	0.135
Linear-by-Linear Association	1.662	1	0.197		
N of Valid Cases	200				

**Conclusion:** Since the P-value (0.196) is greater than the alpha value (0.05), we do not reject the null hypothesis ( $H_0$ ). This indicates that there is no significant association between the two variables. In other words, being disturbed by vehicle sound and traffic noise is independent of the experience of answering and responding inappropriately.

## DISCUSSION

The residents of the study area exhibit a nuanced understanding of noise pollution and its impacts. A substantial percentage, 95 (47.5%), strongly agree, and 83 (41.5%) agree that prolonged exposure to noise pollution causes ringing in the ears. Despite this awareness, most respondents, 118 (59%), report experiencing tinnitus, indicating a disconnect between knowledge and mitigating personal impact. The analysis using a Chi-square test indicates no significant association ( $P\text{-value} = 0.820 > 0.05$ ) between residents' understanding of noise pollution and its adverse effects, such as tinnitus. This suggests that while residents acknowledge the impact of noise pollution, they continue to be affected by its consequences.

Noise pollution poses a growing threat in the area, particularly from traffic-related sources. A notable majority, 102 (51%), agree that traffic noise contributes to environmental noise irritation. Moreover, 136 (68%) respondents agree that the environment is highly noisy during the daytime, particularly citing market activities. Further analysis reveals a significant association ( $P\text{-value} = 0.00 < 0.05$ ) between traffic noise irritation and difficulty in hearing, indicating a weak negative correlation (-0.338) between these variables. This underscores the impact of environmental noise on auditory health. Respondents generally support proposed strategies to control noise pollution, indicating broad consensus for their implementation. This collective sentiment highlights a community's readiness to address noise-related issues through effective mitigation measures.

## CONCLUSION

Based on the findings of this study, traffic noise emerges as the primary source of noise pollution in Oja-Oba, Ado-Ekiti. The environment is consistently noisy, adversely affecting residents' health. Noise stems from vehicular activity and bustling market transactions among buyers and sellers. A significant portion of residents regularly experience tinnitus, highlighting the pervasive impact of noise pollution. Interestingly, some residents lack awareness of effective noise control measures. Specifically, 92 out of 200 respondents disagreed that the inability to hear soft or high sounds is an effect of noise pollution, with 84 respondents disagreeing and 6 strongly disagreeing. This indicates a need for educational initiatives.

The study lays the groundwork for further research, underscoring the delicate balance between awareness and the lived experience of noise pollution in Oja-Oba Market, Ado-Ekiti. Despite its known adverse effects on

health and well-being, noise pollution remains overlooked. Unlike more harmonious or neutral sounds, noise disrupts peace and can induce stress and health problems. Neglecting this issue could reduce human productivity in the locality. Therefore, targeted strategies for noise reduction and comprehensive educational campaigns are essential.

Residents and local authorities should consider measures such as installing barriers and implementing soundproofing techniques. Moreover, raising awareness among Oja-Oba residents about the detrimental effects of noise pollution and ways to minimize exposure is crucial. It is imperative for the government of Ekiti State, Nigeria, to acknowledge noise as a significant public health concern and support further research on its health impacts. Enforcing effective noise control strategies outlined by researchers is pivotal for improving the quality of life in the community.

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