RESEARCH ARTICLE

DISSEMINATION OF HEALTH RESEARCH INFORMATION AT MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES LIBRARY: CHANNELS AND CHALLENGES

*CHRISTIAN MUBOFU

Assistant Librarian, Library and Publications Department, the Mwalimu Nyerere Memorial Academy, Dar es Salaam

ABSTRACT

This study examined the dissemination of health information to stakeholders in Tanzania. The study aimed at determining the channels used to disseminate health information and the challenges hindering the dissemination of health information in Tanzania with specific reference to Muhimbili University of Health and Allied Sciences (MUHAS) library. This study used the Mixed Approach. Convenience sampling was used to draw a sample of thirty one library professionals and teaching staff at MUHAS Library. Data were collected through questionnaires where by both open ended questions and closed questions were asked. Statistical Package for social sciences was used to analyse the descriptive statistics and the findings were presented in contingency tables and figures. The findings showed that the major channels for disseminating health information include: brochures, research reports, journals, news papers, exhibitions, press conferences, social media, radio, short messaging services, drama, seminars, and community based organizations. Other channels include: primary school pupils, religious leaders, website, health service providers, and flyers. Further it was revealed that challenges hindering dissemination of health information to stakeholders include: financial constraints, unreliable electricity in some rural areas, researchers' poor motivation and inadequate skills in repackaging information sources, poor reading culture, and language problem. The study concludes that the government through the ministry of health, community development, gender, elderly, and children (MoHCDGEC) should address all the identified challenges hindering the dissemination of health information to stakeholders at MUHAS, Tanzania. The study therefore, recommends that measures such as allocation of enough budget and provision of training in repackaging to researchers could enhance the dissemination of health information in the Country.

INTRODUCTION

The World Health Organization (WHO) recognizes that communication and utilization of health research information by the people is the main mechanism through which the burden of diseases could be reduced (WHO as cited in Mbondji *et al*. 2014). In view of this, various countries from developed and developing world established health research institutions and universities for conducting research related to health issues. The major role of health research institutions and universities is to stimulate government health research programs and support the generation, translation and sharing of health research information to various stakeholders. In Tanzania through the ministry of health, community development, gender, elderly, and children (MoHCDGEC) a substantial amount of budget is always set in order to facilitate various projects including facilitation of health research programs in various health research institutes and universities (URT, 2012). Furthermore, it is envisaged that, health research information from research institutions and health allied universities could be widely disseminated to various stakeholders and the public

Corresponding author: **Mubofu, C.,**
Mr. Mubofu Christian, is affiliated with The Mwalimu Nyerere Memorial Academy, in Dar es Salaam.

at large to create awareness and reduce the disease burden in the country. Although there is an increasing attention to know the status of dissemination of health research information, evidence on the ways in which health research information are disseminated in the country is insufficiently available. The report by WHO (2012) on research for health shows that one of its core activities is to support effective governance mechanisms for supporting the production, dissemination and use of research evidence by the stakeholders. AbouZahr and Boerma (2005) noted that reliable and accurate health information is crucial for monitoring health, assessing and improving the release of health care services and programs to various stakeholders. This could only be possible if health research institutes and universities had good channels of disseminating health research information to health care providers, researchers, government officials, policy makers, and other key stakeholders. Though there are efforts to disseminate health research information to health sector stakeholders and the general public at large, many people are still suffering due to failure of access to appropriate health information (WHO, 2012) and it is not apparently revealed on how health research institutions and universities disseminate its research information to the intended users. Therefore, this situation stimulates the need for this study, with the view to examine the channels employed and challenges faced in the

dissemination of health research information in Tanzania with specific reference to Muhimbili University of Health and Allied Sciences library in Dar es Salaam.

LITERATURE REVIEW

Channels for Disseminating Health Research Information: Searching for health information is one of the most common activities on the information sources like the internet, books, journals, and newspapers but success depends on the strategy the creator used to communicate it to the public (Susannah & Deborah, 2003). Successful health research information dissemination covers the use of appropriate channels that are friendly to people expected to receive the information. For instance, Wyatt *et al.* (2013) echoed that for effective dissemination of health research findings from researchers, research institutions should consider the use of multiple dissemination channels that could reach all intended beneficiaries. The channels for disseminating research information include: email, monthly teleconference, periodic face to face meeting, project's websites and for shared documents like reports, social media, articles in papers, and other publications are communicated in drop box giving partners access at all times. Furthermore, European Union (2005) noted that health research findings reach people through a wide range of channels and sources of information such as friends and family, professionals and interest groups, public bodies and authorities, general and specialist print media, television and radio as well as internet are heavily used. Furthermore, Bosompra (1987) noted that health stakeholders may get health research information through a variety of channels such as churches, schools, health officers, radio, television, and information van. Therefore, due to the existence of many channels, a good selection of dissemination channel to community members is very important. Proper channel is likely to influence people's behaviour to adopt or at least become aware of a new idea or services which is being disseminated.

Factors Hindering Dissemination of Health Research Information: All the factors that hinder the intended message from either being received or from being correctly interpreted by users can be regarded as a challenge to effective dissemination of health research findings. According to Lucky and Achebe, (2013) one of the critical challenge in the dissemination of research findings to stakeholders is the low level of deployment of Information and Communication Technologies (ICT's) in less developed countries. Khan *et al.* (2013) stated that the most obvious challenges affecting dissemination of research findings to stakeholders is man's ability to think and draw logical inferences. The ability one can have in coding and decoding messages; for example the ability to read and write, the ability to speak certain language and the ability to understand not only the languages but all symbols of information communication in a particular area. Other challenge affecting the dissemination of health research information is researchers' lack of dissemination plan (Brown et al., 2008). It is a common practice for abstracts of research findings to be circulated to health research stakeholder but there is not always the chance for researchers to re-enter the organization to support the interpretation of research findings and implementation where appropriate.

A Conceptual Model Underpinning this Study: The process of disseminating health research information begins from the researchers who discover various facts through research (Lomas, 1993). The sender of a message/Information can be an individual researcher, academic and research institution. The process starts when the sender is struck by an idea which is the stimulus that sets the sender thinking about it. The sender may then wish to share with others. This information are envisaged to be disseminated to the health stakeholders such as patients, medical doctors, CBO's, NGO's and general public. The massage/information travels through the channels which act as a vehicle that carries information to the receiver. Health research information are disseminated through various channels such as friends, social media, libraries, websites, news papers, letter, telephone, memorandum, radio, film, television, picture, postman and books that can be used to disseminate/deliver the message. Effective dissemination of this information may only be possible if the challenges such as language, inappropriate channel, thinking ability, poor repackaging, and inability to code and decode message are addressed. It is important for the sender to know the appropriate channel for the kind of message that has to be disseminated. Sen (2005) recommends that the choice of channel depends on the purpose of communication, the sender's needs, and the profile of the receiver. Anything that interferes with the transmission process is called a noise/barrier or challenge in the communication process. Channel barriers/challenges can cause disturbances in the radio, television, and telephone or typographical error in e-mail message or unclear pronunciation in oral communication (voice as a channel of communication). Poor selection on the channel for transmission of the information/message can also be a challenge to the receiver. The receiver of the information is any stakeholder to whom the information has been transmitted. Such stakeholder can be patients, medical doctors, community based organizations (CBO's), non-governmental organizations (NGO's) and the general public.

METHODOLOGY

This study was conducted at Muhimbili University of Health and Allied Science (MUHAS) due to the fact that MUHAS acquires, processes, stores, organizes and disseminates health research information to stakeholders through various means such as publishing the research results on journals, local news papers, seminars and conferences aiming at fulfilling its responsibility of keeping the public conscious of current health related information emanating from research works. The study involved 31 library professionals and teaching staff. In the course of ensuring that the sample size entails the reasonable proportion of the units from the sampling frame, Boyed *et al.* (1981) cited in Njana (2008) posited that the sampling intensity of 5% should be considered, such that the units representing the population under study should not be less than 30 units. Following Boyed *et al.* (1981) assumptions, a total of 31 respondents were envisaged to be a standard sample size which could reasonably represent the population in question (Bailey, 2004; Kothari, 2004; Babbie, 2007). Additionally, Saunders *et al.* (2007) emphasised that a sampling intensity of 30 respondents was regarded as reasonable in social science studies and a statistical analysis using this population size are sufficiently large enough to draw scientific conclusions. For these reasons, the group was considered representative of the population of MUHAS. The study employed convenience non-probability sampling whereby data were collected from respondents who were conveniently available to participate in this study.

The study used both primary and secondary data in which primary data were collected through questionnaire while secondary data were collected through online subjected based information gateways and library information resources. Finally, collected data were organized, described, coded and analyzed using Statistical Product and Service Solutions (SPSS) programme 18.0 versions to derive simple descriptive statistics such as frequencies, percentages and to draw tables and charts.

RESULTS AND DISCUSSION

Socio-Economic Characteristics of Respondents: Relevant socio-economic characteristics of the 31 respondents who took part in this study include sex, age and education level are summarized in Table 1. The respondents' characteristics were important in order to provide a picture on the background of the respondents and their suitability for this inquiry. It is clear that out of the total respondents involved in this study, majority (71%) of them were males whereas about (29%) were females. The researcher tried to be gender sensitive but only a small number of women were found to be engaged in research activities at MUHAS. This arise from the trend that there is large number of educated male in the country who can engage in professional activities like research. This is due to more enrolment of males than female students in many health science universities in the country.

Age of the respondents is one of the most important characteristics in understanding their views about the particular problem under investigation since large age indicates the maturity level of the respondent and thus, age becomes more important in examining the response of the respondent. Findings from this study revealed that most (48.4%) of the respondents fell within 30 to 40 years. This implies that respondents are within energetic and inventive category. Aderinto *et al.* (2007) echoed that this quality is expected to influence their quest for innovative sources of information dissemination. Thus, it was important to know the age of respondents because people in different ages act and react differently when it comes to the issue of disseminating and receiving health information. Education level of respondents is one of the most important characteristics that affect the person's attitudes and the way of looking and understanding any particular phenomena under study. In a way the response of an individual is likely to be determined by his/her education status and therefore, it becomes imperative to know the education background of the respondents. The study revealed that all (100%) of the respondents had one level of education or another. The level of education attained by most (38.7%) of the respondents is bachelor degree followed by respondents with master's degree (35.5%). Normally, the more educated an individual is the better he/she is placed to appreciate the potentials of information and communication technologies in the access, use and dissemination of information.

Channels for Disseminating Health Research Information (HRI): The channels for disseminating health research information to stakeholders are analyzed and their frequencies and percentages presented in Table 2. The response show that the majority of the respondents (67.7%) used social media, brochures and research report as the main health information dissemination channels, whereas others used radio and journals (61.3%); seminars, news papers and exhibitions were used by 58.1% of the respondents.

Other respondents (54.8%) mentioned community based organizations, drama, short messaging services, flayers and press conference as information dissemination channels. The least mentioned channels include primary school pupils, health service providers, religious leaders, and website. Social media is common in daily life. Using it fully helps researchers to create a better communication and partnership with other professionals in their field on global scale. Through social media researchers are no longer dependent on prescribed media channels; the power to disseminate information is in their finger tips. Contemporarily, health stakeholders such as patients, researchers and policy makers have access to information in real time. Social media can be used as a means of meeting and sharing information with other researchers in their respective field, thereby expanding their scholarly network.

Research reports as a means of information dissemination may be circulated to other investigators, health professionals and other key stakeholders. Also a brief research report may be submitted to the professional organizations aiming at sharing the new research findings. In universities and other higher learning institutions the requirement of sending a research report is normally included in the consent form that participants sign upon entry to a study. Brochures are the key information dissemination channels for circulating health research information where researchers can provide brief but complete information on specific topic and be handed out during events such as workshops, seminars, and conferences. Additionally, an attractive look of a brochure as well as its legibility encourages reading and contributes to making the text more meaningful for the reader. Publication in academic journals is a key action for academic researchers and the most important way by which research findings are disseminated. Journals have a responsibility to refine and define information and act as a scientific filter (Ware & Mabe, 2012). Findings in this study show 19 (61.3%) of the respondents used published articles in journals as the main channel in the dissemination of health research findings. Radio is widely used as a means of communication by sending and receiving information by people. Most of the respondents (61.3%) reported radio as a channel used by MUHAS in the dissemination of health information. This implies that a considerable number of the respondents most likely received health information on radio. Similarly radio has been found to be an effective means of disseminating various types of information like health information and agricultural information to various groups of people (Mubofu & Emanuel, 2017).

Challenges in Disseminating Health Research Information: Respondents were asked about the existence of challenges in the dissemination of health research information (HRI) at MUHAS. Twenty three (74.2%) respondents indicated the existence of challenges in disseminating HRI while 8 (25.8%) respondents said no challenges in disseminating health research information. Their results are summarized in Figure 2. From the results presented in Figure 2 it is clear that there are challenges in disseminating health research information to stakeholders that researchers from Muhimbili University of Health and Allied Sciences come across. The present findings confirm that the majority (74.2%) of the respondents agreed that in disseminating health research information to stakeholders at MUHAS library there are challenges that exist and they should be addressed for proper health information dissemination.

Figure 1 presents a model for disseminating health research information.
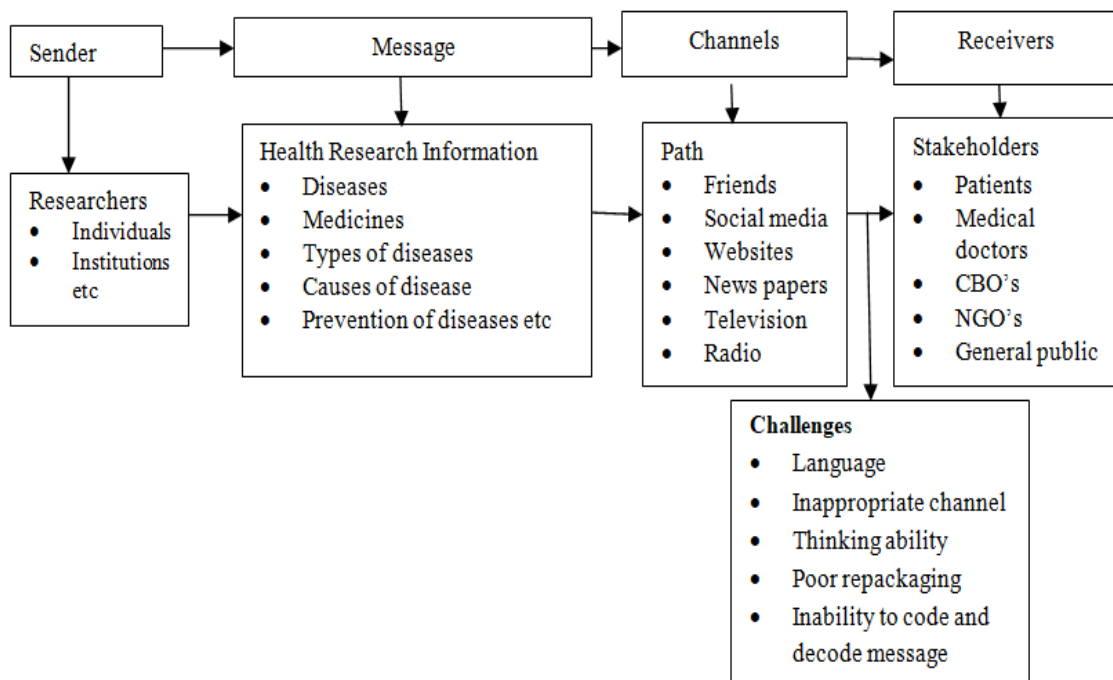
Source: Adopted and Slightly Modified from Sen (2005).

Figure 1. A Conceptual Model Underpinning this Study

Table 1. Socio-Economic Characteristics of Respondents (n=31)

Variables		Frequency	Percent
Sex	Male	22	71
	Female	9	29
	Total	31	100
Age	Below 30	5	16.1
	30 to 40	15	48.4
	40+	11	35.5
	Total	31	100
Education	PhD level	2	6.5
Level	Masters level	11	35.5
	Bachelor degree	12	38.7
	Advanced diploma	6	19.3
	Total	31	100

Table 2. Channels for Disseminating HRI (n=31)

Dissemination Channels	Response			
	Yes		No	
	F	%	F	%
Religious leaders	14	45.2	17	54.8
Website	15	48.4	16	51.6
Health service providers	15	48.4	16	51.7
Primary school pupils	16	51.6	15	48.4
Flayers	17	54.8	14	45.2
Press conference	17	54.8	14	45.2
Short messaging services	17	54.8	14	45.2
Drama	17	54.8	14	45.2
Community based organizations	17	54.8	14	45.2
News papers	18	58.1	13	41.9
Exhibitions	18	58.1	13	41.9
Seminars	18	58.1	13	41.9
Journals	19	61.3	12	38.7
Radio	19	61.3	12	38.8
Research report	21	67.7	10	32.3
Brochures	21	67.7	10	32.3
Social media	21	67.7	10	32.2

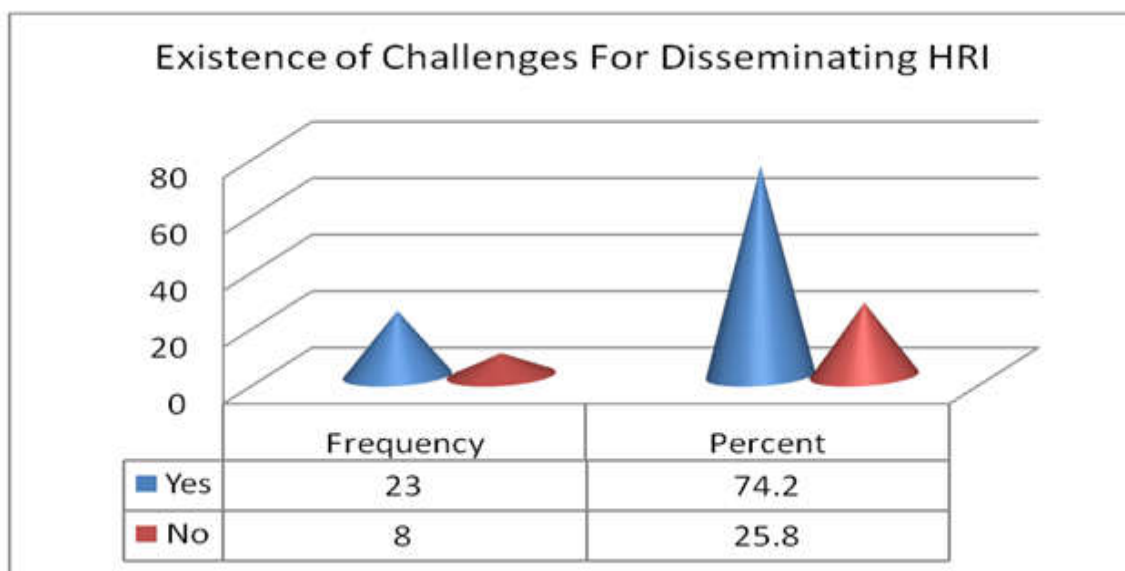**NB**: Frequency total= 31 and Percent total=100 **F**=Frequency **%** =Percent

Figure 2. Existence of Challenges for Disseminating Health Research Information

Table 3. Challenges Hindering the Dissemination of HRI (n=31)

Challenges	Responses			
	Yes		No	
	F	%	F	%
Language problem	13	41.9	18	58.1
Researcher's little motivation	18	58.1	13	41.9
Inadequate skills in repackaging Information sources	18	58.1	13	41.9
Poor reading culture	18	58.1	13	41.9
Unreliable electricity in some rural area	19	61.3	12	38.7
Financial constraints	29	93	2	6.5

NB: Frequency total= 31 and Percent total=100; F=Frequency %=Percent

The findings are in line with Grunig and Hunt (1984) who declared that health stakeholders like nurses and health attendants are likely to face specific difficulties when attempting to make use of research information disseminated or received from the disseminators. Furthermore, Tan *et al.* (2018) noted that discovery of new and improved interventions is important to fully utilize public health benefits, however, greater efforts needs to be devoted in dissemination and implementation sciences to enhance the reach, use and implementation.

Challenges Hindering Dissemination of Heath Research Findings: Library and teaching staff were asked to state challenges hindering the dissemination of health research information. Findings indicate that 29 (93%) mentioned financial constraints, 19 (61.3%) mentioned unreliable electricity in some rural area; others 18 (58.1%) mentioned poor reading culture, inadequate skills in repackaging information sources and researcher's little motivation. The results also showed that only 13 (41.9%) mentioned language as the challenge hindering the dissemination of health information as Table 3 illustrates. In general, the result in Table 3 indicates clear that financial constraint is the major challenge in the dissemination of health research information. The majority (93%) of the interviewed library and teaching staff agreed that MUHAS faces financial constraints that hinder the dissemination of health research information. Funds are usually required to be paid for the television programs, preparation of brochures, flayers, radio programs, and other media for dissemination of health research findings. The study findings imply that dissemination needs to be considered at the

initial stage of research planning, with proposal for funding including a period of time purposely for dissemination at the end of research work. Study findings further, revealed that unreliable electricity in some rural areas is the challenge which affects the dissemination of health research findings especially where electronic devices are the only means of information dissemination. Electronic devices such as laptops, computers and smart phones cannot operate if at all electricity are not reliable. Uzezi (2015) noted that rural communities are unlike the urban counter parts. They are associated with poor health care facilities, inaccessible roads, pipe born water, and lack of electricity. Additionally, researcher's poor motivation was revealed to be the challenge in disseminating health research information. Fifty eight percent of the respondents indicated that researcher's motivation is the challenge in the dissemination of health research information in the study area. Vansteenkiste *et al.* (2005) noted that motivation has been reported in primary, secondary and college education to influence research, academic performance, and consultancy through learning attempt as an intermediary. The present study findings imply that the universities and other research institutions should motivate the researchers so that they can be able to conduct various health related researches and disseminate their findings to the stakeholders in the country. Moreover, the study shows that an inadequate skill in repackaging information sources is the problem in the dissemination of health research information to the health stakeholders. Health research findings normally come in a technical format and in a language that an ordinary person cannot understand. Findings show that 58.1% of the respondents indicated that an inadequate skill in repackaging

information dissemination sources by the researchers hinders effective dissemination of health research information. The repackaged health research information would be in a format which is accessible and in local language that is understood by residents. Thus, researchers should learn how to repackage information sources so that users can understand the message disseminated to them. In addition, poor reading culture was mentioned by 58.1% of the respondents indicating that it was among the big challenges affecting the dissemination of health research information in the study area. This forces the researchers to use television and radio programs in disseminating information where people can see and hear the message. Uzezi (2015) noted that most of the people especially in rural areas are illiterate and that they do not have reading culture. Although researchers decide to use television and radio in the dissemination of health information such channels are very expensive as compared to print resources like brochures and news papers.

The common language used in Tanzania is Swahili but most of the research reports are written in foreign language which is not easily understood by the local people. Research information from research institutions and universities are normally written by scholars who are knowledgeable in a certain field and use certain terminologies in writing their report, these terminologies are not familiar to the general public, so it causes problems in getting the message from the report. For instance, research outputs that are written in English language and disseminated in English language and distributed via English news papers are not suitable to people whose native language is not English. Findings from this study indicate that 41.9% of the respondents revealed that language is the problem to most of the information users. This implies that the research information cannot reach the intended users unless the language used is boiled enough to be understood by all groups of people and they should avoid the use of technical terms that are likely to mislead the intended audience.

Conclusions and Recommendation

Conclusion

From the findings, it can be concluded that the most effective channels in dissemination of health research information are social media, radio, group trainings and seminars, short messaging services, use of drama, and use of community based organization. The study also concludes that the least channels used include: primary school pupils, health services providers, and religious leaders. Also the study concludes that the channels used to disseminate health research findings at MUHAS include: research reports, journals, libraries, brochures, news papers, exhibitions, social media, flayers, and websites. Moreover, the study concludes that the major challenges hindering the dissemination of health research findings include: financial constrains, lack of electricity in rural areas, researcher's poor motivation, inadequate skills in repackaging information sources and poor reading culture among people.

Recommendations

Most people in Tanzania and Africa at large live in rural areas where important health research findings for their health stability is invaluable. Researchers in the health sector should disseminate health information to rural dwellers by using acceptable channels such as social media, radio, group training and seminars, short messaging services, drama and community based organizations that could enable the message to be received by all intended users. The study recommends that the Government through the Ministry of Health, Community development, Gender, Elderly, and Children (MoHCDGEC) should seek appropriate ways that can enhance the dissemination of health information to the general public and other key stakeholders. Finally, this study recommends that in order to have effective dissemination of health research information to stakeholders in Tanzania measures should be taken to address all the challenges identified in this study.

REFERENCES

AbouZahr, C. &, Boerma, T. 2005. *Health Information Systems: The Foundations of Public Health.* Bull World Health Organ; 83:578–83. PMID: 16184276

Aderinto, A., Dada, O M. &, Fapojuwo, O. E. 2007. Perceived Influence of Rural Infrastructure on Livelihood of Rural Dwellers: *Powering the Agricultural and Rural Transformation Process in Nigeria.* Proceeding of the 16th Annual Congress of the Nigerian Rural Sociological Association held at Bowen University, Osun State, Nigeria

Babbie, E.R. 2007. *The Basics of Social Science Research.* 4th ed., South Melbourne: Thomson Wadsworth

Black, K. 2010. *Business Statistics: For Contemporary Decision Making,* 6th ed. Hoboken: John Wiley and Sons

Bosompra, K. 1987. Sources of Health Information among Rural Dwellers in Africa: A Case Study of two Ghanaian Villages. *African Media Review*, Vol. *1*(2)

Brown, C, E, Wickline, M .A. Ecoff, L. &, Glaser, D. 2008. Nursing practice, knowledge, attitudes and perceived barriers to evidence-based prctice at an academic medical centre *Journal of Advanced Nursing, 65* (2)

Control among Chinese learners: Vitalizing or immobilizing? *Journal of Educational Psychology; 97(3):468–483.* doi: 10.1037/0022-0663.97.3.468

Egbule, C. Agwu, A., & Uzokwe, U. 2013. *Availability and Use of Mobile Phones for Research Dissemination by Public Extension Agents in Delta State, Nigeria.* Retrieved from http://dx.doi.org/10.4314/jae.v17i2.4 on 21/07/2015

European Union 2005. *Health Policy Forum: Recommendations on Health Information.* From:https://ec.europa.eu/health/archive/ph_overview/health_forum/docs/recom_health_information.pdf

Grunig, J. E. &. Hunt, T. 1984. *Managing Public Relations.* New York: Rinehart and Winston

Khan, G. A., Muhammad, S., Mahamood, K. & Khan, M.A. 2013. Information regarding Practices and plant protection measures obtained by the farmers through electronic media: *The journal of plant and animal sciences,* 23 (2): 647-650

Kitchin, R. &., Tate, N. 2000. *Conducting Research in Human Geography: Theory, Methodology and Practice.* London: Pearson-Prentice Hall

Kombo, D. K., & Tromp, D. L. A. 2006. *Proposal and Theses Writing: An Introduction. Nairobi.* Pauline's Publications Africa

Kothari, C. R. 2004. *Research Methodology: Methods and Techniques.* New Delhi: New Age International

Lomas, J. 1993. *Diffusion, dissemination and implementation.* Annals of the New York Academy of Sciences

Lucky A.T. & Achebe N. E. E. 2013. *Information Communication Technology and Agricultural Information Dissemination: A Case Study of Institute of Agricultural Research.* Ahmadu Bello University, Zaria, Kaduna State. http://maxwellsci.com/print/rjit/v5-11-17.pdf retrieved on 28th/09/2014

Mbondji, P. E., Kebede, D., Zielinski, C., Kouvividila, W., Sanou, I., & Lusamba-Dikassa, P.-S. 2014. Overview of national health research systems in sub-Saharan Africa: results of a questionnaire-based survey. *Journal of the Royal Society of Medicine, 107*(1_suppl), 46–54. http://doi.org/10.1177/0141076814530600

Mubofu, C. & Emanuel, E. 2017. Dissemination of agricultural research information: a case study of farmers in Mlolo, Lupalama and Wenda Villages in Iringa district, Tanzania. *University of Dar es Salaam library journal, Vol.12*

Neuman, W. L. 2007. *Basics of Social Research: Qualitative and Quantitative Approach.* 2nd ed. Boston: Pearson and AB

Niger - Delta Communities, Nigeria. *Journal of Emerging Trends in Computing and Information Sciences;* Vol. 6, No. 7

Njana, M. A. 1981. *Arborescent Species diversity and stocking in Miombo woodland of Urumwa Forest Reserve and their Contribution to livelihoods, Tabora,* Tanzania. Dissertation for Award of MSc Sokoine University of Agriculture, Morogoro, Tanzania

of Scientific, Technical and Medical Publishers. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4473415/

Orodho, A.J., & Kombo, D. K. 2002. *Research Methods: Nairobi.* Kenyatta University, Institute of Open Learning

Policy Recommendations for Open Access to Research Data in Europe, (April). Retrieved from http://recodeproject.eu/wp-content/uploads/2013/05/RECODE-D7.1_FINAL-Diss-Strategy.pdf

Ridenour, C., & Newman, I. 2008. *Mixed Method Research: Exploring the Interactive Continuum.* Illinois: Southern Illinois University

Rwihura, O.C. 2011. *The role of information dissemination in addressing Obstetric fistula in rural areas in Tanzania: Mpwapwa district case study.* University of Dar es Salaam, M.A. Thesis

Saunders, M., Lewis, P., & Thornhill, A. 2009. *Research methods for business students.* 5th ed., Harlow: Pearson Education

Schement, J. R. 2002. *Encyclopaedia of Communication and Information.* Macmillan, New York

Sen, L. (2005). *Communication Skills.* Prentice – Hall of India: New Delhi

Siyao, P. O. 2012. Barriers in accessing Agricultural Information in Tanzania with a Gender Perspective: The Case Study of Small-Scale Sugar Growers in Kilombero District. *The Electronic Journal on Information Systems in Developing Countries*

Susannah F. & Deborah F. 2003. *Internet Health Resources.* Retrieved from: http://www.pewinternet.org /pdf / PIP, Health Report July 2003.pdf

Tan, A., Mazor, K. M., McDonald, D., Lee, S. J., McNeal, D., Matlock, D. D., & Glasgow, R. E. 2018. Designing Shared Decision-Making Interventions for Dissemination and Sustainment: Can Implementation Science Help Translate Shared Decision Making Into Routine Practice? *MDM policy & practice, 3*(2), 2381468318808503. doi:10.1177/2381468318808503

Tara, H. 2007. *Molecular Characterization of Cassava Brown Streak virus Coat Protein Pathology*

URT. 2012. *Makadirio na Matumizi ya Fedha kwa Mwaka 2012 / 13. Wizara ya Jinsia na watoto.* Bungeni – Dodoma : Tanzania

Uzezi, O. P. 2015. Challenges of Information Dissemination to Rural Communities: A Case of

Vansteenkiste, M., Zhou, M., Lens, W., & Soenens, B. (2005). Experiences of autonomy and

Ware M. & Mabe M. 2012. The STM Report. 3rd Ed. The Hague: International Association

World Health Organization (2012). The WHO strategy on research for health. WHO press: Geneva. 27, Switzerland

Wyatt, S., Finn, R., Wadhwa, K., & Linde, P. 2013. Deliverable D7.1: Dissemination Strategy.

****