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## Influence of Information Literacy and Information use on competence of Community Health Practitioners in Ibadan, Nigeria

By

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#### **Abstract**

The effective gathering and transmission of information is essential to the standard of care provided for patients. Community Health practitioners have a responsibility to acquire and use information in order to be well informed and competently discharge their duties creditably.

The study is a descriptive survey that targeted 305 community health practitioners from Primary Health Care centres in five selected Local Governments Area in Ibadan out of which 215 respondents were selected using random sampling technique.

The study revealed that the Community Health practitioners (CHP) in Ibadan needs information relating to health-related, primary healthcare, emergency situations, how to perform some minors operations, drug prescription and administration, disease control and prevention, problem-solving and patient healthcare. Majority of the CHPs possessed the necessary and required skills in information acquisition and utilization. Colleagues, personal contacts, mass media (TV, Radio, Newspapers) and patients' cases notes were the major sources of information often consulted by the CHP.

Information is an important resource for the community health practitioners to understand and engage in the management of health conditions of their patients. Therefore, the CHPs skills in finding and applying information about healthcare delivery services have a significant influence on their professional competence. If this is to be achieved, however, government should ensure that relevant, adequate and up-to-date information in various formats, like the internet, libraries, reports, etc., are made available to the health workers in primary healthcare centres in Nigeria to enable them meet their information needs regularly. The CHPs should be given comprehensive training on the use of information technologies to source for and acquire health information.

#### 1. Introduction

The world has been witnessing exponential information growth in various disciplines, resultantly the volume of information doubles every two years (Chamberlain, 2020). With these at the back of mind, no community health practitioners that want to remain relevant and up to speed about practices will not want to make use of information at their disposal. With the increase in the usage of technology for accessing and sharing information, the need for information literacy programmes has increased. 'Information Literacy' is an understanding and set of abilities enabling individuals to recognize when information is needed and can locate, evaluate, and use needed information effectively (Humes, 1999:Singh, Sharda, Chandwani and Singh, 2021).

Health literacy is described as "the degree to which individuals can obtain, process, and understand basic health information and services needed to make appropriate health decisions" (IOM 2004). According to Singh, et al (2021) health Literacy has become a multifaceted task, varying frequently due to technological innovation. With the development of the Internet as a source of health information, health literacy may also include the ability to search the Internet and evaluate Web sites. E-Health literacy sometimes called digital health literacy is finding health-related information from the Internet and using it for health-related issues.

#### 2. Literature Review

World Health Organization (WHO), 2007 affirm that shortages of skilled health workers, particularly in underserved areas, have been identified as a key facet of the growing human resource crisis. These shortages are driven by a number of factors: the dramatic increase in demand for health workers in high-income countries that has created a tremendous pull of health workers into these countries; increasing morbidity, mortality and absenteeism rates, coupled with increasing workloads due to the impact of the HIV/AIDS pandemic; and inadequately funded and poorly managed and performing health systems, which lead to deteriorating working conditions in many underserved areas, creating a strong push factor.

The World Health Organization (WHO, 2020) defines health literacy as 'the cognitive and social skills which determine the motivation and ability of individuals to gain access to understand and use information in ways which promote and maintain good 'health'. Health

literacy means more than being able to read pamphlets and successfully make appointments. In fact, it is critical to empowerment and helps to improve people's access to health information and their capacity to use information effectively.

Information needs, information seeking behaviour and availability of information sources has to be studied since literature have proved that a naïve way of students' information seeking process emerged through empirical studies (Ismaila, 2019). It is also important due to the variety of access points, authentication procedure set by the publishers, search federations availed by the libraries and level of training and awareness provided to use the resources (Sankpal & Punwatkar, 2015).

Information is a product of processed data or data that has been given meaning by way of relational connection. It is equivalent to finished goods produced after processing the raw material. The information has a value in decision making as it brings clarity and creates an intelligent human response in the mind. It is knowledge that one derives from facts placed in the right context with the purpose of reducing uncertainty. Information is valuable because it can affect behaviour, decisions, or an outcome (Institute of Medicine, 2018). Health information is another type of information. Therefore, Health information is the data related to a person's medical history, including symptoms, diagnoses, treatment, and results. Health information records include patient histories, laboratory results, x-rays, clinical information, and notes (Okogwu, & Nnam, 2013). A patient's health information can be viewed individually, to see how a patient's health has changed; it can also be viewed as a part of a larger data set to understand how a population's health has changed, and how medical interventions can change health outcomes for the better.

Health informatics focuses on information systems, informatics principles, and information technology as it is applied to the continuum of healthcare delivery. It is an integrated discipline with specialty domains that include management science, management engineering principles, healthcare delivery and public health, patient safety, information science and computer technology (Chim, 2015).

Kaur (2017) examined the importance of health information literacy for seeking preventive health, disease control and improving the well-being of citizens and empowered them with cognitive and social skills to access, understand, evaluate and use information appropriately to make decisions for better health.

At every level of healthcare system, individuals need information in different ways to meet their needs. Health information users include consumers/patients, funders, researchers, global agencies, program managers, service provides, caregivers/communities, librarians, old people, etc.; all these units from consumers/patients to government/non-government organizations need health information on a range of health measurement areas (Urhiewhu and Edom, 2021).

## 3. Methodology

The sampling techniques used for this study was simple random sampling technique, using an on-sight method. The sampled respondents were drawn from the total population of 305 Community Health Practitioners from five (5) Local Government areas in Ibadan Metropolis.

Seventy percent (70%) was selected because it serves as a good representation of the entire population. The sample size taken was 215 respondents across the Primary Health Care centres in the selected Local Government Areas.

4. Results

Table1 showing socio-demographic characteristics of the respondents

Variable	Frequency	Percentage (%)			
	Age Range				
18-25 years	2	1.2			
26 - 35 years	38	23.3			
36 – 45 years	62	38.0			
46 – 55 years	41	25.5			
56 years and above	3	1.8			
No response	17	10.4			
Total	163	100.0			
Gender					
Male	48	29.4			
Female	102	62.2			
No response	12	8.0			
Total	163	100.0			
Level of education					
WASSCE/SSCE or equival	ent 7	4.3			
ND	83	50.9			
HND	53	32.5			
First Degree	5	3.1			
Masters	-	-			
Ph.D.	2	1.2			
No response	13	8.0			
Total	163	100.0			

Table 1 above shows that out of the 163 respondents, majority 62(38.0%) were between the age of 35 and 45 years, followed by 41 (25.2%) who were between 46-55 years, 38 (23.3%) were between 26-35 years old, 3 (1.8%) were 56 years and old above while 2 (1.2%) were between 18- 25 years; 102 (62.2%) were female while 48 (29.4%) were male; 83 (50.9%) had ND certificate, 53 (32.3%) were HND holder, 7 (4.3%) were WASSCE/SSCE holder, 5 (3.1%) were first degree holder while 2 (1.2%) were Ph.D. certificate holder.

**Table 2 showing information needs of the Community Health Practitioners** 

S/N	Information needs		Frequency	Percentage (%)
1	General health-related information		150	92.0
2	Information on primary healthcare		149	91.4
3	Information on drugs prescription a administration	and	147	90.2
4	Information on disease control a prevention	and	147	90.2
5	Problem-solving information		134	82.2
6	Information on emergency situations		127	77.9
7	How to perform new operations		109	66.9
8	Patient health care information		136	83.4

Table 4.2 above shows that majority 150 (92.0%) of the respondents in Primary healthcare centres in the five Local Government Areas affirmed that they need general health related information, 149 (91.4%) of the respondents indicated that they need information on primary healthcare, 147 (90.2%) of the community health practitioners in Ibadan needed information on drugs prescription and administration as well as information on disease control respectively, 134 (82.2%) of the respondents needed information for problem-solving, 127 (77.9%) needed information on emergency situations, 109 (66.9%) needed information on how to perform new operations while 136 (83.4%) needed information on patient's health care information.

Table 3 showing level of information literacy skills of the community health practitioners

S/N	Information literacy skills	SA	A	D	SD
1	I can articulate my information	52(31.9%)	85(52.1%)	8(4.9%)	7(4.3%)
	need				
2	Effective use of information	63(38.7%)	77(47.5%)	9(5.5%)	2(1.2%)
	resources and services				
3	I can analyse and evaluate	50(30.7%)	85(52.1%)	13(8.0%)	3(1.8%)
	information				
4	Ability to access information in	41(25.2%)	93(57.1%)	13(8.0%)	3(1.8%)
	various format				
5	I have knowledge of information	58(35.6%)	77(47.2%)	11(6.7%)	4(2.5%)
	sources				
6	I can effectively communicate	66(40.5%)	73(44.8%)	8(4.9%)	3(1.8%)
	information to others				
7	I can use the computer and internet	42(25.8%)	60(36.8%)	28(17.2%)	22(13.5%)
	to locate information				

Table 3 above shows that majority 137(83.2%) of the respondents said that they can articulate their information needs; 140 (85.9%) said that they can make effective use of information resources and services; 135 (82.8%) said they can analyse and evaluate information; 134 (82.3%) said that they have ability to access information in various format; 135 (82.8%) said that they have knowledge of information sources; 139 (85.3%) said that they can effectively communicate information to others while 135 (82.8%) said that they can use computer and internet to locate information.

Table 4 showing purpose of use of health information

S/N	Purpose	Frequency			
		Very often	Often	Occasionally	Rarely
1	For problem-solving	58(35.6%)	70(42.9%)	23(14.1%)	4(2.5%)
2	Handling emergency situations	57(35.0%)	57(35.0%)	31(19.0%)	5(3.1%)
3	For decision -making	55(33.7%)	65(39.9%)	23(14.1%)	10(6.1%)
4	Performing surgical operations	31(19.0%)	37(22.7%)	23(14.1%)	49(30.1%)
5	Drug prescription and	83(50.9%)	57(35.0%)	9(5.5%)	1(0.6%)
	administration				
6	Counselling and provision of	89(54.6%)	52(31.9%)	9(5.5%)	3(1.8%)
	advice to patients				
7	Training of lower level health	79(48.5%)	44(27.0%)	25(15.3%)	5(3.1%)
	workers				
8	For updates of patients records	79(48.5%)	58(35.6%)	14(8.6%)	3(3.1%)
9	Planning and administration	72(44.2%)	56(34.4%)	20(12.3%)	4(2.5%)
10	Sensitization/ awareness	88(54.0%)	42(25.8%)	24(14.7%)	-
	raising about disease				
	prevention and control				

Table 4 above revealed that majority 129(78.5%) of the respondents said they make use of information for problem solving often; 114 (70.0%) of the respondents said that they use information for handling emergency situations often; 120 (73.6%) said that they use information for performing surgical operations often; 49 (30.1%) said that they rarely use information for performing surgical operations; 140(85.9%) said that they use information for drug prescription and administration often; 141(86.5%) said that they make use of health information for counselling and provision of advice to patients; 123(75.5%) said that they often use health information to train the lower level health workers; 137 (84.1%) said that they often use health information for updates of patients records; 126(78.6%) said that they often use health information for planning and administration while 130(79.8%) said that they often use health information for sensitization/ awareness about disease prevention and control.

Fig 1 showing how often Community Health Practitioners use health information

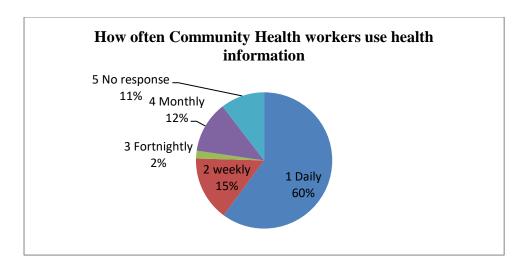


Fig 1 above shows that 98 (60.1%) of the respondents use health information daily, 25 (15.3%) use it weekly, 20 (12.3%) used it monthly while 3 (1.8%) used it fortnightly.

Fig 2 showing sources of health information of Community Health Practitioners

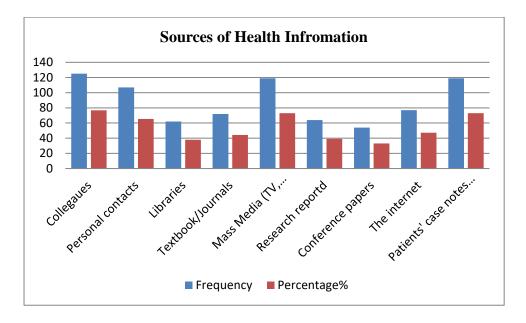


Table 2 shows that majority 125 (76.7%)of the respondents had their source as their colleague; 107(65.4%) had personal contacts as their source; 62 (38.0%) had libraries as their source; 72(44.2%) had textbooks/journals as their source; 119(73.0%) had mass media as their source; 64(39.3%) had research reports as their source; 54 (33.1%) had conference papers as their source; 77 (47.2%) had the internet as their source while 119 (73.0%) had patients' case notes as their source.

Table 5 showing influence of information literacy and use on the competence of Community Health Practitioners

S/N	Information sourcing and use	Frequency	Percentage (%)			
1	Ability to source for and use information affect	138	84.7			
	my professional competence					
2	It does not affect my professional competence	15	9.2			
3	No response	10	6.1			
	Total	163	100.0			
Influence of Information literacy						
1	Quick response to emergency situations	148	90.8			
2	Enhanced decision-making effectiveness	141	86.5			
3	Effective diagnosis skills	143	87.7			
4	Efficiency in handling serve cases	143	87.7			
5	Lead to significant changes in the state of	147	90.2			
	knowledge					

Table 5 above shows that majority 138 (84.7%) of the respondents said that ability to source for and use information affects their professional competence while 15(9.2%) said it does not affect their professional competence; it was in the table that 148(90.8%) of the respondents said that information literacy influence quick response to emergency situations; 141 (86.5%) said that information literacy enhanced their decision making effectiveness; 143 (87.7%) said that information literacy influences effective diagnosis skills and efficiency in handling severe cases respectively while 147 (90.2%) of the respondents said that information literacy leads to significant changes in the state of knowledge.

Table 6 showing barriers to acquisition and use of information by Community Health Practitioners

S/N	Barriers encountered	Frequency	Percentage (%)
1	Some information are too technical, too advanced or	117	71.8
	not applicable		
2	Some information are not relevant	112	68.7
3	The knowledge gathered from information could not	115	70.6
	be put into practice		
4	Rapid evolution of knowledge about various disease	110	67.5
	and infection		
5	There is a professional gap between healthcare	114	69.9
	practitioners and information specialists		

Table 6 above shows that majority 117 (71.8%) of the respondents said that some information are too technical, too advanced or not applicable; 112 (68.7%) said that some information are not relevant; 115 (70.6%) said that the knowledge gathered from information could not be put into practice; 110(67.5%) said that rapid evolution of knowledge about various diseases and infection while 114 (69.9%) said there is a professional gap between healthcare practitioners and information specialists.

## 5. Discussion

The study revealed that the information needs of the Community Health Practitioners in Ibadan included health-related information, information on primary healthcare, emergency situations, and how to perform new operations. Others were information on drug prescription and administration, disease control and prevention, problem-solving and patient healthcare which is not all dissimilar to the study of Hartzler, Tuzzio, Hsu & Wagner (2018) which stated that community resource connections link patients with community-based services, such as referrals for transportation or food assistance

Majority of the Community health practitioners claimed that possessed necessary and required skills in information acquisition and utilization. Their information literacy skills includes ability to use information resources and services effectively, ability to analyse, evaluate and access information in various formats, good knowledge of information sources,

effective communication of information to others and ability to use computer and internet to locate information.

Health information was used by health practitioners for counselling and provision of advice to patients, sensitization/awareness about disease prevention and control, drug prescription and administration, on-the-job problem solving, handling emergency situations, decision-making, and training of lower level health officers. The health workers also used health information in updating patient's records, and planning and administration.

Majority of the Community Health Practitioners rarely used information for surgical operations. It was understood that, this was however, outside the scope of their duties except for those minor operations like incision and drainage, suturing of wounds, removal of cysts and circumcision. Majority of the Community Health Practitioners (CHP) used health information mostly on daily basis. This further explains the importance and relevance of information to healthcare service delivery.

The study revealed that colleagues, personal contacts, mass media and patient's case notes were the major sources of information for the Community health Practitioners while sources such as libraries, internet, textbooks, journals, conference papers and research reports were consulted by only few of the health workers.

The study further revealed that information literacy and use of the community health practitioners has greatly influenced their professional competence such that it has led to quick response to emergency situations, enhanced decision-making effectiveness, effective diagnosis skills, efficiency in handling severe cases, as well as significant change in their state of knowledge.

The major barriers to information acquisition and use were information being too technical, too advanced or not applicable, irrelevancy of some information, and the knowledge obtained from information could not be put into practice. Others included rapid revolution of knowledge about various diseases and infections, and existence of professional gap between healthcare practitioners and information specialists.

#### 6. Implications of the findings

The following are the implications of the above findings:

- ✓ The community healthcare practitioners provide healthcare services at the grassroots level and for them to be able to discharge their duties effectively, they need to acquire and use health information regularly.
- ✓ The barrier to information acquisition and use were information being too technical, too advanced or not applicable, irrelevancy, rapid evolution of knowledge about various diseases and infections. Existence of professional gap between healthcare practitioners and information specialists.

#### 7. Recommendations

The following recommendations were made based on the findings of the study:

- The CHPs should be given a comprehensive training on the use of information technologies tom source for and acquire health information, as this forms part of their information literacy skills which eventually has profounding effects on their professional competence
- Sources of health information like internet, libraries, reports and other current sources should be made available to the community health practitioners to ensure efficiency in their service delivery.
- Government should ensure that standard specialized health/medical libraries with professionally qualified personnel are established across all the Local governments where primary health care centres are located to cater for the information needs of the health workers regularly.
- Government should ensure that relevant, adequate and up-to-date information in various formats are made available to the health workers in primary healthcare centres in Nigeria to enable them meet their information needs all the times.
- The healthcare industry is dynamic and is constantly changing to reflect shifts in client's needs. Proactive strategic planning in anticipation of future challenges in information acquisition and use will ensure that the health workforce is well-equipped to continue delivering safe, high quality care to consumers.