Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.5, No.19, 2014

Perceived Effect of Noise Generated by Religious Houses on the Health of People of Osun State, Nigeria

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Abstract

This study investigated perceived effect of noise generated by religious houses on the health of people of Osun State, Nigeria. The research design used for this study is descriptive survey and the instrument for data collection is self developed and structured questionnaire with reliability coefficient of 0.737. The people of Osun State formed the population for this study, while a total of two hundred and twenty-six (226) respondents were sampled. Two hypotheses were raised to guide the study. The hypotheses were tested using Chi-square and analysis of variance (ANOVA) for hypothesis one and two respectively, all hypotheses were tested at 0.05 alpha level. The result showed that there is no significant perceived effect of noise on health (X^2-Crit=21.026, X^2-Cal=11.681, P>0.05); also, there is no significant difference in the perceived effect of noise due to religion (F(2.377), Sig.=0.95, P>0.05). It was therefore recommended that there should be proper education on the effects of noise on people's quality of life.

Keywords: noise, religious houses, pollution, health.

Introduction

Noise is unwanted or meaningless sound of greater than usual volume. It is usually generated by sources such as traffic, machinery, industries and electronics. The advancement in technology has increased noise pollution with the latest addition of religious centres to the sources of noise pollution. Fieid (1993) defined noise pollution as an unwanted excessive harmonious sound that has undesired physiological and institutional effects on individuals. It is a number of tonal components disagreeable to man and more or less intolerable to him because of the discomfort, fatigue, disturbances and, in some cases, pain it causes (Hamza, 2008).

According to Wassermann and Parnell (2008), there have been continual attempts to mitigate the impacts of noise since Roman times, and it is the assessment, understanding, communication and management of noise impacts that has provided the challenge for all involved in the process of reducing the impact of noise. In the advanced nations of the world, technological and scientific experimentations like bombs sounds and launching of rockets generate a great deal of noise pollution, while generating plants, vehicular movement, and religious activities constitute noise pollutants in the developing countries. Noise has become a very significant stress factor in the environment, to the level that the term noise pollution has been used to signify the hazard of sound which consequences in the modern day development is immeasurable (Mohammed & Amna, 2008).

The global society today is undergoing significant constant proliferation of religious houses which are thought to provide solutions to the numerous problems confronting people, especially, the black race and Nigeria in particular. Nigeria is a country with easily the largest number of churches per capital in the world and a fertile soil for the growth of independent churches (Adesanya, 2011). This proliferation of religious houses is borne out of the understanding that in Nigeria, there is freedom of religious worship but central to this is the question of its environmental effects on the people in the society. All these are not without the attendant emotional and psychological effects on individuals and the society at large. Religious houses are springing up at an alarming rate in all available spaces, shops and uncompleted buildings. Worship come up in warehouses, hotels, abandoned cinema buildings, studios and other public places and is a common sight to see a minimum of fifty different religious centres on a street of four kilometres long (Adesanya, 2011). She further hinted that people living side by side with religious centres constantly experienced noise pollution emanating from blaring loud speakers at no respect to time, day or night and more so on any day, be it working day or weekend; that of night is even worse because it is quiet and their message can overwhelm the environment.

According to Mohammad, Saidatul and Tamjis (2009), noise activates the pituitary adrenal-cortical axis and the sympathetic-adrenal-medullary axis, while researchers frequently found changes in stress hormones including epinephrine, norepinephrine and cortisol in the acute and chronic noise experiments. Noise disturbs sleep and when sleep is disturbed, it affects mental functioning and judgment. Even students living in such environment will lose concentration while reading at night and that alone is capable of reducing their productivity. Noise does affect human behaviour and physiological measurement such as blood pressure, heart rate and blood flow (Diego, Field & Hernandez-Reif, 2001). The population which is exposed to a nocturnal equivalent continuous air traffic noise level of 50 dB for three quarters of a given time has a higher average

blood pressure compared to a population exposed to the same equal energy noise level for only one quarter of the time (Mohammad, Saidatul & Tamjis, 2009).

Adesanya (2011) stated that experts in medical science contend that chronic exposure to noise may cause noise induced hearing loss and it could also lead to stress induced ailments like hypertension, diabetes and psychiatric problems; hence, the normal noise level in any circumstances should not go beyond 60 decibels, anything beyond it is a threat to one's hearing capacity. Mindful of the health hazard associated with noise pollution, the Lagos State Government in June 18, 2009 and October 30, 2009, shut down one parish of Redeemed Christian Church of God (RCCG) and Mountain of Fire and Miracle Ministry (MFM) over alleged noise pollution, and for flouting the state environmental law (Daily Champion, 2009).

Babisch (2005) stated that when sleep disruption becomes chronic, the results are mood changes, slowness in task performance, and other long-term effects on health and well being. Noise exposure during sleep may increase blood pressure, heart rate and finger pulse amplitude as well as uncontrollable body movements; there may also be after effects during the day following disturbed sleep; perceived sleep quality, mood and performance in terms of reaction time all decreased following sleep disturbed by noise (Stephen & Mark, 2003). They further noted that noise pollution may cause or contribute to, anxiety, stress, nervousness, nausea, headache, emotional instability, argumentativeness, sexual impotence, changes in mood, increase in social conflicts, neurosis, hysteria, and psychosis.

Noise is a potential hazard to health, communication and enjoyment of social life. Depending on its duration and volume, the effects of noise on human health and comfort are divided into four categories; physical effects, such as hearing defects; physiological effects, such as increased blood pressure, irregularity of heart rhythms and ulcers; psychological effects, such as disorders, sleeplessness and going to sleep late, irritability and stress; and finally effects on work performance, such as reduction of productivity and misunderstanding what is heard. In comparison to other pollutants, the control of environmental noise has been hampered by insufficient knowledge of its effects on human and lack of defined criteria (Oyedepo, 2013).

Anomohanran, Iwegbue, Oghenerhoro and Egbai (2008) hinted that in Nigeria, the problem of noise pollution is wide spread with several studies reporting that noise level in metropolitan cities exceeds specified standard limits. The living environment plays a vital role in determining health (Wedan, Carpiano & Robert, 2008). A better understanding of prevailing neighborhood environmental stressors, the relationship between these stressors and health, and the effectiveness of healthy environmental interventions are essential to formulating policies, plans and actions to improve the quality of neighborhood environments which subsequently enhance the nation's health and general productivity. Individuals living in poor neighborhood environments tend to have higher morbidity and mortality compared to those living in environmentally sound neighborhoods (Martikainen, Kauppinen & Valkonen, 2003).

Statement of the Problem

Osun State like any other states in the Federal Republic of Nigeria is prone to religious activities due to the multi religious nature of the country. These activities mostly take the form of congregational worships in Mosques, Churches and other nonconventional locations like motor-parks and residential buildings in the daytime and sometimes throughout the night. Noise of significant levels is generated by these congregational centres aided by the use of heavy public address systems which projects voices of the worshippers with deafening intensity from inside such centres. However, despite the thunderous nature of the noise and the adverse effect on human health, not much has been done by the government to address this all important issue. Hence this study investigated the perceived effect of noise generated by religious houses on the health of people of Osun State, Nigeria.

Methodology

The research design employed in this study is descriptive survey research design and the instrument used for data collection is self developed and structured questionnaire with twelve items designed according to the variables tested in the study in four-likert scale format. Twenty respondents were used for the field-testing of the instrument which was later analyzed yielding reliability co-efficient of 0.737. The population for this study comprised of all the people living in Osun State. Two hundred and twenty-six (226) respondents were sampled for this study using multistage sampling technique in the following order: stratified sampling technique was used to pick a town each from the three senatorial districts in Osun State, viz: Ilesha (Osun East senatorial District), Osogbo (Osun Central Senatorial District), Ikire (Osun West Senatorial District), while simple random sampling technique was used to select seventy-five (75) respondents each from Ilesha and Ikire, while seventy-six (76) respondents were chosen from Osogbo.

Results and Discussion

Hypothesis 1: Noise from religious houses will not be significantly perceived as a cause of ill health among the people of Osun State, Nigeria.

Table 1: Perceived Effect of Noise from Religious Houses

Variable	Perceived effect of Noise		Total	X^2-Crit	X^2-Cal	df	P
	Yes	No					
Q1	155 68.6%	71 31.4%	226 100%				
Q2	133 58.8%	93 41.2%	226 100%				
Q3	117 51.8%	109 48.2%	226 100%				
Q4	87 38.5%	139 61.5%	226 100%				
Q5	101 44.7%	125 55.2%	226 100%				
Q6	116 51.3%	110 48.7%	226 100%				
Q7	112 49.6%	114 50.4%	226 100%				
Q8	115 50.9%	111 49.1%	226 100%				
Q9	160 70.8%	66 29.2%	226 100%	21.026	11.68	12	0.472
Q10	159 69.9%	68 30.1%	226 100%				
Q11	93 41.2%	133 58.8%	226 100%				
Q12	106 46.9%	120 53.1%	226 100%				

(X^2-Crit=21.026, X^2-Cal=11.681, P>0.05). Null hypothesis is accepted.

The table above showed that the calculated X^2 value is 11.681, the table value is 21.026, and degree of freedom (df) is 12, while the significant P (0.472) is greater than 0.05, hence, the null hypothesis is accepted. This implies that noise from religious houses is not significantly perceived as a cause of ill health among the people of Osun State, Nigeria. 68.6% of the respondents said government should regulate generated by religious houses, while 31.4% said they should not. 58.8% said noise from religious centres sometimes distrupts their sleep, while 41.2% said it does not. 51.8% said they normally feel stressed each time such noise wakes them up, while 48.2% said no. 38.5% said noise from religious centres sometimes gives them headache, while 61.5% said it does not. 44.7% said noise from religious centres affects their thinking/concentration, while 55.2% said it does not. 51.3% said they do not enjoy living close to religious houses, while 48.7% said they do. 49.6% said noise reduces the accuracy of their work, while 50.4% said it does not. 50.9% said living close to religious houses is frustrating, while 49.1% said it is not. 70.8% said religious activities sometimes constitute noise pollution, while 29.2 said it does not. 69.9% said noise generated by religious houses is preventable, while 30.1% said it is not. 41.2% said noise from religious houses interferes with conversation in their homes, while 58.8% said it does not. 46.9% said noise reduces the quality of their work, while 53.1% said it does not.

This finding that noise from religious houses will not be significantly perceived as a cause of ill health among the people of Osun State, Nigeria is in line with that of Oyedepo (2013) which showed that noise pollution continues to grow to such an unsustainable level because it involves direct, as well as cumulative adverse health effects, though accompanied by an increasing number of complaints from people exposed to it but due to the ignorance of Nigerians, little or no attention is paid to its control in Nigeria. He further submitted that there is no legal frame work upon which noise pollution can be abated in Nigeria as Federal Environmental Protection Agency (FEPA) in Nigeria only provided daily noise exposure limits for workers in industry (90 dB(A) for 8h exposure), hence, the Nigerian Government and her citizenry appear not to be conscious of the present and future impacts of noise induced health hazards in their environment.

Hypothesis 2: There will be no significant difference in the perceived effect of noise generated by religious houses on the health of people of Osun State due to religion.

Table 2: ANOVA Table Showing Difference in Perceived Effect

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	58.683	2	29.341	2.377	.095
Within Groups	2752.685	223	12.344		
Total	2811.367	225			

(F(2.377), Sig.=0.95, P>0.05).

In the ANOVA table above, it is observed that there is no significant difference in the perceived effect of noise generated by religious houses on the health of people of Osun State due to religion. Since the Sig. P (0.95) > 0.05, hence, the hypothesis that says there is no significant difference in the perceived effect of noise generated by religious houses on the health of people of Osun State due to religion is hereby upheld. This finding is in line with that the result of a study by Dickson, Audu and Nwaomah (2012) which showed that religious noise in the society finds its roots in the biblical, koranic and cultural convictions, hence, convictions are appropriated into the daily worship activities; adherents follow them tenaciously since in them lie the meaning and full expression of their faith. Singh and Davar (2004) observed that noise is becoming an increasingly omnipresent, yet unnoticed form of pollution even in developed countries. Despite the tremendous amount of research over the past two decades on religion, spirituality and health, the relationship between religion and health remains poorly understood today and at times controversial (Koenig, McCullough & Larson, 2001; Sloan, Bagiella & Powell, 2001).

Conclusion and Recommendations

The proliferation of religious houses has its advantages and its disadvantages; however, care must be taken not to put the health of the same people that these religions are meant to serve in jeopardy because doing that will be counter-productive. Hence, there should be proper education on the effects of these environmental stressors on people's quality of life. Education, public enlightenment and sensitization on the human health catastrophe associated with noise pollution is crucial to ensuring that people act in an informed manner since many people as reflected by this study do not know that noise has any effect on people's health. Also, appropriate policy that prohibits the use of loud speakers by the religious houses should be formulated and strictly enforced at all levels of government. Planning and design of buildings should be done in a way to checkmate the present arbitrariness in the building of private and public buildings so as to have an environment that can better ensure promote the population's physical and mental health.

References

Adesanya, I.O. (2011), ''Environmental Effects of Church Proliferation: the Redeemed Christian Church of God as a Case Study'', International Journal of Humanities and Social Science, 1(15): 177-182.

Anomohanran, O., Iwegbue, C..M..A., Oghenerhoro, I.O. & Egbai, I.J.C. (2008), ''Investigation of Environmental Noise Pollution Level of Abraka in Delta State, Nigeria'', Trends in Applied Sciences Research 3 (4): 292-297.

Babisch, W. (2005), ''Noise and Health Environment: Health Perspective'', [Online] Available: http:///www/pubmedcentral.nih.gov/artic/erender.feg (October 6, 2013)

Daily Champion. (2009), Lagos Seals Off RCCG, Mountain of Fire Over Noise Pollution, [Online] Available: www.naifapals.com/modules/naifapals (June 18, 2013)

Dickson, T.U., Audu, S.D. & Nwaomah, S.M. (2012), ''The Effect of Religious Noise on the Environment of Ilishan-Remo, Ogun State'', Babcock Journal of Management and Social Sciences, 10(1): 3-18.

Field, J. M. (1993), ''Effects of Personal and Situational Variables Upon Noise Annoyance in Residential Areas'', Journal of the Acoustical Society of America 93:2753-2763.

Hamza, A.D. (2008), ''Noise Pollution Regulatory Measures for Protection of Ecosystem'', Faculty of Law Journal, 2007-2008, 3&4(32).

Koenig, H.G., McCullough, M.E. & Larson, D.B. (2001), ‘‘Handbook of Religion and Health’’, New York, NY: Oxford University Press.

Martikainen, P. Kauppinen, T.M. Valkonen, T. (2003), ‘‘Effects of the Characteristics of Neighborhoods and the Characteristics of the People on Cause Specific Mortality: A Register Based Follow Up Study of 252 Men’’, Journal of Epidemiology and Community Health, 57, 210-217.

Muhammed, A..S..& Amna, B. (2008), ‘‘Effect of Noise Pollution on Hearing of Public Transport Drivers in Lahore City’’, Pakistan Journals of Medical Science, 24(1).

Mohammad, N.F., Saidatul, A. & Tamjis, M.R. (2009), ‘‘A Study of Noise Effect on the Fast Brain Activity’’, Proceedings of the International Conference on Man-Machine Systems (ICoMMS) 11 – 13 October 2009, Batu Ferringhi, Penang, Malaysia. [Online] Available: www.dspace.unimap.edu.my/.../1/A%20Study%20of%20Noise%20Effect.pdf (October 6, 2013)

Oyedepo, S.O. (2013), ‘‘Effective Noise Control Measures and Sustainable Development in Nigeria’’, World Journal of Environmental Engineering, 1(1): 5-15. http://pubs.sciepub.com/wjee/1/1/2 (October 10th, 2013)

Singh, N. & Davar, S.V. (2004), ‘‘Noise pollution: Source, effects and control’’, J. Hum. Ecol., 16(3): 181-187.

Sloan, R.P., Bagsella, E. & Powell, T. (1999), ‘‘Religion, spirituality and medicine’’, The Lancet, 353: 664-667.

Stephen, A. S. & Mark, P. M. (2003), ‘‘Noise pollution: Non-auditory effect on health’’, British Medical Bulletin, 68(244).

Wassermann, J. & Parnell, J. (2008), ‘‘The art of noise communication’’, Proceedings of ACOUSTICS, 24th-28th November, 2008, Geelong, Australia.

Wedan, M.M. Carpiano, R.M.. Robert, S.A. (2008), ‘‘Subjective and objective neighborhood characteristics and adults health’’, Soc. Sci. Med. 66: 1256-1270.