



Cite this article as: Muhanga, M. I. (2021). Health Information and Communication Needs under One Health Approach in Tanzania: Do health professionals influence health literacy? *East African Journal of Social and Applied Sciences*, 3(1), 1-20.

HEALTH INFORMATION AND COMMUNICATION NEEDS UNDER ONE HEALTH APPROACH IN TANZANIA: DO HEALTH PROFESSIONALS INFLUENCE HEALTH LITERACY?

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ABSTRACT

Health professionals (HPs) have always been considered as a source of health information (HI). Nonetheless, potentiality of this source relies on HPs' recognition and response to the community's information and communication needs hence contributing significantly to diseases prevention, health care and promotion. Definitely, attaining optimal health calls for collaboration among animals, humans, and environmental HPs plus understanding the consequences of the interactions of animals, humans, and environment on health. This article discusses the influence of HPs on health literacy (HL) in the context of One Health Approach (OHA) in Morogoro, Tanzania. Through the use of questionnaire, data were captured from a 1440 sample which was obtained by the use of multistage sampling. The study also involved 16 and 80 individuals as a key informant interviews and focus group discussions respectively. Score Indexes measured the interaction of HPs with community members (CMs) and HL. A chi-squared test assessed the influence of HPs on HL. IBM-SPSS v.20 was employed in analysing quantitative data; whereas qualitative data were thematically analysed. Findings show that (32.9%) of the respondents had adequate HL, while (30.8%) and (36.3%) had moderate and inadequate HL. Findings further show a significant association between the level of HPs' interactions with CMs and HL, ($\chi^2=168.593$, $p=0.000$, $\phi=0.342$). This concludes that HPs influence HL. Effective interventions should be formulated to enable HPs attend to CMs' information and communication needs for further influence of HL under OHA.

Key Words: Patients-providers interaction, health literacy, patient-centered care, health information and communication needs, One Health Approach

Paper type: Research paper

Type of Review: Peer Review

1. INTRODUCTION

Apparently, people do interact daily with different purposes; namely; communication, information and technology. These have significantly been shaping their ideas and

knowledge on health and behaviours (Margalit, *et al.*, 2006; Aceto, *et al.*, 2018). It is documented, (Assis-Hassid, *et al.*, 2013; Darcy, *et al.*, 2014; Aceto, *et al.*, 2018; Muhanga and Malungo, 2018a; Muhanga and Malungo, 2017b) that health communication, information, and technology are crucial to public health, health care, and how health is viewed by the society. In actual sense, such interactions have always been observed to have the potentiality of impacting on how the public searches for, understands and uses health information (HI), as a result, influencing both health decisions and actions.

Individuals' interaction with health professionals (HPs) represents interaction that people have not afforded to escape from in their lives; obviously, when individuals fall sick they are forced to seek medical attention. This is what humans cannot afford to escape. Literature (Assis-Hassid *et al.*, 2013; URT, 2017; Muhanga, 2018a) regard this particular interaction serving as a communication route and a source of information which subsequently influences on health literacy (HL) significantly and consequently health outcomes. Undeniably, HL can contribute significantly towards attainment of good health, mainly in the context of the fact that the environment, people and animals are inextricably linked (Muhanga and Malungo, 2018b). It is uncontested that HPs and the health system have a considerable role in supporting individuals towards creation of skills and knowledge on their health (Mboera, *et al.*, 2007). It is against this understanding that, HPs and health facilities, among others, are recognised as key stakeholders in HL (Mitic and Rootman, 2012; Muhanga and Malungo, 2018c). Encounters with patients, the general community, HPs and systems have in various circumstances been reported to result in improved HL knowledge and skills (Nielsen-Bohlman, *et al.*, 2004; Easton, *et al.*, 2010).

Nevertheless, the magnitude to which health care providers and health professionals do recognise also respond to patients' communication and information needs is what has always been determining their effectiveness both as a communication route and a source of information which can significantly influence HL and consequently health outcomes. Literature (Barry, Bradley *et al.*, 2000; Cegala *et al.*, 2000; URT-MoHSW, 2009) report innumerable barriers to the effectiveness of the interactions of health professionals with the community members to better serve patients and general public notwithstanding its potentiality to serve as a health information source. Cases worth noting, include, the use of medical jargon by health professionals to such an extent that communities have very little understanding; (Rudd and Anderson, 2006). Nutbeam (2018:4) claims that at times patients find it very difficult to interact "with a person (like a doctor) whom they find unfamiliar and intimidating". Other barriers are related to language and communication resulting in impaired communication with medical providers (Williams, *et al.*, 1995).

Studies (Stewart, 1995; Williams, *et al.*, 1998; Makoul and Clayman, 2006; Street Jr, *et al.*, 2009) identify the quality of communication between health professionals and patients as another barrier. Additionally, unfriendly services (URT, 2007), resulting from health workers' abuse of the professional code of ethics and conduct, also impacts service provision negatively (URT, 2017).

Given the identified barriers and challenges, there have, in some cases, been difficulties for the interactions to realise what has been expected; that is, to provide substantial HI that can improve HL skills and knowledge through the support of HPs. To address this situation, countless efforts have been institutionalised (Booth, *et al.*, 2005; Reis *et al.*, 2011; Darcy *et al.*, 2014; URT-MoHSW, 2007; URT, 2017). *Inter alia*; these efforts included: transforming healthcare organisations to HL responsive organisations. This has specifically involved these organisations' structures redesigning and processes in supporting patients having low literacy to comprehend, navigate, make use of information and services in health caring (Paasche-Orlow, *et al.*, 2006; Brach *et al.*, 2012). This transformation encourages health care organisations to establish elements of patient-centered care (PCC). Literally, PCC is construed as "care that is respectful of and responsive to individual patient preferences, needs, and values" and which guarantees "that patient values guide all clinical decisions" (IOM, 2001:3). Practically, the implementation of elements of patient-centered necessitates organisations providing health care together with staff working there to shift their total focus from disease-oriented care but also involved in a close physician- patient partnership for the sake of producing the best possible outcome for the patients (Barry and Edgman-Levitan, 2012). The government of Tanzania embarked on several initiatives which among others, focusing on information, education, and communication; aiming at empowering the community for health improvement (URT, 2007).

Initiatives devised to address barriers and challenges towards quality and effective health communication theoretically are intending to facilitate patients to care for their health in a good ways and also support patients in navigating, understanding, and using health services and information (Altin and Stock, 2016). Contemporarily, there is scanty existing empirical evidence on the extent to which HPs and CMs' interactions based on patient-provider communication have been enhanced and how it has resulted in greater patients' empowerment in connection with HI and services in Tanzania. It is not empirically known however to which extent such contacts (interactions) have managed to influence information exchange and hence impacting on HL. It is in this light that this article analyses the influence of health professionals on HL in connection with the efforts of the government of Tanzania to educate her citizens to become health literate. The efforts

concentrated on cultivating the necessary skills and knowledge needed in accessing, understanding and using HI, which can obviously enable and encourage individuals to make lifestyle related choices which are healthier (towards attaining positive health outcomes for animals and humans). This article discusses the influence of HPs on health literacy (HL) in the context of One Health Approach (OHA) from selected wards in Morogoro, Tanzania.

2. THEORETICAL FRAMEWORK

This article is guided by the Trans-theoretical model of health behaviour change. The model claims that health experts have a role to help people in having a healthier life. This goal usually involves advice provision to individuals to abandon health-threatening practices (including smoking, unhealthy eating), taking up healthy habits (such as working out) or assisting people to better manage in a better way some health related behaviors hence improvement of their health and consequently comfort. Health improving activities, from personal consulting to group activities are all regarded as information behaviors (Lalazaryan and Zare-Farashbandi, 2014). In cognizant of this goal, this article analyses the influence of Health Professionals on HL by investigating their responses to the Health Information and Communication Needs of the community towards healthier life under One Health Approach in Tanzania. In this study, the Trans-theoretical model of health behavior change was reflected in designing research questions, in the selection of relevant data to be collected, interpreting the data, and propose explanations of the underlying causes or influences of HPs on HL.

3. METHODOLOGY

A cross-sectional study was conducted in Morogoro municipality and Mvomero districts in Morogoro region, Tanzania. The area is reported by Tanzania-NBS, (2013) to have the population of 315 866 and 312 109 inhabitants respectively. The area where the study was conducted is located under potential routes of risks exposure by the National One Health Strategic Plan 2015 – 2020. This is due to the identification of some incidences of zoonotic diseases in the area (URT-PMO, 2015). The choice of these two districts is premised on numerous interactions between animals and humans with high potential and risks of disease transfer between the two species (Karimuribo, *et al.*, 2005; Mgode, *et al.*, 2014).

This study involved both quantitative and qualitative data. For quantitative data interview schedule and semi-structured interviews were used. Key informants interviews and focus group discussions were employed to collect qualitative data. Moreover, personal observation, especially visits in public health centres, hospitals, and households were employed to see the real situation concerning HL, HB and HCSB on the ground. A sample size of 1 440 respondents was determined through a multi-stage sampling

procedure, (in selecting districts, wards, villages/streets, HHs). A Computer Assisted Personal Interviewing (CAPI) electronic platform was employed to administer a structured questionnaire for quantitative data collection. For the purposes of estimating size of the sample, a 95% confidence interval (CI) was assumed, a margin of error (5%), and a design effect (1.5). The statistical estimation method of Kelsey *et al.*, (1996) was employed to calculate a minimum adequate sample size. A sample size of 1440 respondents was determined by using the formulae:-

$$s = \frac{X^2 NP (1 - P) \div d^2 (N-1) + X^2 P (1 - P)}{}$$

Where:

s = sample size required

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level

(3.841).

N = the size of population.

P = the proportion of the population (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (.05).

The sample size for this study was calculated from the total population of each 2 purposive selected streets/ villages from a ward. After obtaining the total sample for each ward, the proportions of each street/village from the total sample were calculated. The sample size was then distributed in the identified study streets/ villages. Bailey (1994) and Field (2009) argue that when a statistical analysis has to be performed a sub-sample of 30 respondents should be the minimum employed irrespective of the size of the population. In this context the sample size allocated for each village/ street was considered adequate.

4. MEASUREMENT OF VARIABLES

4.1 Patients/ Community Members –Health Professionals interactions Measurement

To measure the interaction of respondents with professionals (medical, veterinary and environmentalists) on health and related matters, respondents were asked if they had communicated with these professionals in the past three (3) months and, if they had visited or been visited by any of these professionals. A total of 6 questions were asked, three (3) each for communication and visiting respectively. Respondents were required to respond "No" if they had not communicated with professionals and if they had not visited and/or been visited, and 'Yes' if they had communicated with professionals and/or if they had visited or been visited at all. All "No" responses were coded 0 and "Yes" responses were coded 1. Responses were then transformed to 1 and 2 for No and Yes responses respectively for computing scores to indicate the level of community

members' interaction with professionals. A total score was computed from the six (6) questions.

$$\text{PCMHI} = Q_1 + Q_2 + Q_3 + Q_4 + Q_5 + Q_6$$

PCMHI was then categorised into levels namely: - High level of PCMHI, (scores above 5.0), Medium level (scores between 4.0 and 5.0) and Low level (scores below 4.0).

4.2 Health Literacy Measurement

This study adapted some methodological aspects from the European HL Survey to measure HL (HLS-EU, 2012). Respondents were asked: how do they find on a scale from very easy to very difficult, how they find easy: i.e., to obtain information concerned the treatment on illnesses which affect them. The questions comprised items reflecting health related aspects (health promotion, caring for health, and prevention of disease) together with stages involved in processing information (accessing, understanding, appraising and application) in association with health-relevant decision-making and tasks on health in the interface of the environment, animals and people. The items reflecting health-related aspects and stages in processing information were used to develop a context-specific HL assessment framework in the context of OHA. This framework measures perceived difficulty or easiness in performing specific OH related tasks on a four-point self-reporting scale (very easy, easy, difficult and very difficult). Difficulty or easiness to undertake a certain task by a respondent reflected/s an individual's HL level under OHEA. To categorise HL, IBM-SPSS was used to cut scores based on percentiles into three equal groups. HL was then categorised into Adequate Health Literacy (AHL), Marginal Health Literacy (MHL) and Inadequate Health Literacy (IHL). A similar approach has been employed in a study by Gazmararian *et al.*, (2003).

5. FINDINGS AND DISCUSSIONS

5.1 Socio-demographic profile of study participants

Findings show that the highest group, 29.2% (95% CI: 23.3% to 35.0%) were between 30 to 39 years and the lowest group which formed 3.8% (95% CI: 1.7% to 6.2%) were 70 years and above. The average age being 43.7 years (95% CI: 42.1 to 45.3), 21 and 72 years being the highest age and the lowest age respectively. It is indicated that 47.9% men (95% CI: 41.3% to 53.7%) and 52.1 % women (95% CI: 46.3% to 58.8%). Slightly more than one-third (39.2%; 95% CI: 32.9% to 44.6%) had no formal education, and 30.0% (95% CI: 25.0% to 36.2%) completed primary school education. For the interviewed respondents, the majority 57.5% (95% CI: 50.9% to 63.8%) of the respondents were married. The average household size was 5 (95% CI: 4.9% to 5.4%) members, the smallest household size

having 1 member and 10 members for the maximum household size. About 62.9% of the interviewed households had 1 to 5 members. The results are detailed in Table 1.

Table 1: Socio-Demographic profiles of study participants (n=1440)

Variable	Categories	Percent (%)
Age in Years	21-39	42.1
	40-49	26.3
	50-59	17.1
	60-69	10.7
	>70	3.8
Level of Education	No formal education	39.2
	Universal adult education	2.5
	Primary education	30.0
	Secondary education	8.8
	Post-secondary /vocational	10.4
	University	9.2
Sex	Male	47.9
	Female	52.1
Marital Status	Never married/ Single	30.4
	Married	57.5
	Separated	1.7
	Widow	5.4
	Widower	2.5
	Cohabiting	0.8
	Too young to marry	1.7
Household Size	1-3	21.7
	4-7	65.9
	>8	12.4

4.2 Health Literacy under Animals, Humans and the Environment Interface

Table 2 shows that the mean HL score being 261.9 (95% CI: 257.6 to 266.4) while the highest and lowest scores standing at 501.0 and 141.0 respectively with a Std. deviation of 85.0 (95% CI: 81.4 to 88.3). Results further show that 36.3% (95% CI: 33.7 to 38.9) of respondents had IHL, while 30.8 % (95% CI: 28.4 to 33.3) were with MHL and 32.9% (95% CI: 30.3 to 35.3) had AHL. Table 2 presents HL results into categories.

Table 2: HL categories (n=1440)

HL Categories	Frequency	Percent (%)	95% Confidence Interval	
			Lower Bound	Upper Bound
IHL	522	36.3	33.7	38.9
MHL	444	30.8	28.4	33.3
AHL	474	32.9	30.3	35.3
Total	1440	100.0		

Trends show that IHL, low and limited HL is reported to be a common occurrence throughout the world; it is even reported in economically advanced countries where strong education systems are in existence (Gazmararian, *et al.*, 1999; IOM, 2004; Kutner, *et al.*, 2006; HLS-EU CONSORTIUM, 2012; WHO, 2013; Sørensen *et al.*, 2015). Low HL may well be more prevalent in numerous countries; some being low-income some are even middle-income, although the situation is reported to be worse in developing countries (Muhanga and Malungo, 2018a). This may indicate a lack of skills and familiarity with medical terms by community members needed to manage health and prevent disease. Undeniably, (to quote CDC¹)there are significant proportions of people within “those who read well and are comfortable using numbers, who are still facing HL issues much as they aren’t familiar with medical terms or how their bodies work.” Such individuals have problems with evaluating the risks against the benefits which are likely to affect these individuals’ health and safety.

Mboera *et al.*, (2007) observed that despite health care facilities being found to be suitable for rural Tanzanian individuals to obtain health related information, it was witnessed that some of the brochures and posters that were prepared to provide health-related information did not reflect health risks of the respective local community. Notably, the same brochures were not at some points readily available for distribution to individual patients. Unavailability points out issues of inadequacy of such health promotion materials.

4.3 Patients/ Community Members’ Interactions with Health Professionals (PCMIHP)

Table 3 shows that the highest and lowest scores on PCMIHP were 6.00 and 3.00 respectively with the mean score being 4.7 (95% CI: 4.65 % to 4.76%) with Std. Deviation of 0.84 (95% CI: 0.8% to 0.9%).

Table 3: Scores on PCMIHP on Health Matters (n=1440)

¹Understanding Health Literacy: <https://www.cdc.gov/healthliteracy/learn/Understanding.html>

Scores	Frequency	Percent	95% Confidence Interval	
			Lower Bound	Upper Bound
3.00	102	7.1	5.6	8.6
4.00	474	32.9	29.9	35.8
5.00	612	42.5	39.4	45.6
6.00	252	17.5	15.2	20.1
Total	1440	100.0	100.0	100.0

Table 3 shows that only 17.5% (95% CI: 15.0 to 19.9) were in high level of PCMIHP, while 42.5% (95% CI: 39.5 to 45.9) on medium level PCMIHP and 40.0% (95% CI: 37.2 to 43.1) on low level of PCMIHP. The categories of PCMHPI are detailed in Table 4.

Table 4: Levels of PCMIHP on Health Matters (n= 1440)

	Frequency	Percent	95% Confidence Interval	
			Lower Bound	Upper Bound
Low PCMHPI	576	40.0	37.2	43.1
Medium PCMHPI	612	42.5	39.5	45.9
High PCMHPI	252	17.5	15.0	19.9
Total	1440	100.0	100.0	100.0

Other studies (Gillis *et al* 2013; Hironaka and Paasche-Orlow, 2008; Seurer and Vogt 2013) have also identified the existence of patient-health professional relationship.

4.4 Influence of Health Professionals on Health Literacy

Table 5 indicates that 47.9% of those respondents who had low PCMHPI were found under the IHL category, while 27.1% on MHL and only 25.0% had AHL. Table 5 further indicates that the majority of the respondents (54.8%) who had high PCMIHP were found under the IHL category, while 16.7% on MHL and only 28.6% had AHL.

Table 5: PCMIHP categories * Health Literacy Levels Crosstabulation (n=1440)

		Health Literacy Levels			Total
		IHL (%)	MHL(%)	AHL (%)	(%)
Low	Count	276	156	144	576
	% within Categories of PCMIHP	47.9%	27.1%	25.0%	100.0%
	PCMHPI % within HL levels	52.9%	35.1%	30.4%	40.0%
	% of Total	19.2%	10.8%	10.0%	40.0%
Medium	Count	108	246	258	612
	% within Categories of PCMIHP	17.6%	40.2%	42.2%	100.0%
	PCMHPI % within HL Levels	20.7%	55.4%	54.4%	42.5%
	% of Total	7.5%	17.1%	17.9%	42.5%
High	Count	138	42	72	252
	% within Categories of PCMIHP	54.8%	16.7%	28.6%	100.0%
	PCMHPI % within HL Levels	26.4%	9.5%	15.2%	17.5%
	% of Total	9.6%	2.9%	5.0%	17.5%
Total	Count	522	444	474	1440
	% within Categories of PCMIHP	36.2%	30.8%	32.9%	100.0%
	% within HL Levels	100.0%	100.0%	100.0%	100.0%
	% of Total	36.2%	30.8%	32.9%	100.0%

Table 6 shows results for Chi-square tests on association between PCMIHP and HL level. The results from the Chi-Square Tests of independence indicate that $\chi^2 = 168.593, p = .000$. This indicates a statistically significant association between PCMIHP and HL level.

Table 6: Chi-Square Tests for the association between PCMHPI and HL level (n=1440)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	168.593 ^a	4	.000
Likelihood Ratio	178.776	4	.000
Linear-by-Linear Association	5.839	1	.016
N of Valid Cases	1440		

A significant association between PCMIHP and HL level is indicated in a chi-square test of independence with $\chi^2 (4, n=1440) = 168.593, p=.000, \phi=.342$. The phi coefficient in this

study is .342 based on Cohen’s 1988 criteria of .10 for a small effect, .30 for medium effect and .50 for the large effect the strength of association between the variables is medium. Table 7 presents the details.

Table 7: Symmetric Measures for the association between PCMIHP and HL level (n=1440)

		Value	95% Confidence Interval	
			Lower Bound	Upper Bound
Nominal by Nominal	Phi	.342	.300	.390
	Cramer's V	.242	.212	.276
N of Valid Cases		1440	1440	1440

It can be noted from Table 5 that PCMHPI has not been very effective to influence information exchange and hence impacting on HL. It is obvious from Table 5 that the nexus between PCMHPI and HL can only be observed for Low PCMIHP and IHL also for Medium PCMIHP and MHL only but not for High PCMIHP and AHL. This is to say that those who had low PCMHPI had also IHL and likewise those who had medium PCMIHP had MHL but there has been a mismatch between high PCMIHP and AHL. The results also in Table 4 show that only 17.5% had high PCMIHP. It can be observed that a low level of PCMIHP can be connected to the fact that health professionals have not been welcoming such interactions very much as it was explained by this middle-aged male participant:

“...Doctors and nurses are not the kind of people to be questioned a lotthey don't welcome thatwhen you ask a lot they see you a much know person and interfering intoWhere else can we get such informationsee the radio and TV stations mostly are busy entertaining ...playing music and movies newspapers are mostly doing business ...politics and current issues are what mostly featuring in these newspapers ...We sometimes really like to know about our health and the like.... but where do we get such information ?....” (Male FGD participant, Melela).

Thaker (2008) argues that how patients interact with the healthcare professionals has always had a certain influence on the communication between the doctor and patient. Literature (Canadian Council on Learning, 2008; Nakayama *et al.*, 2015; Sorensen *et al.*, 2015), reports very strong role of healthcare systems in dealing with the challenges of mainly low levels of HL in populations, despite health systems continuing being less responsive to the issues of low HL (Paasche-Orlow, 2011; Penaranda, Diaz, Noriega and

Shokar, 2012; Palumbo, 2017). It can be observed from the FGDs what people have been expecting from the health care sources and the kind of response they received. The kind of response received from the healthcare systems has been hindering individuals to obtain, comprehend and even make use of health-related information. Obviously, if such information is inadequate individuals' demands for such information are likely not to be met. This implies that low HL is attributed to the inadequacy of health information as explained by this participant in a FGD. Undeniably, health professionals-patients interaction could have been the most effective source of health information if it could be effective. What has been learnt from the FGD is that these professionals have not been allowing a lot of questioning from their clients so this implies that this source has not been in a position to serve as an effective source. An almost similar observation has been made by Nutbeam (2018:4) who claims that sometimes patients find it very difficult to interact "with a person (like a doctor) whom they find unfamiliar and intimidating". It is no wonder that HL is observed to be low in the study area given these circumstances.

Another important aspect that emanated from the FGDs was on how health information is presented. Of interest to health information presentation is the language used. The most vital here is the level of simplification of the language used for the laypersons to understand. From the FGDs it came clear that the language used has sometimes not been simplified enough for lay person's understanding. This by itself, unquestionably, stands as a barrier towards understanding and using such information towards promotion and maintenance of good health. Williams *et al.*, (1995) and Davis *et al.*, (2002) report that low HL is associated with barriers in language and communication, which in turn result in impaired communication with medical providers. One key informant from the health department when asked on how they try to bring medical and health messages to lay people's understanding, he responded:

"...We have been trying to simplify our communication with laypeople whenever it has been possible. But sometimes it becomes difficult to really get medical issues to such levels. We, health professionals, do have our own culture and language. This is an inherent culture of medicine and the language of medical specialty as a result of our training and work environment?..." (KII, Health Department, Morogoro).

It is therefore apparent that given such circumstances PCMHPI cannot realise its intended targets due to the ways healthcare professionals interact with the general public. In a way, if these professionals are the key source out of which lay people are expecting to gain knowledge on health matters are so much sticking to their culture and language then an obvious barrier is created when it comes to accessing such information. Obviously, if a particular communication is in plain language there are higher chances for

what is communicated to be understood the first time it is communicated/shared. Communicating in plain language makes it possible for the provision of meaningful and reliable information. This has been the concern of the World Health Organisation (2013) when it comes to building HL together with making health information and related materials sensitive based on the existing differences and diversities reflected on cultures, age, sex and individuals in their format and content. Definitely, HL problem is likely to be created when organisations or individuals create and provide health information which is excessively difficult to comprehend. Another observation made during FGDs which also affects HL is on the interaction between health workers and patients. Level of interaction between patients and health workers is considered to influence the transfer of health information to the patients as stated by a participant in a FGD at Doma:

.....when I visit the hospital, I get to know at least on the symptoms, causes and preventive measures for certain disease(s)but this depends very much on how interactive a particular health worker would be when attending to yousometimes some of these health workers are not that much interactivethey will simply provide you with the medication and that's it(Male, FGD participant, Doma).

Obviously, when a person is ill, s/he is expected to visit a healthcare facility or doctor and this encounter involves a reciprocal set of obligations and privileges. It can be implied from the FGDs that in way health professionals have so much focused on the medication aspects ignoring the role of providing information related to diseases (i.e on symptoms and preventions). Lalazaryan and Zare-Farashbandi (2014) argue that health workers have another role beyond just providing medication to patients. Transmission of health related information through health education to the patients accompanied with encouragement to search for health related information is considered as a role that health workers have to play towards preventing diseases, health care and health promotion. This is supported by Making Every Contact Count Approach (NICE, 2007 as cited by NWPH, *n.d.*) and Beck, Daughtridge and Sloane, (2002).

5. CONCLUSIONS AND RECOMMENDATIONS

It can be observed that the efforts to address the challenges towards effective PCMIHP have not realised its intended objectives towards greater patients' empowerment to understand, navigate, use health information and services towards better health outcomes. As it has been witnessed during FGDs several barriers and challenges have been identified which had negatively impacted on the PCMIHP in the study area. Consequently, low PCMIHP has been observed in this study which resulted in IHL from a significant proportion of the respondents. This implies that such contacts (interactions) have not managed to influence information exchange and hence failed to significantly

impacting on HL. In light of that, it is concluded that despite the potentiality of PCMIHP to serve as a health information source, several barriers to PCMIHP effectiveness still exist. It is recommended that further initiatives should be devised by the stakeholders to improve PCMIHP by addressing the challenges facing this important source of health information.

Acknowledgments

Special thanks are given to the European Union for supporting financially the Intra-ACP Academic Mobility Scheme which funded "the Enhancing Community of Practice in One Health for Infectious Diseases through Postgraduate Training" which awarded me a scholarship for Ph.D. studies at the University of Zambia. We thank our reviewers for their careful readings, analyses and suggestions.

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