

Environmental Determinants and Socioeconomic Impact on the Occurrence of Malaria with Special Reference to a Rural Community of Abuja, Nigeria

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Background: *Malaria is a public health and socio-economic threat to development in most countries in Sub-Saharan Africa, and particularly in rural areas. Nigeria has the greatest number of malaria cases. The study examined the socio-economic impact and environmental risk factor of malaria in a rural community of Jahi, in Federal Capital Territory, Abuja, Nigeria.*

Methods: *The study was carried out at the Federal Capital Territory (FCT). FCT is the administrative headquarters of Government in Nigeria. It is also regarded as a State of the 36 plus 1 Federation. The study was conducted in a rural community called Jahi, it is 5km from the city centre with population of about 3, 000 people mostly women and children. They have only one health centre which was ill equipped with one nurse, one laboratorian and assistants health worker. The study was a cross-sectional survey that utilized a multistage sampling technique to recruit 416 community residents. Data were collected using Open Data Kits (ODK) real time software. The collated data was exported into excel, then analysed using SPSS statistical software, and findings were presented with frequencies, percentages, and Frequency tables, mean, standard deviation, charts, Chi-square tests, correlation analyses; statistical significance was set at $p < 0.05$.*

Results: *A total of four hundred and sixteen respondents were interviewed using ODK android phone, out of which 53% were female while 47% were male. Majority of them were into unskilled labour (57%). Most of the respondents are between 25 and 34 years (188) while 45 years and above was 40. Eighty seven percent were unskilled labour with little or no education. Majority of the responders had their monthly income as low as less than N20,000 (\$55.56)*

Seventy percent (291) of respondents identified fever, headache and rigour as symptoms of malaria. Thirty six percent (149) individuals used bed nets while 45% (187) used aerosols to keep mosquitos away. There was a significant ($p=0.001$) between daily income and willingness to visit government hospital as most (56%) people are leaving below two dollars (610 naira) per day due to (87%) unskilled labour of majority in the community. The environment was dirty with stagnant water which was

enabler for breeding mosquitos. Majority (80%) of the populace seek treatment with chemists and native doctors or traditionalist for herbal remedies.

Table 1: Socio-demographic characteristics of respondents

Socio-demographic variables	N=416	Percent (%)
Age (in years) \bar{x}(SD) 38.28±12.48years		
15-24	108	26.0
25-34	188	45.2
35-44	80	19.2
45-54	87	20.9
Gender		
Male	197	47.0
Female	219	53.0
Respondent Head of household		
Yes	180	43.5
No	236	56.5
Number of people in the household		
1-4	16	48.5
5-9	21	45.3
10-14	205	3.5
15-19	174	2.7
Educational Attainment		
No formal education	26	6.3
Primary	168	40.3
Secondary	210	50.4
Diploma/B.Sc	7	1.7
Master/PhD	5	1.2
Occupation		
Unskilled	360	87
Skilled	56	13
Monthly income		
< 20,000	236	57.0
20,000-200,0000	176	42.0
200,000-1,000,000	4	1.0

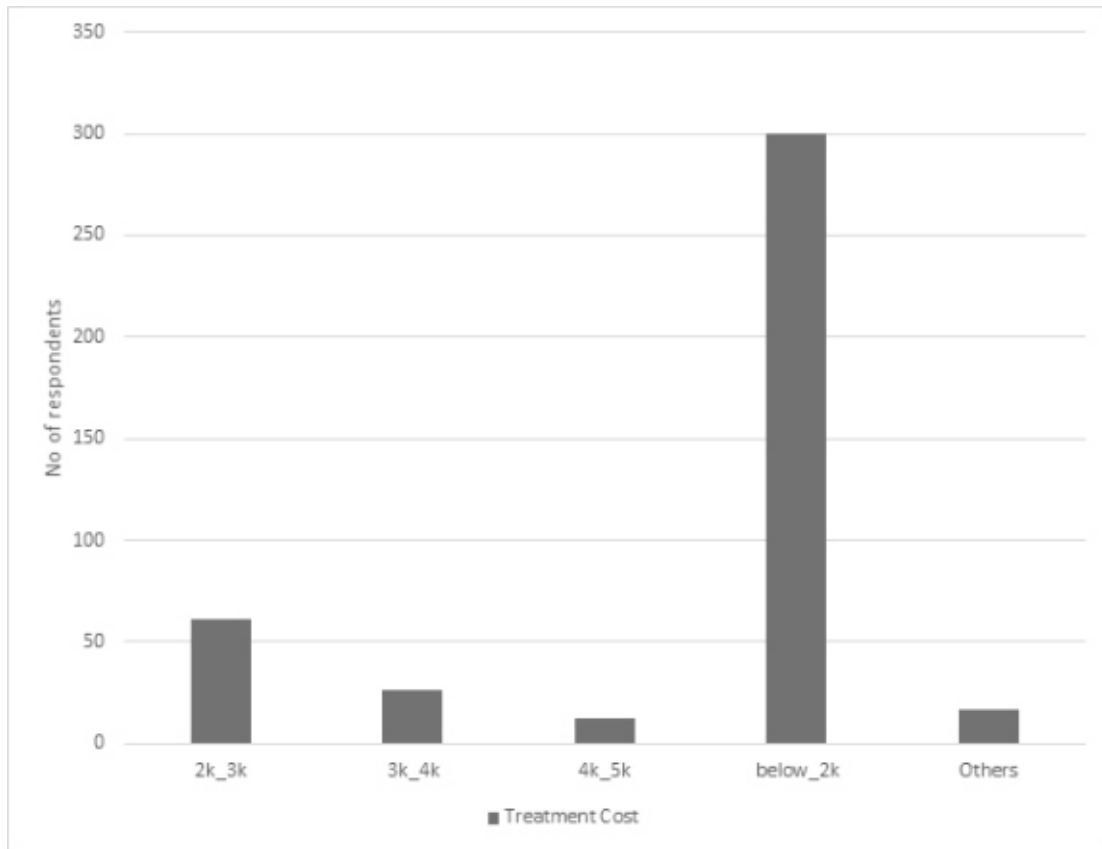


Figure 1: Distribution of participants by treatment cost

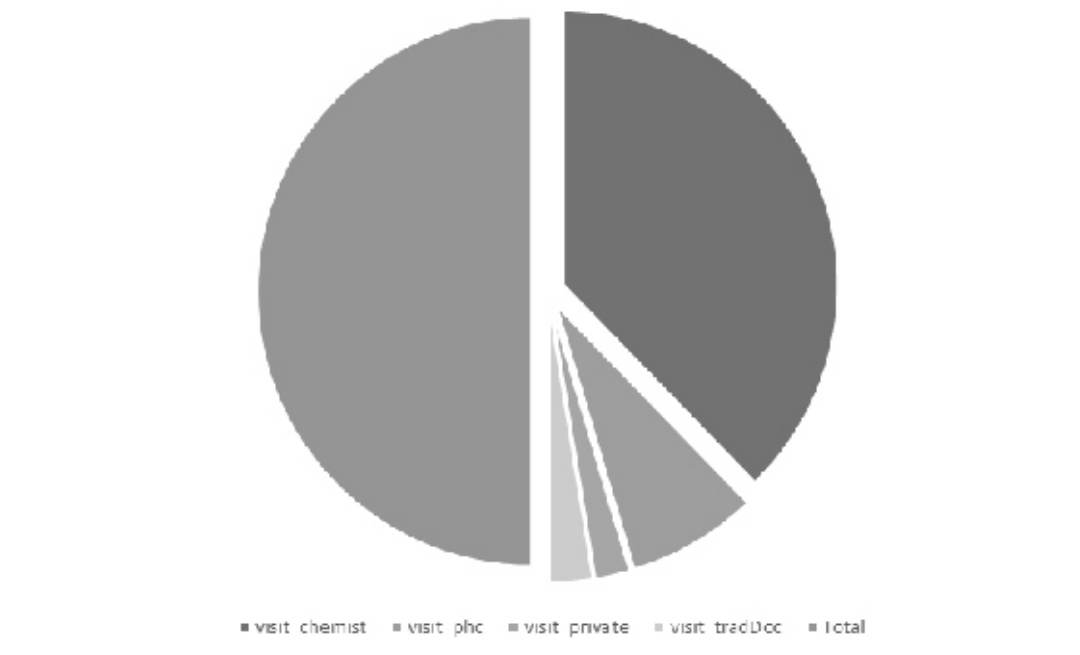
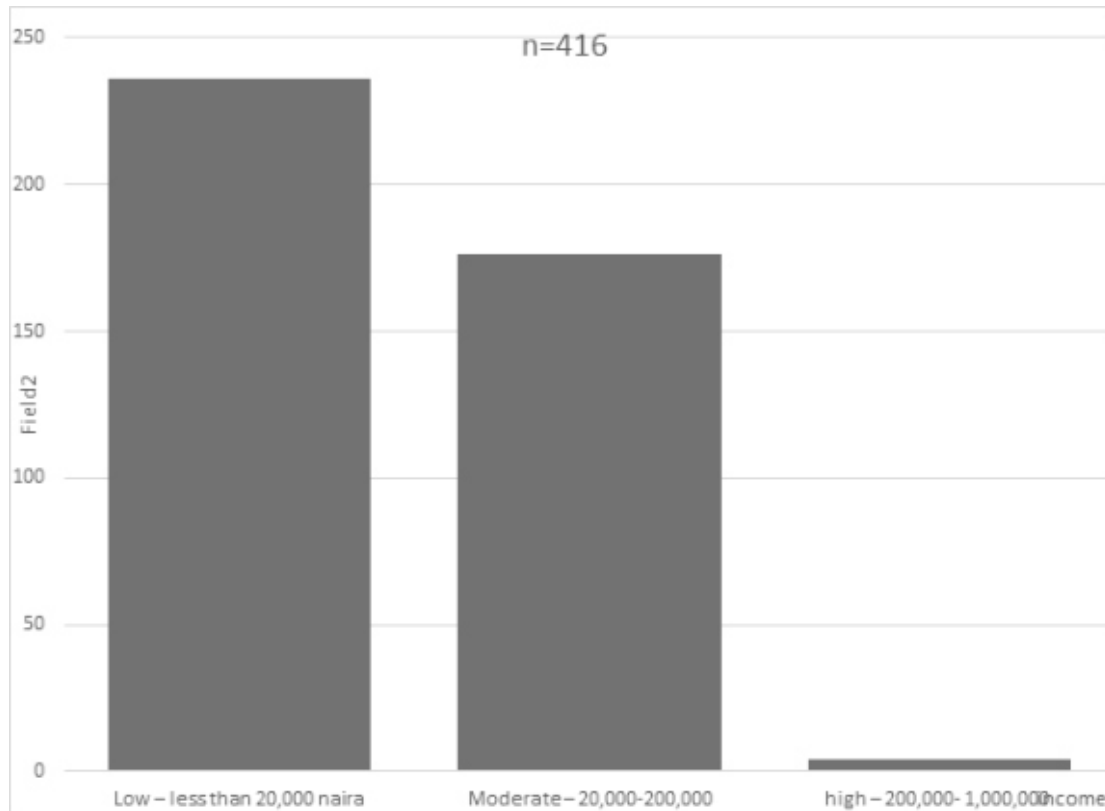


Figure 2: Respondents' places of treatment



Discussion: Majority of the respondents are living below \$55 per month spending as much as \$5 per visit to treat malaria and this can be 3 to 4 times in a month. In view of poverty ravaging the community coupled with lack of amenities, most of the respondents visited chemists/patent medicine/ native doctors, this was in line with Kazeem Adefemi et al (2015) where the authors said that most of the rural dwellers believe in spiritual and herbal remedies in treating malaria, it was also due to lack of money that made it impossible to visit Health clinics.. They asserted that most cases of malaria are treated at home or with traditional healers as first line of action. Most of the respondents knew that mosquito bites should be avoided in order not to be infected with malaria but only 36% used mosquito bed nets while majority used aerosols to keep mosquito away from their environment (45%).

The WHO argues that more than a quarter of the global disease burden and at least 42% of global malaria incidence are due to modifiable environmental factors.

Conclusion: Findings of this study revealed that majority of people living in this rural communities, Jahi FCT Abuja suffered a lot from malaria. Most of them visit chemist stores for treatment compared with public health clinic or private hospitals because of the fact that they are poor and their daily income is less than two dollars hence there is negative socio economic impact coupled with environmental risk factors on malaria in the community. The people have little or no education, which was detected as a major

drawback for effective control, and intervention measure for malaria in the community.

Environmental sanitations and health education should be the focus to tackle the menace of malaria and its resultant negative socio economic impact in Jahi community.

Key words: Malaria, Environmental Sanitation, Socioeconomic impact, poverty, parasite, tropical disease

Disclosure: No conflict of interest among the author and the co-authors

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