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Government information seeking behaviour of citizens in selected districts of Tanzania

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Abstract

The study assessed the information needs and information seeking patterns of citizens in Tanzania with a particular focus to three districts: Morogoro town, Njombe and Kinondoni districts. Questionnaire survey was self-administered to 450 citizens in selected districts, with a rate of return of 99.6 per cent. Findings revealed that citizens mainly required information on national examination results, which was followed by information on birth, death and marriage certificates, land, and health. Citizens relied on electronic sources and interpersonal communication with neighbours and friends more than explicit sources of information. Certain demographic factors related to education level and respondent's age determined use of various types information sources. Common barriers of citizens' information seeking behaviour were related to poor ICT infrastructure, difficulty in retrieving information, distant location and high costs of information sources. This is a comprehensive study that provides findings which might help the government in Tanzania and other countries with similar conditions to provide effective government information and services to their citizens.

Keywords: information needs, information seeking behaviour, government, citizen, e-government, Tanzania

Introduction

People require accurate, reliable and timely information about their government to make informed decisions for the good of the country. Access to government information is essential in a democratic society because it fosters citizen trust, the fight against corruption, and provides basic information for the public, companies, and journalists (Florini 2007). Citizens have a variety of avenues for accessing government information as part of a search to satisfy their needs and these include press release, requester release, leaks from whistleblowers, and open public meetings (Cuillier & Piotrowski 2009). Of recent, the advancements of information and communication technologies (ICTs) especially internet has changed the information behaviour of people and reshaped virtually every channel of access to government information, for example;

newspapers, television, movies, magazines, books, music, and all forms of telecommunications in the past decade (Lyons 2009). All these types of information sources are now accessible online, making it easy for public to access government information which they need.

Electronic government (e-government) provides access to information and enables citizens to contact government agencies through national, state and local website (Means & Schneider 2000). Services offered on national, state, and local web sites include: ordering publications; downloading publications or forms; filing complaints; on-line databases (for example, access to voting records of elected officials); user payments (for example, pay parking tickets); filing and paying state taxes; fully-executable services (for example, driver's license renewals and voter registration); voting on-line; and state park information (Goings et al. 2003). Effective and timely user access to public information is one of the most fundamental requirements for the success of government information system (Alghamdi, Goodwin, & Rampersad, 2011).

The challenge however remains that most government organizations at municipal, provincial or state, and federal levels provide all kinds of information both online and print media, which make it difficult for general public to find what is relevant to them (Pang et al. 2015; Buie & Murray 2012). Studies on information seeking behaviour focuses on people's information needs; on how they seek, manage, give, and use information, both purposefully and passively, in the varied roles that comprise their everyday lives (Julien et al. 2011). It is therefore important to understand the government information needs and information seeking patterns of the general public in order to provide information and services relevant to public.

Different e-government plans which focus in citizens are being implemented in Tanzania. According to Yonazi (2010), these e-government plans make the government more reachable, transparent, efficient and effective in providing information and services to its citizens. The cross-cutting public services reforms which laid a foundation for e-government started in the mid 1990's (Mutahagayhwa, Kinyeki, & Ulanga, 2007). Therefore, e-government has become one of the ten priority areas of the National ICT policy of 2003 (United Republic of Tanzania, 2003). Regardless of the fact that Tanzania has put huge efforts on the adoption of e-government, there

are many challenges which need to be overcome, so that people are able to access relevant information in the country. Tanzania lags behind in e-government adoption. According to UN (2008) Tanzania was ranked number 143 out of the 182 countries. Similarly, Ngulube (2007) and Yonazi (2010) found out that Tanzania was still on the initial stages of e-government development, whereby most of the procedures and activities of the Tanzanian government are integrated through internet portals and websites. Services which are provided by the websites at the initial stage are; downloadable forms, policies, speeches, laws, and few searchable databases (Yonazi, 2010). Given the current existing differences on e-government adoption status in Tanzania, it is imperative to conduct a study to examine what type of government information citizens require, and how they seek this information either online or offline to fulfil their needs?

This study therefore sought to assess the information needs and information seeking patterns of citizens in Tanzania with a particular focus to three districts: Morogoro town, Njombe and Kinondoni districts. In particular, the study assessed the information needs and information seeking patterns of citizens in the selected districts of Tanzania. Further, the study determined factors that may prevent citizens from seeking government information in the country.

Theoretical framework

This study used Wilson and Walsh (1996) information behaviour model to understand the information needs and seeking behaviour of citizens in the selected districts of Tanzania. The Wilson and Walsh model was used because it was relevant to the study objectives, and it has been used in many other information behavior studies in the Tanzanian context including: information needs and information seeking behaviour of parents and caregivers of children with mental illness at the Kilimanjaro Christian Medical Centre (KCMC) in Tanzania (Lwoga & Mosha 2013), physicians' information seeking behaviour (Norbert & Lwoga 2013), and the information seeking behaviour of South African parliamentarians and Ugandan informal entrepreneurs (Ikoja-Odongo & Mostert 2006). Wilson and Walsh's (1996) model suggests a high-level information seeking search processes: passive attention, passive search, active search, and ongoing search. Passive attention occurs when information is obtained without being actively sought such as while listening to the radio or television. Passive search is the

serendipitous acquisition of information through search. Active search occurs when information is actively being sought through explicit searches. Ongoing search occurs when occasional searching is carried out to expand or update previously found information.

The Wilson and Walsh's (1996) model was originally developed in 1981, and later on improved in 1996 and focuses on the context that an individual searches information to satisfy a perceived need. In the context of the present study, people require information for various purposes from the government. Governments have been and still remain the single largest collectors, users, holders and producers of information (Isaac-Henry 1997). Information remains the basic ingredient in developing countries in pursuing the political, economic, social and managerial activities. The model provides three theoretical aspects to explain why people search information: (i) stress/coping theory, focus on the possibilities that some needs may not activate information-seeking behavior; (ii) risk/reward theory, assist to understand why citizens may use some information sources more than others (iii) and social learning theory, which help to understand why an individual can successfully execute the behaviour needed to yield the desired outcomes, which is related to self-efficacy. In order to fulfill their needs, the Wilson and Walsh's (1996) model illustrates that individuals seek information from formal or informal information sources or services. Information users may either be successful or not in acquiring the required information. If successful, the user may make use of the information. Otherwise, the user may partly or fail to fulfill the needs and repeat the information seeking process.

During the process of information seeking, the individuals may come across intervening variables, which may support or inhibit the use of information. These variables may include: psychological, demographic, social/interpersonal, environmental, economic and source characteristic variables (Wilson & Walsh 1996). Psychological factors may include the characteristics and perceptions of the citizen, and characteristics of the organisation and situation. Demographic variables include age, sex, education level and other factors which can also determine information seeking behaviour of citizen. The economic issues that may inhibit information-seeking behaviour include direct economic costs, and the value of time. Social/interpersonal barriers arise whenever the information source is a person, or where

interpersonal communication is needed to gain access to other kinds of information sources. The environment factors may include geographical location, national culture, and lack of time available for citizens. Information source characteristics can also include accessibility and credibility of information sources (Wilson & Walsh 1996). This study used the Wilson and Walsh's (1996) model to guide the study, where three aspects were used: information needs, information seeking process and intervening variables, which included demographic, social/interpersonal and economic factors.

Government information needs and information seeking behaviour of citizens

A citizen centred government implies that governments know what citizens want from government, and want to meet citizen expectations and needs. As a result, governments focusing on citizen centered government actively need to discover what citizens want from the government (Komba & Ngulube 2012). There is thus a need to take note of the specific needs of the specific target groups of citizens, such as unemployed persons, families, pensioners, architects, lawyers and students, who would be using a particular government information service for government information system to succeed (Jansen 2005). Information needs of the general public are very specific according to the location and other socio-demographic characteristics of the citizens (Lwoga, Ngulube, & Stilwell, 2010). Earlier studies in UK report that the public mainly needed to access government information on single European currency and local council cutbacks (Marcella & Baxter 2000). Small proportions of the sample had encountered problems in relation to employment, education, housing or welfare benefit (Marcella & Baxter 2000). Another study of citizenship information needs in USA found that the major information needs of citizen was related to renewing a driver's license, which was followed by voter registration, obtaining state park information, making park reservations, one-stop shopping for government services, and the ability to access specific government information, such as medical or health care data (Cook 2000). Another study in UK revealed that information needs differ considerably between different levels of government (Lambert 2013). A recent study in USA found that major government related information needs of the community were related to location-based information—knowledge tied to specific places—and time-based information—knowledge of upcoming events and happenings (Pang et al. 2015). It is therefore important to

determine information needs of the general public to assist the government in provision of effective information and services to its citizens.

Knowledge about the information seeking behaviour of citizens is crucial for “program planning, collection development, and information policy creation” of governments (Burroughs 2009). A review of information behaviour studies indicated that local people in the rural areas of developing countries mainly search information from informal rather than formal sources (Dutta 2009). For instance, interpersonal communication with friends, relatives, and neighbours were found to be primary sources of information in other information behaviour studies in different contexts in Tanzania (Lwoga et al. 2012; Chilimo et al. 2011), and Nigeria (Njoku 2004). Mass media such as radio, television and newspapers were a major source of information for most rural poor in Manipur, India (Meitei & Devi 2009).

A review of information behaviour studies showed that information-seeking behaviour of educated urbanites in developing countries is quite similar to the information-seeking behaviour of educated citizens in developed countries, where by internet was referred as a primary information source (Dutta 2009). Consistently, various government information behaviour studies in developed countries show that citizens use a variety of information sources to fulfil their government information needs, but they mainly prefer internet as their main source of information. For instance, a study in USA that examined the impact of transition to a mix of print and electronic material found that the web has changed the way of accessing government information. People use the web (e-government) instead of physically going to the documents area or to the library at all to access a growing volume of government information (Aldrich et al. 2000). Another study in USA also showed that citizens generally used internet, and Sixty percent of users turned to a search engine whereas forty percent tried a specific URL (Uniform Resource Locator or Web address) to access government information (Hargittai 2003). Consistently, another study of researchers in USA showed that researchers generally accessed government information online, although some respondents prefer printed materials for specific types of information (Burroughs 2009). A recent study in USA found that people commonly accessed government information from both tangible and digital sources (Pang et al. 2015). Similarly,

internet was found to be primary sources of information in other information behaviour studies in developing countries, including Tanzania (Lwoga & Mosha 2013), and Saudi Arabia (Alghamdi & Moussa, 2012). A combination of print and digital media can enable governments to effectively provide information and services in the same way as the commercial sector (Weerakkody et al. 2011). According to Dutta (2009), information seeking behaviour “is not defined as much by the economic status of a geographic location as it is by an individual user’s educational background”. Therefore as much as there could be differences of information seeking patterns according to the location, it is also important to assess the effects of demographic factors on information seeking behaviour of citizens.

While some information can be obtained easily, other information may require extensive searching and access to multiple sources especially information on online environment (Lwoga et al. 2012). Therefore, general public need to have the skills on how to search and access this government information. Majority of the public however do not only lack information searching skills, but they also lack access to computers, internet, or even basic electrical and telecommunications infrastructure which hinder them to effectively access e-government information (Singh & Sahu 2008; Oladokun & Aina 2009). Mossenburg and Stansbury (2008) identify ethnicity, income, age and education as significant predictors of access to technology. Other barriers include culture, social, psychological and behavioural needs (Meyers, Fisher & Marcoux, 2009). The constraints identified from various information seeking behaviour studies are similar to barriers identified in Wilson and Walsh's model. Wilson (1999) also categorized these factors that may interfere positively or negatively the process of information seeking, which include the following: personal, emotional, educational, demographic, social/interpersonal, environmental, economic, and source characteristics. It is thus essential to investigate citizen information needs and factors, which influence citizen attitudes and behaviour towards information seeking in developing countries.

Methodology

The study conducted self-administered questionnaire survey to assess the information needs of Tanzania citizens, their preferences regarding information sources, and intervening variables that

inhibit them from seeking government information. The study was conducted in three districts which represented urban, peri-urban and remote location, namely: Kinondoni, Morogoro town, and Njombe districts. These districts were selected purposively based on accessibility by roads; a diverse combination of urban area, peri-urban area and rural areas, geographical location and economic activities taking place in these regions. Quota sampling was used to select study location and participants because it was not possible to get a list of households and participants in advance, limited budget, and financial constraints. It was also difficult to use probability sampling methods due to the fact that Tanzania does not have a systematic arrangement of habitation (Nchimbi 2002). Therefore, it was not possible to sample households and participants using simple random approach. Participants were drawn in each of the three wards in each district. Based on the criteria of high, medium and low concentration of households, the selection of households was done as follows: In Kinondoni district, participants were obtained at a sampling interval of one in every ten households. In Morogoro town district, participants were obtained at a sampling interval of one in every five households and in Njombe district; participants were obtained at a sampling frame of one in every three households. In the households, participants were purposively selected based on their position in the house, age and gender. The study strived to have an equal representation of men, women, young and the elderly.

The ethical clearance was obtained from Mzumbe University in Tanzania, and informed consent was used to ensure voluntary participant of study participants. The questionnaire was pre-tested using convenience sample of 10 respondents at Morogoro rural and town districts. The questionnaire was pre-tested to increase the reliability and validity of the findings. A total of 450 questionnaires were collected from the three districts in Tanzania. After eliminating incomplete responses, 99.6% (n=448) usable responses were retained. Data were analysed with the Statistical Package for the Social Sciences, version 16. A descriptive analysis of the sample was performed. Pearson Chi-square test was used to assess the relationship of demographic factors (i.e. age, gender, education) and the use of various health information sources among surveyed respondents.

Results and discussion

More than half of the respondents were males (54.7 per cent, n=246) compared to females. Most respondents were young and middle aged, between 31 and 40 years (36.9 per cent, n = 166) and between 20 and 30 years (33.8 per cent, n=152). One third of the study participants (33.3 per cent, n=150) had a primary education, while about 27.8 per cent (n=125) had advanced diploma (see Table 1).

Table 1: Table 1 Demographic details of study respondents

		Freque ncies	Percentag es
<i>Gender</i>	Female	202	44.9
	Male	246	54.7
<i>Age</i>	Over 60	8	34.8
	51 – 60	40	36.9
	41 – 50	82	18.2
	31 – 40	166	8.9
	20 – 30	152	1.6
<i>Education</i>	Never attended school	12	2.7
	Primary school	150	33.3
	O-level secondary school	77	17.1
	A-level secondary school	13	2.9
	Advanced diploma or university degree	125	27.8
	Post-graduate or masters degree	66	14.7
	Other	5	1.1

Government information needs of citizens

The study findings revealed that more than half of the respondents required information on national examination results, which was followed by information on birth, death and marriage certificates, land, and health. Information on business licences and driving license, and migration and/or travelling documents were ranked low (See also Table 2). The study findings are inconsistent with the previous findings which found that information on renewing driving license as the major information requirement (Cook 2000). This finding shows that information needs are context specific.

Table 2: Government information needs of citizens

Categories of information needs	Frequencies (Percentages)
National examination information	309(68.9)

Birth, death, and marriage certificates	287(68.3)
Land information	264(58.7)
Medical information	235(52.2)
Education information/ research	224(49.8)
Sponsorship/funding	215(47.8)
Business licence, driving licence	207(46.0)
Migration information/ travelling documents	175(40.1)

Information seeking patterns of citizens

Participants in this study expressed overall preference for internet (37.8 per cent, n=170) as their main source of government information, followed by email and neighbours and friends (17.8 per cent, n=80) as indicated in Table 3. Social group gathering, library and magazines were also ranked as important sources of information to citizens. This finding of a high usage of internet to access government information is in line with the findings the results of many other studies (Cook 2000; Lyons 2009; Aldrich et al. 2000; Weerakkody et al. 2011; Lwoga & Mosha 2013; Burroughs 2009; Hargittai 2003). Apart from internet and email as sources of information, the study findings also indicate that citizens still depend on interpersonal communication with family/ friends and social group gathering to access government information. It is therefore important for the government at various levels to use multiple sources of information to deliver relevant information to the general public.

Table 3: Sources of government information to citizens

Information sources	Frequencies (Percentages)
Personal experience	70 (15.6)
Parent/guardian/family	67(14.9)
Neighbour/friends	80(17.8)
Church/mosque	72(16.0)
Social group gathering	74(16.4)
Newspapers	71(15.8)
Magazines	74(16.4)
Newsletters	67(14.9)
Posters	69(15.3)
Books	63(14.0)
Conferences/Workshops/Seminars	71(15.8)
Library	74(16.4)
Visit government agency/office	69(15.3)
E-mail	80(17.8)
Internet websites	170(37.8)
Telephone/mobile phone	66(14.7)

A X^2 test was performed to analyse the existence of any relationships among demographic variables (age, gender and education level) and use of government information sources. The findings indicated that there was a significant relationship between education level and use of various information sources. The respondents' education level had a larger relationship with the use of posters ($V = 0.545$) more than other information sources as shown in Table 4. This observation of the influence of the education factor is consistent with the results of another study of the parents and caregiver's health information behaviour which showed a significant relationship between education level and use of certain types of information sources, which were print (books and journals) and electronic sources (i.e. CD-ROM and internet) (Lwoga & Mosha 2013).

Table 4: Sources of government information by respondents' education level

Information source	Never attended school	Primary School	O-level Sec.	A-level Sec.	Ad. Diploma/ Degree	Post Grad/ MSc	Pearson X^2	Phil & Cramer	P-va
Personal experience	0	10(2.23)	4(0.89)	1(0.22)	33(7.36)	22(4.91)	83.673	0.435	0.0
Parent/guardians	0	6(1.34)	2(0.45)	3(0.67)	30(6.69)	26(5.80)	1.159E2	0.513	0.0
Neighbour/Friends	1(0.223)	9(2.01)	5(1.11)	1(0.22)	40(8.93)	24(5.36)	1.293E2	0.539	0.0
Church/Mosque	0	8(1.79)	5(1.11)	0	37(8.26)	21(4.68)	90.750	0.455	0.0
Social group gathering	0	6(1.34)	3(0.67)	3(0.67)	34(7.59)	28(6.25)	1.221E2	0.526	0.0
Newspapers	1(0.223)	5(1.12)	6(1.34)	4(0.89)	31(6.92)	24(5.36)	98.375	0.472	0.0
Magazines	1(0.223)	12(2.68)	4(0.89)	2(0.44)	35(7.81)	20(4.46)	99.757	0.473	0.0
Newsletters	1(0.223)	9(2.01)	4(0.89)	1(0.22)	30(6.69)	21(4.68)	92.361	0.457	0.0
Posters	1(0.223)	9(2.01)	4(0.89)	2(0.44)	30(6.69)	23(5.13)	1.316E2	0.545	0.0
Books	1(0.223)	7(1.56)	5(1.11)	2(0.44)	28(6.25)	20(4.46)	94.926	0.463	0.0
Conference/Worship	1(0.223)	7(1.56)	5(1.11)	3(0.67)	31(6.92)	24(5.36)	87.844	0.446	0.0
Library	1(0.223)	19(4.24)	5(1.11)	2(0.44)	22(4.91)	24(5.36)	87.010	0.450	0.0
Government Officer/office	1(0.223)	12(2.68)	6(1.34)	2(0.44)	29(6.47)	19(4.24)	77.457	0.421	0.0
Email	1(0.223)	21(4.69)	7(1.56)	2(0.44)	28(6.25)	21(4.68)	1.158E2	0.511	0.0
Internet/ Website	1(0.223)	15(3.348)	5(1.11)	1(0.22)	17(3.79)	4(0.89)	1.092E2	0.494	0.0
Telephone/Mobile Phone	2(0.446)	7(1.562)	3(0.67)	1(0.22)	32(7.14)	21(4.68)	87.955	0.452	0.0

Moreover, it was found that there was a significant relationship between respondent's age and use of certain types of information sources, which were: personal experience ($X^2 = 40.880$,

$p=0.004$), neighbours/friends ($X^2 = 34.168$, $p=0.025$), library ($X^2 = 36.705$, $p=0.013$) and government officer/office ($X^2 = 34.348$, $p=0.024$) as shown in Table 5. The respondents' age had a larger relationship with the use of personal experience ($V = 0.304$) and library ($V = 0.292$) more than other information sources. The findings indicate that older citizens are more likely to prefer using their personal experience, library and interpersonal communication with neighbours/friends/government officers to gain access to government information as compared to young ones.

Table 5: Sources of government information by respondents' age

Information source	20-30 years	31-40 years	41-50 years	51-60 years	Over 60 years	Pearson X ²	Phil & Cramer	P- value
Personal experience	28(6.25)	24(5.36)	17(3.79)	1(0.22)	0	40.880	0.304	0.004
Parent/guardians	28(6.25)	29(6.47)	9(2.01)	0	1(0.22)	30.691	0.264	0.059
Neighbours/Friends	33(7.37)	28(6.25)	18(4.02)	1(0.22)	0	34.168	0.277	0.025
Church/Mosque	29(6.47)	27(6.03)	13(2.90)	3(0.67)	0	24.674	0.237	0.214
Social group gathering	28(6.25)	31(6.92)	13(2.90)	2(0.45)	0	30.821	0.264	0.058
Newspapers	27(6.03)	27(6.03)	12(2.68)	5(1.12)	0	28.688	0.255	0.094
Magazines	32(7.14)	27(6.03)	11(2.46)	4(0.89)	0	30.765	0.263	0.058
Newsletters	25(5.58)	26(5.80)	11(2.46)	5(1.12)	0	25.688	0.241	0.176
Posters	27(6.03)	24(5.36)	15(3.34)	3(0.67)	0	37.251	0.290	0.55
Books	27(6.03)	19(4.24)	14(3.13)	3(0.67)	0	29.115	0.257	0.086
Conference/Worship	29(6.47)	23(5.13)	16(3.57)	3(0.67)	0	26.122	0.243	0.162
Library	31(6.92)	23(5.13)	16(3.57)	4(0.89)	0	36.705	0.292	0.013
Government Officer/office	31(6.92)	23(5.13)	13(2.90)	2(0.45)	0	34.348	0.280	0.024
Email	37(8.26)	26(5.80)	11(2.45)	6(1.34)	0	29.575	0.258	0.077
Internet/ Website	63(14.06)	68(15.18)	27(6.03)	10(2.23)	2(0.45)	22.243	0.223	0.327

Telephone/Mobile Phone	32(7.14)	18(4.02)	12(2.68)	4(0.89)	0	26.802	0.249	0.141
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The study further found that there was no significant relationship between respondent's gender and use of various types of information sources (see Table 6). The findings indicate that there is no gender inequality on access to government information from various types of sources. The study findings are similar to a previous studies that showed that demographic variables did not have any effect on government information seeking behaviour (Lambert 2013; Lwoga & Mosha 2013).

Table 6: Sources of government information by respondents' Age

Information source	Male	Female	Pearson X ²	Phil & Cramer	P-value
Personal experience	41(9.15)	29(6.91)	14.494	1.181	0.006
Parent/guardians	38(8.48)	29(6.91)	2.838	0.080	0.585
Neighbour/Friends	46(10.27)	34(6.36)	6.358	1.120	0.174
Church/Mosque	41(9.15)	31(7.07)	7.079	1.127	0.132
Social group gathering	45(10.04)	29(2.75)	2.753	0.079	0.600
Newspapers	41(9.15)	30(0.65)	0.650	0.038	0.957
Magazines	43(9.59)	31(7.07)	1.765	0.063	0.779
Newsletters	39(8.70)	28(1.58)	1.579	0.060	0.812
Posters	38(8.48)	31(7.07)	5.064	0.107	0.408
Books	34(7.59)	29(6.91)	6.297	0.119	0.178
Conference/Worship	43(9.59)	28(1.58)	6.295	0.119	0.178
Library	35(7.81)	39(5.61)	5.607	0.114	0.230
Government Officer/office	38(8.48)	31(7.07)	1.335	0.055	0.855
Email	37(8.26)	43(4.22)	4.217	0.097	0.377
Internet/ Website	98(21.87)	72(2.33)	2.326	0.072	0.676
Telephone/Mobile Phone	39(8.71)	27(1.82)	1.817	0.065	0.769

The major barriers to respondent's information seeking behaviour were related to poor ICT infrastructure (71.88 per cent, n=322) as shown in Table 7. Similar to previous studies (Singh & Sahu 2008; Oladokun & Aina 2009), majority of the surveyed participants lacked access to computers or cell phones which are connected to the internet, and they either lacked electrical power or they faced frequent power outages, and thus it was difficult for them to access government information. In the present study, other common barriers were related to difficulty in retrieving information, information sources were located very far, information sources were expensive, information is complicated and language barrier.

Table 7: Barriers to citizen information seeking behaviour

Factors	Frequency (Percentage)
Poor ICT infrastructure	322 (71.88)
Difficulty in retrieving information	301(67.88)
Lack of search skills	218(48.66)
The information is complicated	235(52.46)
The information source is expensive	249(55.58)
The information is located far	254(56.70)
Language	227(50.67)
Policy and regulations do not support access of information	220(49.10)

Conclusion and implications of the study findings

The study established that citizens mainly required information related to national examination results, which was followed by information on birth, death and marriage certificates, land, and health. Internet was the major source of government information to surveyed citizens, which was followed by email and neighbours and friends. Social group gathering, library and magazines were also ranked as important sources of information to citizens. Certain demographic factors related to education level and respondent's age determined use of various information sources. Common barriers that to citizens' information seeking behaviour were related to poor ICT infrastructure, difficulty in retrieving information, information sources were located very far, and high costs of information sources. Based on these findings, the implications of the study findings are in five folds.

Firstly, the government at various levels should enhance accessibility of government information by using multiple sources. They should combine digital, print and oral communication media, since the public prefer using a combination of sources. Secondly, the government at local levels should assess the needs of the public at various locations. The information needs of citizens are location specific and therefore, it is essential to determine their needs to improve delivery of demand driven information and services. Thirdly, the government should enhance access to online government information, and in particular the content should be in Swahili language to enable uptake of e-government. The websites should be user friendly to enable the public to navigate and retrieve information more effectively. These initiatives should be conducted in collaboration with the local communities to enhance uptake, ownership and sustainability of the

new information services. Communities should be involved in the development and evaluation of these websites to ensure that their needs are considered.

Fourthly, public libraries should focus on building the information capabilities of the local communities for effective retrieval of information from online resources. The findings indicated that lack of information searching was one of the problem that faced citizens, and libraries and information centers need to address that. Libraries should collaborate with local government authorities to design the information literacy programmes to ensure ownership and sustainability of the programmes.

Lastly, the government should also improve ICT infrastructure and enhance the distribution of electrical power across the country. ICT infrastructure in Tanzania is poorly developed with insufficient electrical power supply and poor access to Internet and computers, with only 7.5 million internet users, and a penetration rate of 14.9% as of 31 December 2014 (Internet World Stats 2016). Thus, this problem hinders majority to access online government information especially in the remote areas.

Study limitations

The study focused on the perspective of the general public regarding their government information needs and information seeking behaviour. Future research is required to assess the specific information seeking behaviour of the general public in the government websites, and factors that affect the access and usage of such online information. Additionally, the e-government information behaviour may differ according to the location, income, social-economic status, and many other demographic variables; however, such information was not gathered in this study. Further studies that combine both qualitative and quantitative methods may examine the e-government information seeking behaviour, use of the online information, and outcomes of online information seeking behaviour among citizen.

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