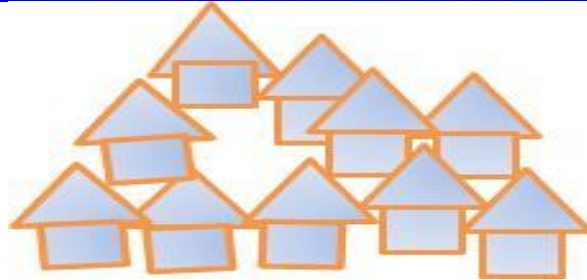
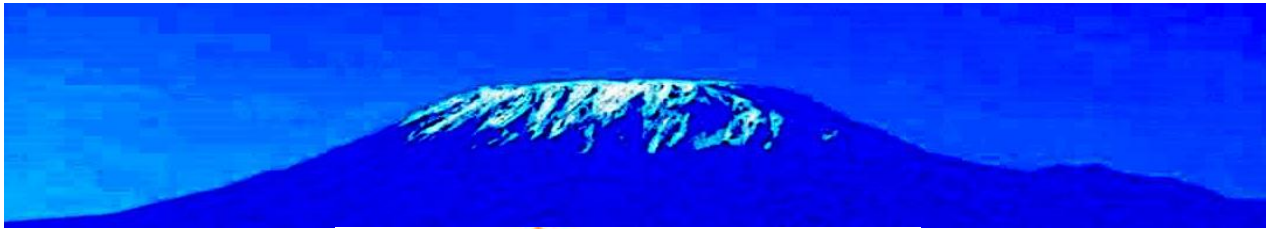


**Volume 1 Number 2
September, 2021**

Tanzania Journal of Community Development (TAJOCODE)



**Online: ISSN 2773-675X
Print: ISSN 2773-6725
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**Journal of the Community Development Professionals
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Health Literacy, Health Behaviour and Healthcare Seeking Behaviour in Rural Settings in Tanzania: Towards a Conceptual Framework

Mikidadi I. Muhanga¹

Abstract

Conceptual framework can serve very useful purposes when it comes to formulating research questions and developing hypotheses. This article presents a conceptual framework from a study conducted in rural settings in Mvomero district in Morogoro, Tanzania. The study assessed health literacy (HL) and its influence on health Behaviour (HB) and health care seeking behaviour (HCSB) as well as attitudes of people under One Health Approach (OHA). This article shares with readers who intend to conduct similar studies focusing on the connection between HL, HB and HCSB on the framework to be employed in studies of those nature. The intention of this article is not to present the whole study, but to share a detailed account of a conceptual framework. This framework is on the connection between HL, HB and HCSB. The framework informs health education and HL interventions; particularly, on ways the interventions can effectively lead to health behavioural change in the context of One Health Approach (OHA). Other studies can be conducted to assess HL in other areas of Tanzania and beyond using this conceptual framework. This analytical framework is vital at this particular moment when the need for educating people to become more health literate is pertinent. It is recommended that the conceptual framework should contextualize to attain additional context specific variables.

Keywords: Health literacy, Health Behaviour, Healthcare seeking behaviour, conceptual framework, Rural Settings, Tanzania

1.0 Introduction

Conceptual frameworks are useful in formulating research questions, research questions, and developing hypotheses. A conceptual model covered in this article, provides insights to those interested in exploring the connection between health literacy (HL), health behaviour (HB) and health care seeking behaviour (HCSB). Miles and Huberman (1994:18), define “a conceptual framework as a visual or written product that explains, either graphically or in narrative form, the main things to be studied— the key factors, concepts, or variables—and the presumed relationships among them.” In this conceptual framework, HL is the dependent variable which is affected by a number of independent variables (predictors). The conceptual framework integrates a number of approaches and theories related to HL and HB. The conceptual framework was used in a study conducted in Mvomero district, Morogoro, Tanzania. As such, the objective of the article is to present a conceptual framework using insights from the study.

1.1 A synopsis of the study

The conceptual framework was refined and contextualized through a study that examined the nexus between health literacy and health behaviour. The study focused on the problematic nature of HBs observed through existence of higher prevalence of infectious diseases. Overall, the government engages in a number of health promotion initiatives including health campaigns, distribution of fact-based pamphlets, the placement of posters, and mass radio broadcasts (Mboera, *et al.*, 2007; URT, 2007a; 2007b; URT, 2017). Although the study findings revealed a number of government efforts to improve health services and educating people to become more health literate at the study location (URT, 2003a; URT, 2007a, URT, 2007b), the efforts hardly bare any fruits. The majority of Tanzanians prefer alternative healthcare services instead of

¹ *Department of Development Studies, College of Social Sciences and Humanities, Sokoine University of Agriculture, P.o.Box 3024, Morogoro-Tanzania* Email: mikidadi@sua.ac.tz

going to the hospital in line with government efforts. Overall, the findings of the study contradict those of Airhihenbuwa (2007) who argues that knowledge has always been connected to positive behaviour change. Study questions were: why have people not changed their health behaviours despite these government efforts? Could health information and subsequently health knowledge stand as a strong driver towards health behavioural change? Which barriers exist in accessing, using, and understanding health information towards health behavioural change?

HL is thought to have significant implications on health outcomes and hence on quality of population. The focus of this study was on OHA due to the fact that for optimal health to be attained there is a need to understand humans, animals and environment interactions and its consequences on health. The study assessed HL and HB in the interface of humans, animals and the environment. Specifically, the study assessed the level of HL and how it is associated with HB and HCSB of the household members in the study area. It also analysed attitudes /perceptions of people on HB.

In order to establish how HL associates with HB, it was important to establish how health literate members of households were, what kind of health influencing practices they involve themselves with and from which sources did they prefer to seek health care in the study area. The observation has been that there has been notable existence of health impairing behaviours (HIBs) resulting sometimes into a higher prevalence of infectious diseases. Further, there were varying preferences for Tanzanians in terms of seeking healthcare services despite the efforts by the government of Tanzania to improve health services and educating people to become more health literate (URT, 2003a; 2007a; 2007b). The question here was: were these people literate enough on issues related to health in the interface of humans, animals and the environment? It is obvious that despite having a number of studies having assessed HL but none of them reflected the interface of humans, animals and the environment.

Further, the study focused on the perceived or self-reported HL, HBs and their perceptions on the effectiveness of stakeholders' initiatives (collaborative efforts and strategies) in building public health capacity, developing HL and empowering people to manage their health in the interface of humans, animals and the environment. It established the realities with respect to levels of HL, HBs exhibited and health care sources preferences plus effectiveness of stakeholders' efforts in health related aspects. It was important to find out if respondents had prior knowledge on issues related to health in the context of humans, animals and the environment interface and its consequences on health to humans, animals and the environment. The aspect of knowledge is important because there were reported government efforts on improving health services and educating people to become more health literate (to cultivate the knowledge and skills needed to access, understand and use health information), thus enabling and encouraging them to make healthier lifestyle choices which did not yield positive outcomes.

Airhihenbuwa (2007:177) argues that "improved knowledge and a change in attitude are the twin engines that generate expected outcomes in behaviour." However, the study suggests that having knowledge without a change in attitudes cannot lead to behavioural change. Muhanga and Malungo (2017) assert that there is a strong connection between attitude and behavioural changes. Freer, (2015: 16) argues that any individual is "a rational being that, when given the correct knowledge, will make the rational choice of positive behaviour change." However, this is not often the case because there are innumerable aspects which can stop an individual from making a "rational" choice. Other studies (Freudenberg, 2000; Freer 2015) have identified the systemic issues of poverty, structural constraints and culture among such precluding factors. Airhihenbuwa's PEN-3 model explains health beliefs and actions within the context of culture,

history, and politics (Airhihenbuwa, 1995, 2007). The model postulates that health behaviour within an African context can be best understood within the cultural identity of Africans. The model further insists that even for other education interventions to be effective there is a need to attach them to African culture.

1.2. Theoretical Framework

The study, out of which this conceptual framework was developed, theoretically was guided by PEN-3 model (Airhihenbuwa, 1995:29-34). Under cultural identity domain, the model recognizes the role of health education in empowering People, Extended Family and Neighbourhood (PEN) to make informed health decisions and perform roles that are appropriate in their families and communities. Relationships and Expectations is another domain of the model. Perceptions comprise of the knowledge, attitudes, values, and beliefs, within a cultural context, that may facilitate or hinder personal, family, and community motivation to change. The model assumes that there are enablers which are cultural, societal, systemic, or structural influences that may enhance barriers to change. The enablers are such as availability of resources, accessibility, referrals, employers, government officials, skills and type of services. Nurturers refer to the degree to which health beliefs, attitudes, and actions are influenced and mediated, or nurtured, by extended family, kin, friends, peer and the community. PEN-3 model also acknowledges Cultural Empowerment reflected in Positive Behaviour, Existential Behaviour and Negative Behaviours (PEN): Positive Behaviours are those that are based on beneficial actions and beliefs. Those ought to be encouraged. The success and sustainability of program relies on such behaviours. Existential Behaviour refers to practices, behaviours and/or cultural beliefs that are inherent to a group and have no harmful health consequences. One should not target to change such behaviours for change because they cannot lead to program failure. Negative behaviours are harmful beliefs and actions that affect health of a victim. Before attempting to change negative behaviours, health providers need to examine such behaviours within their historical, political, and cultural contexts (Airhihenbuwa, 1995). The theory goes beyond just valuing the influence of health information hence health knowledge on health behavioural changes through health education by looking at cultural, historical, and political context (Freer, 2015). Although the model is widely used, there is no empirical information for its application in studies that are OHA based.

2.0. The Conceptual framework

Despite efforts by the government to educate people to become more health literate, there is no evidence on having HL documented in national health datasets so as to be able to establish HL gaps which could form the basis of such efforts to educate the people (see for example TDHS, Census etc). In light of that, it was worthwhile to establish HL levels in the study area and since that has never been done before there was a need to develop a context specific approach /assessment tool to that effect. It was not sufficient just to establish HL, but it was worthwhile to assess specific factors which determine HL, HB and HCSB. Understanding specific factors which determine HL, HB and HCSB remains important when it comes to formulation of interventions related to HL, HB and HCSB. Fig. 1 indicates determinants of HL, HB and HCSB including subjects' characteristics, political aspects, service characteristics and disorder characteristics. The cause-effect relationship of the variables is further elaborated hereunder after a thorough review of literature. However these determinants obtained from review were from studies that did not concentrate on OHA.

A conceptual model by Paasche-Orlow and Wolf (2007) indicates HL to be influenced by socio-demographic and economic characteristics. These characteristics in Fig.1 are referred to as subjects' characteristics (including the level of education attained, gender, age, and occupation). Several other studies (Rauschenbach and Hertel, 2011; Marinaccio *et al.*, 2013; Muhanga,

2017a; Kaale and Muhanga, 2017; Muhanga and Malungo, 2017b) have reported on socio-demographic and economic related characteristics to have predictive effects on other variables. Subjects' characteristics were traced to analyse their effects on HL, HB and HCSB. Other models, Pathway Model and Determinant Model of Illness Behaviour also demonstrate that the decision to engage with particular medical channels is influenced by a variety of socio-economic variables (Akinawo and Oguntimehin, 1997; Tipping and Segal, 1995).

Health of a population is not completely under the control of an individual citizen, nor of a doctor (except in some instances of individual disease), but is substantially under the control of the social relations of the society. Health is political much as power is exercised over it. There are ways public policy has been determining health in the society. Public policy as determinant of health, is acknowledged by Bambra *et al.*, (2003) and Williamson and Carr (2009). At every local community, there are by laws, directives or even policies which form part of local politics. In order to analyse the influence of local politics on HL, HB and HCSB, a variable on Fig. 1 on political aspects was included. The intention here was to give answers to questions on how local leadership involved itself in promoting health related aspects for the local community. Together with this, local governance involvement of health related aspects was also analysed. This is in line with the fact that LGAs have been mandated by the Tanzania National Health Policy responsibilities with respect to health administration in their areas of jurisdiction (URT, 2007a; 2007b). Noteworthy, there are no any local government laws, directives or even policies that have been formulated on health care, diseases prevention and health promotion. There is no evidence on ways the bylaws, directives or even policies have managed to influence people's health.

Knowledge is an important intervening variable in most of social and health related studies. This idea is accommodated in PEN-3 model (Airhihenbuwa, 1995, 2007). Theoretically, prior knowledge on environment management practices, health, and diseases, forms an important aspect of HL, HB and HCSB. Knowledge and awareness have a lot to influence on HL, HB and HCSB. The constructed conceptual framework (Fig.1) indicates prior knowledge having direct link with One Health Literacy. This is based on the fact that lack of knowledge in health related aspects has a number of outcomes. The outcomes include poor understanding of the complex nature of their health; medical care and conditions; poorer comprehension of medical information; low understanding and use of preventive services plus impacts of certain individuals behaviours on their health (see Davis *et al.*, 1996; Baker *et al.*, 1997; Baker, *et al.*, 1998; Bennett *et al.*, 1998; Doak *et al.*,1998). In this study, prior knowledge was assessed and its influence on HL, HB and HCSB was analyzed.

It is apparent that HL is partly about people's access to health information and their capacity to use it effectively to make appropriate health decisions in order to promote and maintain good health (Ratzan and Parker, 2000; TARSC, 2009; Berkman *et al.*, 2010). The communication, information, and technology that people intermingle with each day is the one that moulds ideas about health and behaviours of the people. These processes make up the context and the ways professionals and the public search for, understand, and use health information, significantly impacting their health decisions and actions. Issues of access to information describe individuals' information seeking behaviour. In this context, it was important to address aspects of people's access to information in general and health information in particular much as at the core of health literacy is an aspect of access to health information.

There is also an indication from previous study (Kambarage *et al.*, 2003) that there are significant disease incidences which are undetected, unreported or underreported. Some studies (Karimuribo, 2007, *et al.*) have attributed occurrences of these incidences of failing to

detect and report to low awareness among other factors. Unquestionably, low awareness is partly connected to lack of information. Ultimately the intention of assessing access to information and types of information accessed was to give an answer to whether information accessed was adequate, understood and used in such ways which promoted and maintained good health by observing the kind of HB and HCSB exhibited. Therefore the influence of HISB on HL, HB and HCSB was analysed. Variables on access to information, types of information accessed and Information seeking behaviour were added to the conceptual framework in Fig. 1. Obviously, health care provider-patient interaction can play role in raising awareness on health and healthy choices, sharing health messages, removing barriers and creating supportive networks and environments. This can then influence HL, HB and HCSB. This supposition is supported by Making Every Contact Count Approach (NICE, 2007 as quoted by NWP², *n.d*; Beck *et al.*, 2002).

Service characteristics which include aspects related to health care setting (i.e access to services in terms of physical proximity), perceived quality of service, the quality of medical care in terms of technical efficiency have been cited as key determinants of demand for health care (Mwabu *et al.*, 1993; Ellis *et al.*, 1994; Sahn *et al.*, 2003; Baker 2006). Others being, psychological and monetary costs of taking action (including costs, time, money, effort, stigma, social distance, feeling of humiliation and the like); beliefs in the efficiency of recommended health care (itself related to beliefs about the cause of the disease). The conceptual framework takes into account efficiency in terms of accessing a particular modern human and animal health care service (availability, perceived costs involved and proximity –located within walking distance or not).

A disorder characteristic is another influencing factor on HL, HB and HCSB. It is obvious that patient's ability to acquire and use information is dependent upon the specific health problem faced, the type of illness also influences the choice of a medical channel, (Pathway Model and Determinant Model of Illness Behaviour) (Akinawo and Oguntimehin, 1997; Tipping and Segal, 1995). Perceptions on diseases and other social aspects is another important aspect in understanding the determinants of HB and HCSB (Baker, 2006) as it leads to the recognition of particular symptoms; the perception of those symptoms and the threat of disease; the extent to which symptoms disrupt family, work and other social activities this explained in a model by Kuoeger, (1983) as cited in WHO (1995:5).

Attitudes and perceptions towards health behaviours were considered to be just another variables having direct link on HB. These aspects are well articulated in PEN-3 model. This is based on the fact that an individual is likely to maintain a particular health behaviour if either particular individual(s) or the community around is having positive attitude or perception over it. Attitudes and perceptions are important as much as public perception tends to influence and shape people's behaviour.

Theory of Reasoned Action is framed on thesis that behavioural intentions are influenced by attitudes and norms. A desired health outcome occurs if an individual adheres to a particular behaviour. The influence other people, such as a spouse, have on an individual's behaviour emanate from subjective norms (Nutbeam *et al.*, 2010; Glanz *et al.*, 2008). According to Nutbeam *et al.*,(2010), social norms theory suggests that much of people's behaviour is influenced by their perception of how other members of their social group behave. The traditions

²North West Public Health (n.d). Evaluation of Approaches to Health Literacy in Ashton, Leigh and Wigan <http://www.nwph.net/nwpho/Publications/NHS%20ALW%20Health%20Literacy%20Final%20Oct%202012.pdf>

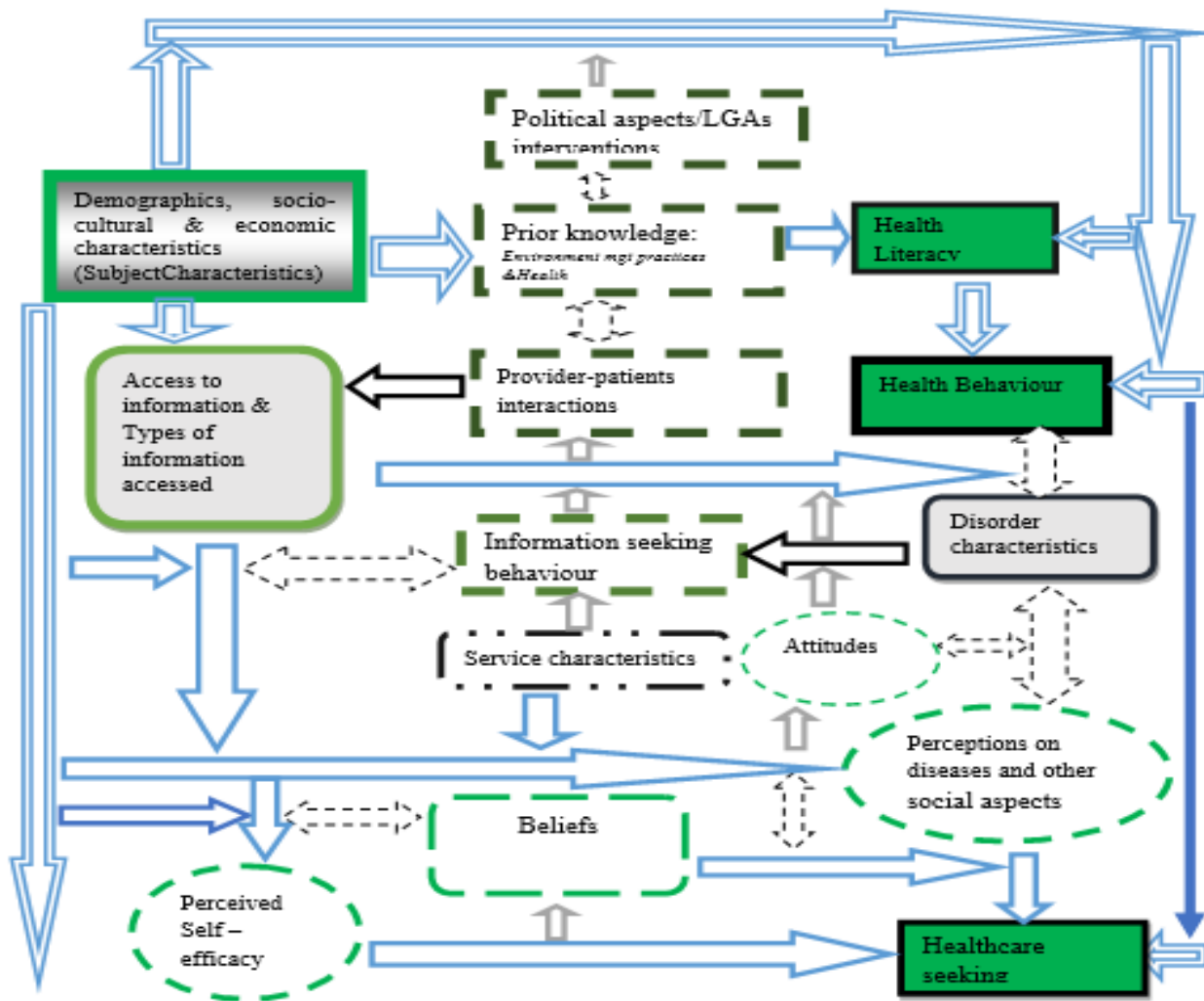
and customs have been considered to have a lot of influence on behavioural aspects. There are instances where certain practices have been maintained on a consideration. That is, they have customary values regardless of their consequences. In the context of an observation that the efforts of the government on improving health services and educating people to become more health literate did not yield positive outcomes. In search for the realities, it was important to investigate on perceptions and attitudes of the people towards HIBs.

Health Belief Model (HBM) predicts that individuals will take action to protect their health, if they perceive themselves to be susceptible to a problem, and serious consequences. In addition, individuals also need to believe a course of action is available that will reduce their susceptibility, and that the benefits of taking action outweigh the costs or barriers (Rosenstock, Strecher and Becker, 1994; Sheeran and Abraham, 1995 as cited by Hausmann-Muela *et al.*, 2003). According to a model by Kuoeger, (1983) as cited in WHO (1995:5) the choice of healthcare is also influenced by beliefs in the efficiency of recommended health care (itself related to beliefs about the cause of the disease).

The conceptual framework further captures local people's experiences: seeking health services, availability of treatment (traditional versus modern), knowledge and beliefs about diseases, and cosmopolitan outlook of diseases. Those have been covered partly under service characteristics; disorder characteristics and prior knowledge (see Fig.1). Andersen's behavioural model of health-care-use presupposes that the utilization of health care is influenced by the predisposition, the ability and the need to use health services (Andersen and Newman, 1973). Andersen grouped factors influencing the utilization into three main categories which are population characteristics, health care systems and the external environment (Andersen, 1995): This is presented in Fig. 1 partly under perceptions on diseases and other social aspects also under services characteristics.

How people perceive diseases in terms of how they can prevent them from their social roles; such perceptions are expected to make one react/ behave in a certain way. This is recognized to be an important aspect towards health care seeking. 'Sick Role' Theory claims that there is general recognition that being sick is an undesirable state; and to facilitate recovery, an individual is expected to seek medical assistance and to comply with medical treatment (Williams, 2005). This aspect is analysed under disorder characteristics in Fig. 1.

The importance of lay networks and cultural factors (beliefs about disease causation and the potential efficacy of different forms of care have been said to affect the toleration or not of different symptoms) for determining health seeking behaviour (see for example WHO, 1995; Amaro and Gornemann, 1991; McCormack, 2012). The conceptual framework also brings on board social networking to analyse the influence of lay networks and some other cultural factors on the choice of a healer and maintenance of some HL, HB and HCSB. Social Cognitive Theory (Social Learning Theory) emphasizes the influence of other people on individual's behaviours, observational learning and the role of self-efficacy (Nutbeam *et al.*, 2010). Behavioural economics and choice architecture approach recognizes that people do not always behave rationally, with behaviours often being governed by instinct, emotion, past events and the people around us (National Social Marketing Centre, 2011). The framework presented in Fig. 1 accommodated a set of independent variables that influence people's behaviour in choosing healthcare sources. The conceptual framework is useful in analysing how HL, HBs and HCSB connect under OHA.



Conclusion

The article provides detailed insights on a conceptual framework that has been used for measuring health literacy in the context of the interaction of humans, animals, and the environment. Other similar studies can adopt the conceptual framework to assess health literacy in other areas of Tanzania and beyond. The conceptual framework has taken into account the fact that health literacy is context-specific, i.e. its function, acquisition, and application should be studied and understood in the light of distinct contextual conditions.

The article adds value to the already existing debates among scholarly and policy literature on one health and population. The article is premised within the subject of the population in general and health in particular. It adds to the theoretical literature on the existing nexus among HL, HB, health and its influence on the quality of the population. The conceptual framework is vital at this particular moment when the need for educating people to become more health literate is pertinent.

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Policy Brief

Health Literacy, Health Behaviour and Healthcare Seeking Behaviour in Rural Settings in Tanzania: Towards a Conceptual Framework

Conceptual framework can serve very useful purposes when it comes to formulating research questions and developing hypotheses. The conceptual framework presented in this article emanate from a study conducted in rural settings in Mvomero district in Morogoro, Tanzania. The study assessed health literacy (HL) and its influence on health Behaviour (HB) and health care seeking behaviour (HCSB) as well as attitudes of people under One Health Approach (OHA). The conceptual framework is useful to those intending to conduct similar studies focusing on the connection between HL, HB and HCSB on the framework to be employed in studies of that nature. It informs on how health education and HL interventions can effectively lead to health behavioural change in the context of One Health Approach (OHA).

Other studies can be conducted to assess HL in other areas of Tanzania and beyond using this conceptual framework. The framework is vital at this particular moment when the need for educating people to become more health literate is pertinent. It is recommended that the conceptual framework should contextualize to attain additional context specific variables. The

conceptual framework has taken into account the fact that health literacy is context-specific, i.e. its function, acquisition, and application should be studied and understood in the light of distinct contextual conditions. The conceptual framework adds value to the already existing debates among scholarly and policy literature on one health and population. The conceptual framework is vital at this particular moment when the need for educating people to become more health literate is pertinent.