AN INVESTIGATION INTO KNOWLEDGE, ATTITUDE AND SAFETY PRACTICES AMONG RESIDENT OF MAKOKO COMMUNITY, LAGOS STATE.

Onwuama, M.A.C., Owolewa, Musiliu., Coker, Funmilola.
Department of Human Kinetics & Health Education
Faculty of Education, University of Lagos.
Email: monwuama@unilag.edu.ng

Abstract

This study examined knowledge, Attitude and practice of healthy living among residents of Makoko community in Yaba, Lagos. The descriptive Survey research design was applied. 200 participants: 100 adolescents and 100 adults selected through purposive sampling technique comprised the study sample. The theory of Reasoned Action by Ajazen under-pinned the study while variables studied include: knowledge of healthful living, Attitudes towards personal hygiene, environmental sanitation, defecation practices, and healthy living in Makoko Community. A validated researchers developed questionnaire was the instrument used for data collection, while descriptive statistics was used for data analysis and inferential statistics tested the hypotheses. Findings revealed various behaviours and exposures to infections and communicable diseases (air = 51.0%, water = 45.5%, toilet = 43.9% and housing =42.4%). *This study concludes that most residents have negative attitude towards personal and environmental hygiene, and practice open defecation on land and water. The residents are exposed to polluted and filthy air. Recommendations include implementation of general environmental hygiene practices, and inculcation of aggressive school and community health awareness programmes.*

Keywords: Knowledge, Attitude, Practices Healthful Living

Introduction

Knowledge, attitudes, and practices of healthy living appear to be neglected among residents of Makoko community, who face unacceptably low levels of hygiene. This suggests limited knowledge and poor attitudes towards health and safety practices. On-site fish smoking and sawdust burning reduce air quality within the community. Access to clean water is inadequate, as residents rely on vendors or fetch water with jerry cans from large plastic tanks located at different points within the settlement. Sanitation is also insufficient; there are no communal latrines, and many households practice open defecation directly into the water. As a result, excreta are often visible floating on the water, alongside wastewater, kitchen refuse, and plastic waste, which contribute to water pollution and foul odors.

Makoko structures are predominantly built on water. Houses are made of hardwood and supported by stilts driven into the waterbed. Each household accommodates six to ten people, with a high proportion of dwellings rented out.

Statement of the Problem

There is an observed unhealthy practice by the Residents of Makoko related to low knowledge, negative attitude and poor practices of healthful living. These environmental challenges ranging from poor sanitation, polluted air, inadequate clean water, open defecation, and water pollution could be felt in the ill-health cases of diarrhea, malaria, typhoid fever, that threatened healthy living among the residents. This research sought

to proffer sustainable solutions to the identified problems in order to improve the health status of the residents of Makoko, Yaba, Lagos.

Research Hypotheses

The following hypotheses were tested:

1. Air quality has no significant impact on healthful living and safety practices among residents of Makoko community, Lagos State.
2. Availability of quality water has no significant impact on healthful living and safety practices among residents of Makoko community, Lagos State.
3. Environmental Sanitation has no significant impact on healthful living and safety practices among residents of Makoko community, Lagos State.
4. Housing facility has no significant impact on healthful living and safety practices among residents of Makoko community, Lagos State.

Methodology

A descriptive survey research was adopted for this study. Descriptive research means observing and measuring without manipulating variables. It can identify characteristics, trends and correlations. The implication of this is that no variables was manipulated. Questionnaires was randomly distributed and administered to the respondents in order to investigate the Knowledge, Attitude and safety Practices of healthy living among residents of Makoko Community.

The population for this study consisted of all the residents of Makoko community. The sample for this study was 200 participants (100 adolescents and 100 adults), selected using purposive sampling technique.

A validated researchers developed questionnaire was used to collect the information on the variable under the study. The questionnaire was divided into 4 sections A, B, C and D. Section A of the questionnaire collected the demographic data of the respondents such as age, gender, religion, marital status, family type, education level and occupation, Section B collected data on Investigation into Knowledge, Attitude and Safety Practices of healthy living of residents of Makoko Community. Section C adopted a modified four-points Likert response options of Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), and Completely Satisfied (CS), Satisfied (S), Not Satisfied (NS), Completely Not Satisfied (CNS). The respondents responded to the items by ticking the option they consider best. Section D was a checklist which assesses the Knowledge, Attitude and safety Practices of healthy living of residents of Makoko Community.

The questionnaire was validated by experts in Health Education to ensure content validation before distribution to respondents. The reliability of the instrument was established through pilot study using test-retest method. The instrument was administered to 25 respondents living in Ajegunle, Lagos and re-tested after interval of two weeks. The data of the instrument administered was analyzed using Cronbach Alpha, a coefficient of 0.85 was obtained which shows that the instrument was valid and there is consistency among the variables and was adopted for data collection.

The total of 200 copies of the questionnaire were administered and all were retrieved on spot to prevent loss, only 198 copies

of the questionnaire were properly filled. The data obtained from completed questionnaire were collated and analyzed using Statistical Package for the Social Sciences (SPSS) version 20. Descriptive Statistics of frequency counts and percentages were used to analyze the data. The hypotheses were tested using the inferential statistics of chi- square at 0.05 level of significance.

Results

Table 1: Socio-Demographic Profile of the Respondents

Variables	Frequency	Percentage (%)
Gender		
Male	105	53.0
Female	93	47.0
Total	**198**	**100.0**
Age Group		
18 – 25 years	55	27.8
26 – 35 years	62	31.3
46 – 55 years	51	25.8
56 – 65 years	19	9.6
65 & Above	11	5.6
Total	**198**	**100.0**
Marital Status		
Married	154	77.8
Unmarried	37	18.7
Divorced	3	1.5
Widower	4	2.0
Total	**198**	**100.0**
Religion		
Christianity	169	85.4
Islam	19	9.6
Traditional	10	5.1
Total	**198**	**100.0**
Educational Background		
No formal education	74	37.4
Primary	64	32.3
Secondary	50	25.3
Tertiary	10	5.0
Total	**198**	**100.0**

Income Level		
Low Income	109	55.0
Middle Income	74	37.4
High Income	15	7.6
Total	**198**	**100.0**

Table 1 presents the percentage distribution of respondents by sociodemographic characteristics. Result shows that 105(53.0%) are males and 93(47.0%) are females. This result shows that majority of the respondents are males. On age, result shows that 27.8% of the respondents were between the ages of 18 and 25 years, 31.3% of the respondents were between ages 26 and 35 years, 25.8% of the respondents were between the ages 46 and 55 years, 9.6% of the respondents were 56 and 65 and 5.6% of the respondents were 65years and above. This result shows that majority of the respondents were between the ages of 26 and 35 years. As regard marital status, the table shows that 77.8% of the respondents are married, 18.7% are unmarried, 1.5% are divorced and 2.0% are widower. This result shows that the parents of majority of the respondents are married. With regards to religion, result shows that 85.4% of the respondents were Christians, 9.6% were Muslims and 5.1% were traditional worshippers. This result shows that majority of the respondents were Christians. The preponderance of respondents who practice Christianity can be attributed to the fact that all the respondents from the Igbo ethnic group practice Christianity and most of the respondents from other ethnic group who are from the South-South and North-Central geopolitical zone also practice Christianity. Table 1 on the level of education, shows that 37.4% had no formal education, 32.3% of the respondents had primary education, 25.3% had secondary education, and 5.0% had tertiary education. This result shows that majority of the respondents had no formal education. As regard their income level, the table shows that 55.0% earn low income, 37.4% earn middle income and 7.6%. earn high income. This result shows that majority of the respondents earn low income indicating poor standard of living.

Table 2: Air Quality impact on Healthful Living and Safety Practices among residents of Makoko Community, Lagos State

Variables	SA N %	A N %	D N %	SD N %	Total	Mean
The quality of air in Makoko is considered to be good	2 (1.0%)	15 (7.6%)	80 (40.4%)	101 (51.0%)	198 (100.0%)	1.69
Smoking of fish affect the quality of air within the environment	0 (0.0%)	48 (24.2%)	91 (46.0%)	59 (29.8%)	198 (100.0%)	1.94
Burning of sawdust is rampant within the environment which affects the quality of air	34 (17.2%)	93 (47.0%)	68 (34.3%)	3 (1.5%)	198 (100.0%)	2.20
There is ventilated environment in Makoko	27 (13.6%)	98 (49.5%)	69 (34.8%)	4 (2.0%)	198 (100.0%)	2.25
Makoko and environment is not smoke free	56 (28.3%)	72 (36.4%)	62 (31.3%)	8 (4.0%)	198 (100.0%)	2.11

As regards whether the quality of air in Makoko is considered to be good, table 2. shows that 1.0% of the respondents strongly agreed to it, 7.6% agreed to it, 40.4% disagreed and 51.0%strongly disagreed. Hence, it can be inferred that majority of the respondents strongly agreed. As regards whether smoking of fish affect the quality of air within the environment, table shows that 0.0% of the respondents strongly agreed to it, 24.2% agreed to it, 46.0% disagreed and 29.8%strongly disagreed. Hence, it can be inferred that majority of the respondents disagreed. On whether burning of sawdust is rampant within their environment which affects the quality of air, the table shows that 17.2% strongly agreed to it, 47.0% agreed to it, 34.3% disagreed and 1.5% strongly disagreed. As regard whether there is ventilated environment in Makoko, table shows that 13.6% of the respondents strongly agreed to it, 49.5% agreed to it, 34.8% disagreed and 2.0%strongly disagreed. Hence, it can be inferred that majority of the respondents agreed. In terms of whether Makoko and environment is not smoke free, table shows that 28.3% of the respondents strongly agreed to it, 36.4% agreed to it, 31.3% disagreed and 4.0%strongly disagreed. Hence, it can be inferred that majority of the respondents agreed.

Table 3: Availability of Quality Water impact on healthful living and Safety Practices among Residents of Makoko Community, Lagos State

Variables	SA N %	A N %	D N %	SD N %	Total	Mean
There is accessibility of clean water	8 (4.0%)	32 (16.2%)	71 (35.9%)	87 (43.9%)	198 (100.0%)	1.88
Water is available throughout the year	47 (23.7%)	91 (46.0%)	53 (26.8%)	7 (3.5%)	198 (100.0%)	2.10
There is access to water in sufficient amounts frequently	45 (22.7%)	7 (3.5%)	56 (28.3%)	90 (45.5%)	198 (100.0%)	2.13
Clean water is available within Makoko and environment	48 (24.2%)	80 (40.4%)	62 (31.3%)	78 (4.0%)	198 (100.0%)	2.15
We have to go extra miles to get clean water	8 (4.0%)	47 (23.7%)	67 (33.8%)	76 (38.4%)	198 (100.0%)	2.18

As regards whether there is accessibility of clean water, table 4.3 shows that 4.0% of the respondents strongly agreed to it, 16.2% agreed to it, 35.9% disagreed and 43.9% strongly disagreed. Hence, it can be inferred that majority of the respondents strongly disagreed. With regards whether water is available throughout the year, table shows that 23.7% of the respondents strongly agreed to it, 46.0% agreed to it, 26.8% disagreed and 3.5%strongly disagreed. Hence, it can be inferred that majority of the respondents agreed. On whether there is access to water in sufficient amounts frequently, the table shows that 22.7% strongly agreed to it, 3.5% agreed to it, 28.3% disagreed and 45.5% strongly disagreed. Hence, it can be inferred that majority of the respondents strongly disagreed. As regard whether clean water is available within Makoko and environment, table shows that 24.2% of the respondents strongly agreed to it, 40.4% agreed to it, 31.3% disagreed and 4.0% strongly disagreed. Hence, it can be inferred that majority of the respondents agreed. In terms of whether they go extra miles to get clean water, table shows that 4.0% of the respondents strongly agreed to it, 23.7% agreed to it, 33.8% disagreed and 38.4% strongly disagreed. Hence, it can be inferred that majority of the respondents agreed.

Table 4: Environmental Sanitation impact on Healthful Living and Safety Practices among Residents of Makoko Community, Lagos State

Variables	SA N %	A N %	D N %	SD N %	Total	Mean
There is good toilet facilities in Makoko	9 (4.5%)	30 (15.2%)	72 (36.4%)	87 (43.9%)	198 (100.0%)	1.88
The environment is clean and free from germs	4 (2.0%)	35 (17.0%)	52 (26.3%)	107 (54.0%)	198 (100.0%)	2.13
Adequate environmental sanitation is being carried out in Makoko	6 (3.0%)	39 (19.7%)	78 (39.4%)	74 (37.0%)	198 (100.0%)	2.24
The environment is not polluted by refuse at all	6 (3.0%)	61 (30.8%)	63 (31.8%)	68 (34.3%)	198 (100.0%)	2.07
Different waste disposal method are used to discard waste in Makoko	38 (19.2%)	75 (37.9%)	78 (39.4%)	7 (3.5%)	198 (100.0%)	2.27

As regards whether there are good toilet facilities in Makoko, table 4 shows that 4.5% of the respondents strongly agreed to it, 15.2% agreed to it, 36.4% disagreed and 43.9% strongly disagreed. Hence, it can be inferred that majority of the respondents strongly disagreed. With regards whether their environment is clean and free from germs, table shows that 2.0% of the respondents strongly agreed to it, 17.0% agreed to it, 26.3% disagreed and 54.0% strongly disagreed. Hence, it can be inferred that majority of the respondents strongly disagreed. On whether adequate environmental sanitation is being carried out in Makoko, the table shows that 3.0% strongly agreed to it, 19.7% agreed to it, 39.4% disagreed and 37.0% strongly disagreed. Hence, it can be inferred that majority of the respondents disagreed. As regard whether the environment is not polluted by refuse at all, table shows that 3.0% of the respondents strongly agreed to it, 30.8% agreed to it, 31.8% disagreed and 34.3% strongly disagreed. In terms whether different waste disposal method is used to discard waste in Makoko, table shows that 19.2% of the respondents strongly agreed to it, 37.9% agreed to it, 39.4% disagreed and 3.5% strongly disagreed. Hence, it can be inferred that majority of the respondents disagreed.

Table 5: Housing Facility impact on Healthful Living and Safety Practices among Residents of Makoko Community, Lagos State

Variables	SA N %	A N %	D N %	SD N %	Total	Mean
There is adequate housing with home facilities for toilet, bathroom, kitchen etc.	10 (5.1%)	57 (28.8%)	63 (31.8%)	68 (34.3%)	198 (100.0%)	2.07
There is good lighting for houses with adequate ventilation	33 (16.7%)	87 (43.9%)	71 (35.9%)	7 (3.5%)	198 (100.0%)	2.26
There is housing problem in Makoko community	6 (3.0%)	42 (21.2%)	66 (33.3%)	84 (42.4%)	198 (100.0%)	2.27
The level of community connectedness in Makoko is adequate	33 (16.7%)	82 (41.4%)	72 (37.4%)	9 (4.5%)	198 (100.0%)	2.30
The standard of living within Makoko is very conducive for health	11 (5.6%)	42 (21.2%)	77 (38.9%)	68 (34.3%)	198 (100.0%)	2.24

On whether there is adequate housing with home facilities for toilet, bathroom, kitchen etc., table 5 shows that 5.1% of the respondents strongly agreed to it, 28.8% agreed to it, 31.8% disagreed and 34.3% strongly disagreed. Hence, it can be inferred that majority of the respondents strongly disagreed. With regards there is good lighting for houses with adequate ventilation, table shows that 16.7% of the respondents strongly agreed to it, 43.9% agreed to it, 35.9% disagreed and 3.5%strongly disagreed. Hence, it can be inferred that majority of the respondents agreed. On whether there is housing problem in Makoko community, the table shows that 3.0% strongly agreed to it, 21.2% agreed to it, 33.0% disagreed and 42.4% strongly disagreed. Hence, it can be inferred that majority of the respondents strongly disagreed. As regard whether the level of community connectedness in Makoko is adequate, table shows that 16.7% of the respondents strongly agreed to it, 41.4% agreed to it, 37.4% disagreed and 4.5% strongly disagreed. In terms of the standard of living within Makoko is very conductive for health, table shows that 5.6% of the respondents strongly agreed to it, 21.2% agreed to it, 38.9% disagreed and 34.3% strongly disagreed. Hence, it can be inferred that majority of the respondents disagreed.

Discussion of Findings

Findings from this research are in tandem with some of the findings of scholars. Even after taking personal variables such as wealth into consideration, Ellaway (2014) found that those living in underprivileged neighborhoods are more likely to have poorer mental health and wellbeing than those living in more affluent areas. When studying the physical characteristics of the indoor

environment that affect health and wellbeing in healthcare facilities, Salonen et al (2013) noted that there is strong scientific evidence to show that indoor environmental factors such as acoustics, ventilation and air conditioning systems, the thermal environment, the visual environment such as lighting and views of nature, ergonomic conditions and furniture have beneficial effects for all user groups. The beneficial link between nature and wellbeing has been extensively researched, and some findings can be usefully applied to the historic environment, according to Reilly et al (2018) while explaining Heritage as Environment. However, more research is needed to understand which historic characteristics of a place (building or landscape) best promote wellbeing. These underpinned the result obtained in table 2.

This is also in line with Regis College (2021), it was noted that maintaining a healthy living is essential for helping people live longer and for enhancing their quality of life. Mabahwi et al (2014) explained that air pollution can harm human health, the environment, and cause property damage. They stated that various research has proven the connection of air quality and human health. The noted that epidemiology and laboratory studies demonstrated that ambient air pollutants (for example PM, O3, SO2 and NO2) contributed to various respiratory problems including bronchitis, emphysema and asthma. Petrowski et al (2021) noted that various forms of air pollution have shown links to physical and mental health concerns.

Health and Sustainable Planning Toolkit (2021) states that while analyzing the link between environmental factors, health inequalities and impacts on health noted that poorer communities have a higher prevalence of cardio-respiratory and other diseases. it was also noted that there is strong evidence that reductions in traffic to reduce air pollution are successful in improving health which is line with the finding in table 4.

In line with World Health Organization (2018), it was opined that the quality of housing has major implications for people's health. Housing in cities is of particular concern, with the world's urban population predicted to double by 2050 and, with it, the demand for housing. Improvement in housing facility is key to sound health and longevity as discovered in table 5 above.

According to Braveman, Dekker, Sadegh-Nobari, & Pollack (2011), healthy homes promote good physical and mental health. Good health depends on having homes that are safe and free from physical hazards. In contrast, poor quality and inadequate housing contributes to health problems such as chronic diseases and injuries, and can have harmful effects on childhood development.

In Palacios, Eichholtz, Kok, & Aydin (2020) the impact of housing conditions on health outcomes was estimated in a setting representative of dwellings in modern societies having a higher-quality housing stock. Research results for housing in that setting is virtually nonexistent. Poor sanitation, poor treatments of waste water, as well as catastrophic floods introduce pathogenic bacteria into rivers, infecting and killing many people (Abraham, 2011).

Conclusion

Most of the residents of Makoko have negative attitude towards personal and environmental hygiene, practices open defecation on land and water.

Recommendations

In the light of the findings of this study, the following recommendations were made:

1. Inculcation and implementation of general and environmental hygiene practices in schools and community through health awareness programmes.
2. Community Development Association (CDA) in Makoko community should be more organized and draft practical plans, that could bring about sustainable development in the community. This could be achievable through outreach to individual, philanthropies and Non-Governmental Organisations.
3. In line with the findings of the study, it is recommended that Government should stop neglecting Makoko communities and provided basic amenities for the people living there as failure to attend to the basic needs of Makoko residents, could make the place a breeding ground for criminal activities in Lagos State.

References

Abraham, W. R. (2011). Megacities as sources for pathogenic bacteria in rivers and their fate downstream. *International Journal of Microbiology*, Vol.11, ID 798292, https://doi.org/10.1155/2011/798292

Ayotunde-Salami, A. (2018). Makoko & Her Danger to the Environment. Retrieved 3 March 2023, from https://www.linkedin.com/pulse/Makoko-her-danger-environment-adefolake-adekola.

Braveman, P., Dekker, M., Egerter, S., Sadegh-Nobari, T., and Pollack, C. (2011) Housing and Health. Robert Wood Johnson Foundation. Retrieved from https://www.rwjf.org/en/library/research/2011/05/housing-and-health.

Ellaway, A. (2014). The impact of the local social and physical local environment on wellbeing. *A Complete Reference Guide*, 1-18.

Eze, I. C., Schaffner, E., Fischer, E., Schikowski, T., Adam, M., Imboden, M., ... & Probst-Hensch, N. (2014). Long-term air pollution exposure and diabetes in a population-based Swiss cohort. *Environment international*, 70, 95-105.

Health & Sustainable Planning Toolkit (2021). Evidence of impact of environment on health and health inequalities - Health and Sustainable Planning Toolkit. Retrieved 31 March 2024, from http://healthsustainabilityplanning.co.uk/health/why-engage-with-planning/evidence-impact-environment-health-health-inequalities/.

Health & Sustainable Planning Toolkit (2021). Evidence of impact of environment on health and health inequalities - Retrieved 31 March 2024, from http://healthsustainabilityplanning.co.uk/health/why-engage-with-planning/evidence-impact-environment-health-health-inequalities/

Lorenc, T., Clayton, S., Neary, D., Whitehead, M., Petticrew, M., Thomson, & Renton, A. (2012). Crime, fear of crime, environment, and mental health and wellbeing: mapping review of theories and causal pathways. *Health & place*, 18(4), 757-765.

Mabahwi, N. A. B., Leh, O. L. H., & Omar, D. (2014). Human health and wellbeing: Human health effect of air pollution. *Procedia-Social and Behavioral Sciences*, 153, 221-229.

Ojule, E. S. (2018) Trees and Sustainable Urban Air Quality in Port Harcourt, Nigeria. FUO Quarterly *Journal of Contemporary Research*, 6:4, 18.

Petrowski, K., Bührer, S., Strauß, B., Decker, O., & Brähler, E. (2021). Examining air pollution (PM10), mental health and well-being in a representative German sample. *Scientific Reports*, 11(1), 1-9.

Regis College (2021). 8 Environmental Factors that affect Health - Regis College Online. Retrieved 26 May 2024, from https://online.regiscollege.edu/blog/environmental-factors-that-affect-health/.

Reilly, S., Nolan, C., & Monckton, L. (2018). Wellbeing and the historic environment. *Historic England Report.* 6. p112-125

Salonen, H., Lahtinen, M., Lappalainen, S., Nevala, N., Knibbs, L. D., Morawska, L., & Reijula, K. (2013). Physical characteristics of the indoor environment that affect health and wellbeing in healthcare facilities: A review. *Intelligent Buildings International*, 5(1), 3-25.

The Health Foundation (2021). How does housing influence our health? The Health Foundation. Retrieved 2 April 2024, from https://www.health.org.uk/infographic/how-does-housing-

Udoma, O. (2021). Makoko: 'Venice of Lagos' | Smart Cities Dive. Retrieved 9 March 2024, from https://www.smartcitiesdive.com/ex/sustainablecitiescollective/ma koko-venice-lagos/241671/ air-quality-human-health-environmental-and-economic

World Health Organization. (2018a). How air pollution is destroying our health. Retrieved 31 March 2024, from https://www.who.int/news-room/spotlight/how-air-pollution-is-destroying-our-health

World Health Organization. (2018b). WHO Housing and Health Guidelines. Retrieved from April 2, 2024, https://apps.who.int/iris/bitstream/handle/10665/276001/9789241550376-eng.pdf