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EVALUATION OF HEALTH LITERACY OF COMMUNITY HEALTH SCREENING AMONG RESIDENTS OF IKEJA LOCAL GOVERNMENT AREA IN LAGOS STATE

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Abstract

Background: *Health screening is a preventive practice which serves as a superior strategy to decrease morbidity and mortality. Community health screening programs provide opportunity for anyone to receive free or inexpensive health evaluations to help determine their risk of developing a medical condition. Early detection and screenings can improve patient health outcomes and reduce the costs of care.*

Objectives: *This study assessed the knowledge of health literacy and community health screening and evaluated the practice among residents of Ikeja Local Government Area in Lagos State.*

Methods: *A cross-sectional study was carried out in Ikeja, Lagos through convenient random sampling technique and included 12 communities the local government. A total of 403 questionnaires were distributed but 380 were returned, entered in MS-Excel and analyzed using Statistical Package Social Science version 26. Chi Square statistics was used to test for correlation between demographic variables and objective variables while Pearson product moment correlation (r) statistical analysis was employed in testing for statistical relationship between objective variables.*

Results: *From a total of 380 respondents, more than half (53.95%) were males. In educational level, 9.47% had no formal education, 11.05% had primary education as their height level, while 23.42% had secondary as their highest level and 56.05% had tertiary education as their highest. Overall, 168 have neither read articles on health-related topics nor attended health seminars, while 19 attend these seminars and read these articles most times. A total of 237/335 attended HIV screening programs, 312/336 have attended COVID screening programs, 69/336 have attended Ebola screening programs, 78/160 have attended Breast cancer screening programs, 327/336 attended malaria screening programs, 78/336 attended diabetes screening programs while 43/336 have attended syphilis screening programs. The p-value of Educational level on knowledge= 0.000, on practice= 0.000 at $p<0.05$ level of significance.*

Conclusion: *There was a high level of knowledge on health literacy and community health screening with a low prevalence in the practice of health screening.*

Keywords:-*health literacy, community health, health screening, health practices, public health, health promotion, health education*

INRODUCTION

The term "Community Health" refers to the health status of a defined group of people, or community, and the actions and conditions that protect and improve the health of the community. Those individuals who make up a community live in a somewhat localized area under the same general regulations, norms, values, and organizations.[1] Community health screenings provide an opportunity for anyone to receive health evaluations to help determine their risk of developing a medical condition such as diabetes. A major disadvantage to traditional health screenings is that they provide one-time data for participants but lack continuity of care. The participants are required to independently use the results from their screening to follow up with another provider. The primary purpose of screening is not diagnostic but meant for selected individuals that are relatively well. It is a selective elimination to find out those peoples who should undergo diagnostic procedures. A screening procedure must be reasonably capable of selecting from a large population those persons most likely to have the disease for which the procedure is used.[2] To simply put ''screening'' is the presumptive identification of unrecognized disease of defect by the application of tests, examinations, or other procedures that can be applied rapidly.[2]

Previous research has demonstrated that participation in health screening positively affects health beliefs, including feelings of control over one's health, as well as an increased sense of health responsibility and health self-efficacy.[3] Screening also can serve as a "cue to action," increasing the likelihood that participants will seek treatment or initiate preventive behaviors for identified risks.[4,5] Health screening also enhances participants' general health knowledge and provides personalized information about health risks.[6,7] In fact, studies show that most individuals attend health screenings to directly access health information relevant to their specific needs[8]. Screening has been used successfully for participants with physical, intellectual and learning disabilities.[9-11] Early detection and screenings can improve patient health outcomes and reduce the costs of care.

With these considerations in mind, the goal of this project was to assess the community's literacy on health screening to determine the level of knowledge of health literacy, community health screening programs as well as their practice and relationship with health-related outcomes. All this is done to increase screening opportunities, patient education, early detection and improve access to care. A systematic review of health literacy and health outcomes reported that patients with low levels of literacy were generally one and half to three times more likely to experience a given poor health outcome.[12] Poor levels of health literacy have been associated with more hospitalizations, greater use of emergency care and poor ability to interpret drug labels, health messages and higher mortality rates especially among elderly persons.[13] Early detection and screenings is needed in Ikeja local government area due to public health issues like Tuberculosis, Malaria and HIV/AIDS among others and can improve patient health outcomes and reduce the costs of care. Low health literacy has been linked to higher rates of hospitalization and higher use of expensive emergency services. This study assessed the knowledge of health literacy and community health screening and evaluated the practice among residents of Ikeja local government area.

Methods

Study design and Instrument

This was a descriptive cross-sectional prospective study conducted in Ikeja (covering different areas in the town) Lagos State. This questionnaire contained a demographic section which cut across age, gender, marital status, education level among others and another section to assess the research objectives. The questionnaire was structured to include open and closed ended questions; about 27 in number. The demographic section contained 5 questions while the second section assessing the research objectives contained 22 questions. The questionnaire was then validated by lecturers of the Department of Clinical Pharmacy and Pharmacy Practice, in Madonna University. The pretest of the study was carried out soon after in Ikeja, Lagos state, Nigeria on 30 individuals above age 15 and it was noted that most of them understood the questions and for others, the researcher explained some concepts and some of the terms aware of the terms used giving a total average answering time of approximately 7 minutes.

Study location

This study was then carried out in Ikeja.

Sample size

A total of 384 individuals plus 5% (19) overage giving a total number of 403 people. The sample was different from the pretest sample earlier used. The questionnaire was distributed to the various districts in Ikeja in proportion to their population size.

Study site

Ikeja is the capital of Lagos State and is situated in the Lagos Mainland and it houses the official seat of the Governor of the state. A large number of businesses mostly retail and service-based businesses operate in Ikeja. Ikeja can be classified as a high-class residential area on the mainland. It is easily accessible and widely popular. There are hotels, schools, churches, mosques, sites of attraction and residential places for both the rich and the middle-income earners alike. One of the very popular spots in Ikeja is the large computer and computer accessories hub known as computer village. It serves as the trademark of the city itself as computer professionals buy and sell in this particular district. Districts in Ikeja include: Oregun, Agidingbi, Magodo, Ogba, Maryland, Onigbongbo, Government Residence Area (GRA), Ojodu, Opebi, Akiode, Alausa. Many companies and commercial openings have their head

offices in Ikeja because of its centrality. Ikeja also contains a large number of literates as well as graduates from higher institutions. Popular places to visit in Ikeja are Kalakuta Museum, Ndubuisi Kanu Park, Aristocrat Casino and Fela's shrine.[14]

Study population

From the census of 2006, Ikeja local government area has a population of 317,493 individuals of which 171,782 are males and 145,832 are females.[15] Ikeja contains a high level of educated individuals. It also contains a high level of business men and women. Ikeja has a land mass of 49.92km^2. It lies 10.5 miles (17km) northwest of Lagos city.[16]

Study criteria

Inclusion criteria

1. Adult residents of Ikeja from ages of above 15 years of age.
2. Both Male and female adults above 15 years of age.

Exclusion criteria

1. Individuals who are not above 15 years
2. Adults who are not residents of Ikeja

Sample size and sampling technique

Cochran's formula for a population greater than 10, 000 was used in sample size determination to give Sample size of 384 was obtained. However, the study was carried out on 403 respondents who were residents/inhabitants of Ikeja Local Government Area due to the addition of 5% overage to ensure there is no serious shortage of data during data collection. The Cochran formula is:

$n_o = \frac{Z^2pq}{e^2}$ Where:

- e is the desired level of precision (i.e. margin of error) – 5% was used
- p is the (estimated) proportion of the population which has the attribute in question – taken to be 0.5
- q is 1 – p

The z-value used was 1.96 considering a 95% confidence level.

The technique applied was a non-probability sampling technique which was convenience sampling method. It was used in distributing the data collection form (questionnaires). The study was conducted in different localities such as malls, parks, business centers/shops, homes and streets across Ikeja.

Data collection and processing

The questionnaires were collected after which they sifted to sort out incomplete data and gather the useful data to be used. The data to be used after collation were then coded in an excel spreadsheet (Version 2019) and the data fed into the computer and analyzed both descriptively and analytically using Statistical Package for Social Sciences (SPSS Version 26.0). Results were presented as frequency and percentage of variables. In total, a total number of 403 questionnaires were shared, 380 of them were answered and 23 questionnaires unanswered/returned/not properly answered.

Data analysis

Using Statistical Package for Social Sciences (SPSS Version 26.0), data collected were analyzed for frequency and percentage distribution and Chi Square. A Co relational analysis between the two research objective variables was done as well as the co relational analyses between relevant demographic factors and the research objectives. Chi Square statistics was used to test for level of significance of knowledge of health literacy and health screening as well as practice. P-value of less than 0.05 was considered to be statistically significant.

Ethical considerations

The consent of the respondents was gotten as it was indicated in the questionnaires

Results

Demographic Data of Respondents

The survey had a response rate of 94.29% (380/403); males (54%), females (46%). The age range with the highest response frequency was 16-29 being 50% with geriatrics (70+) being the least. 40.77% of the populations were unmarried, 54.47% married, 3.68% widowed and 1.05% divorced. Most of the respondents were business men/women 42.11% with only 3.42% retired. In educational level, 9.47% had no formal education, 11.05% had primary as their height level, 23.42% had secondary as their highest level and 56.05% had tertiary education as their highest.

Table 1: Demographic Profile of the Respondents

Item	Frequency	Percentage (%)
Gender		
Male	205	53.95
Female	175	46.05
Age (yr)		
16 – 29	190	50.00
30 – 49	163	42.89
50 – 69	22	5.79
70+	5	1.34
Marital status		
Single	155	40.77
Married	207	54.47
Widowed	14	3.68
Divorced	4	1.05
Occupation		
None	47	12.37
Medical personnel	65	17.11
Business man/woman	160	42.11
Civil servant	74	19.47
Teacher	21	5.53
Retired	13	3.42
Education		
No formal	36	9.47
Primary	42	11.05
Secondary	89	23.42
Tertiary	213	56.05

Table 2: Assessment of Knowledge of Health Literacy of the Respondents

Knowledge of health literacy Questions	**Never**	**Rarely**	**Sometimes**	**Most Times**
How often do you read health articles and attend health seminars	168	136	57	19
How often do you read the leaflet of the drug	117	156	73	34
Do you stop taking your drugs when you feel better without completing the prescription?	207	82	31	60

Table 3: Knowledge of Ikeja residents on community health screening programs

HIV screening	COVID -19 Screening	Ebola Screening	Breast screening	Malaria	Diabetes	Syphilis
323/380	341/380	221/380	268/380	353/380	107/380	64/380

Table 4: Frequency of attendance of community health screening programs in Ikeja

s/n	Frequency	n
1	Frequently	42
2	Often	78
3	Rarely	182
4	Never	40
5	Not sure	38

Table 5: Community health screening programs attended by the respondents

HIV screening	COVID -19 Screening	Ebola Screening	Breast screening	Malaria	Diabetes	Syphilis
237/380	312/380	69/380	78/380	327/380	78/380	43/380

Table 6: Pearson Product Moment Correlation Analysis between Knowledge of health literacy and community health screening and Disposal and practice of health screening

	Knowledge of Health Literacy and Community Screening of the Respondents	practice of health screening
Knowledge of Health Literacy of the Respondents	1	
practice of health screening	0.195458838	1

***Statistically significant at p= 0.037 (p<0.05)**

Table 7: Demographic factors co related to objective variables p<0.05.

S/N	Demographic variables	Description	n (%)	P-values
1	Age on knowledge	16 – 29	190(50)	0.000
		30 – 49	175(42.89)	
		50 – 69	22(5.79)	
		>70	5(1.34)	
	Age on practice	16 – 29	190(50)	0.00
		30 – 49	175(42.89)	
		50 – 69	22(5.79)	
		>70	5(1.34)	
2	Gender on knowledge	Male	205(53.95)	0.052
		Female	175(46.05)	
	Gender on practice	Male	205(53.95)	0.058
		Female	175(46.05)	
3	Profession on knowledge	None	47(12.37)	0.030
		Medical personnel	65(17.11)	
		Business man/woman	160(42.11)	
		Civil servant	74(19.47)	
		Teacher	21(5.53)	
		Retired	13(3.42)	
	Profession on practice	None	47(12.37)	0.01
		Medical personnel	65(17.11)	
		Business man/woman	160(42.11)	
		Civil servant	74(19.47)	
		Teacher	21(5.53)	
		Retired	13(3.42)	
4	Marital status on knowledge	Single	155(40.77)	0.003
		Married	207(54.47)	
		Widowed	14(3.68)	
		Divorced	4(1.05)	
	Marital status on practice	Single	155(40.77)	0.0023
		Married	207(54.47)	
		Widowed	14(3.68)	
		Divorced	4(1.05)	
5	Educational level on knowledge	No formal	36(9.47)	0.00
		primary	42(11.05)	
		secondary	89(23.42)	
		Tertiary	213(56.05)	
6	Educational level on practice	No formal	36(9.47)	0.00
		primary	42(11.05)	
		secondary	89(23.42)	
		Tertiary	213(56.05)	

Discussion

This study found that most of the respondents did not or hardly engaged in self education/general development of their knowledge of health literacy as most of them do not attend health seminars, read articles on health-related topics or read leaflets of drugs after buying them probably due to the fact that many of them were business people and claimed that they had no time to attend said seminars or read the articles. This is similar to study on asthma as it was revealed that only 3% of leaflets were read and understood by majority of the population.[17] In the assessment of the knowledge of health literacy, most of the respondents agreed on the importance/relevance of health screening. Since health literacy is developed over time, it is difficult for those who do not engage in regular health literacy about their conditions to get to a level of better self-care and improved quality of life[18] and limits their ability to make informed decission about their condition or even to determine when to seek for help.[19]

With regards to knowledge of health screening, most of the respondents had knowledge of the screening programs however a large percentage hardly encountered them. A great percentage of the respondents knew about HIV, COVID and Malaria screening probably because these diseases and their screening have been greatly emphasized on in the media and in many health settings due to their prevalence in the country and the world at large. This is in contrast to a similar study conducted in South East-Nigeria[20] where majority of the participants had little or no knowledge of routine checkup. This was because Lagos State has a very high level of literacy as seen in the study conducted by Lagos Bureau of Statistics (LBS) ministry of economic planning and budget.[15] A lot of the respondents had attended HIV screening programs, COVID screening programs and malaria screening programs but only a few had attended EBOLA, breast cancer, diabetes and syphilis tests screening probably because these diseases (HIV, COVID AND malaria) and their screening have been greatly emphasized on in the media and in many health settings due to their prevalence in the country and the world at large. This is in contrast to a similar study conducted in South East-Nigeria,[20] where they hardly attended screening programs in general.[15] It has gone beyound just reading and computation or understanding of health related information to processing, interpreting information, cognitive interaction, and good communication with the society.[21,22]

There is a statistically significant relationship between knowledge of health literacy of the respondents and practice of health screening.poor health literacy has been attributed to poor quality of life and health outcomes in patients suffering from chronic diseses like diabetes and asthma,[23,24] minimal self-care and increase in visit to Emergency Department.[25,26] Other negative impacts are limited involvement in consultations and healhcare decission making.[27,28] These consequently results in high frequency of hospital admissions and cost.[29,30]

There was a significant relationship between educational level and knowledge of health literacy as well as health screening and practice of health screening. This is similar to a study by Usman *et al* where education showed a statistically significant relationship with practice of checks and screening programs.[32] A study in Iraq showed a positive relationship between knowlwedge, attitude and peformance of university degree and diploma holders on health literacy for cancer warning signs. Those who have high health literacy had good KAP towards cancer warning signs.[33] Other studies indicated a positive relationship between health literacy and pap smear in Malay moslem women in Iran.[34] However, there was a no relationship between health literacy and response to colorectal cancer test response in Denmark.[35]

Limitations of the study

The data collection relied on self-reported answers for practices, attitude and knowledge. The answers could be subject to errors due to memory recall or social desirability bias. To mitigate this, the interviewer was trained to maintain a neutral attitude and avoid leading questions. Secondly, the study relied mainly on quantitative assessment. Another limitation was the language barrier, a handful of the respondents could not understand English language and needed further explanations to enable them answer the questions.

Conclusion

There was a high level of awareness/knowledge on health literacy and community health screening with a low prevalence in the practice of health screening. Even though the excuse of being too busy and lack of interest seemed to be the most important factor in the reason why a lot of the respondents have little or no practice of health screening, the high level of education in Ikeja was a key factor in the high level of awareness/knowledge of the residents. Also, sensitization and awareness created in the community by the members of the health sector increased awareness and practice in the screening of certain diseases like HIV, COVID and malaria. This highlights the importance of creating awareness on various health related issues in the community.

Conflict of interest: The authors have none to declare

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