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Gender difference in Information Seeking of research scholars at University of Sargodha, Pakistan

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Abstract:

Purpose of this study is to explore gender difference in the information seeking behavior of research scholars in the field of library and information science. This small-scale study examines the relationship between socio-economic variables and change in information seeking behavior with special reference to gender. Methodology deployed to conduct this study was quantitative in nature. Data was collected through structured questionnaire from 311 participants enrolled in research degrees (both in social and natural science subjects) at University of Sargodha. Primary data was collected by second author for her M.Phil dissertation on "information seeking behavior in the digital environment". Statistical Package for Social Science (SPSS) was used to analyze the data. Findings reveal that gender difference plays an important role in the information behavior of research scholars at university level. There is a strong association between gender and Time spend online for information seeking. The use of smartphone is equally common between male and female research scholars, however, female research scholars are more likely to use online journals than their male counterparts. Male and female research scholars equally prefer different digital resources like offline e-resources, internet-based digital resources, material available via social media spaces, and Audio/Visual digital resources, to seek

Introduction

In this modern period, information play vital role in people's life especially in the life of academic researchers. All users possess their own purposes and needs for which they wish to seek information. They want to access different types of information sources such as journals, books, magazines both in print and digital form, audio/video, delivering and receiving conversation for managing research activities and updating their knowledge. Mills, Knezek, & Wakefield (2013) argue that the use of info graphics most preferred by readers rather than plain texts to learn in everyday life. Video, graphics and interactive materials with great pictorial and filmic features are preferred first by people instead of traditional materials such as books in same subject area.

According to Wilson (2000) information seeking behavior as "the way through which people search for their required information and then make use of that information". This term was first used by Wilson in his paper on information seeking behaviour (Tom D Wilson, 1999). Simply, the information seeking behavior is how people seek, manage, require, use, and share information in multiple contexts and contents. While seeking information, the individual may interact with manual information systems (such as a newspaper or a library) or with computer based information systems such as the World Wide Web.

The earlier work done on information searching shows that with rapid development in the field of IT, it became necessary for the users of information that they must change their seeking behavior to efficiently and effectively access their required information in this jumble technological environment. So with passage of time and with the emergence of new technologies people must have to alter their methods of searching knowledge. Regarding study, search for update and fresh knowledge, students consider one major part to access to information quickly and on time. Expectation becomes wider for the use of electronic resources from those students who studying at high level due to high level course and shortage of time. There is correlation of students (mainly academic researchers) with digital resources of information for fast and quick access. Information has become an essential part of our daily life. Now-a-

days the use of internet by health specialists and patients increase because they both use e-mail to contact with each other (Cline & Haynes, 2001), p.673.

It is also worth mentioning that now in the digital era, people desire to get information through internet instead of traditional printed resources because of easy and timely access to required information (Gray, Klein, Noyce, Sesselberg, & Cantrill, 2005). Whereas, the library plays an important role to understand the users' information behavior and in doing so it develops academic collection, databases, devising online services facilities and improving services to properly meet information search of users (Devi & Dlamini, 2013). It is no exception for library professionals to understand the users' information behavior and to modify library services accordingly.

The information seeking behavior of researchers in digital environment at the University of Sargodha has been assessed by the second author in her MPhil study dissertation and found that the use of electronic resources by doctoral students are useful to increase their knowledge for research or study purposes. The study also indicates that there are countless digital resources available for research student within campus and doctoral students face reasonably several challenges in their use of these electronic resources.

However, the same study identified that there is a dire need to conduct a comprehensive study on gender difference in the information behavior of research scholars in the field of social and natural science subjects. It is therefore, that we intend to examine difference in the information behavior demonstrated by male and female scholars and also to explore what kind of problems they face while seeking information in the digital environment. This study also attempt to determine gender-wise perception, interest, frequency of using e-resources that are utilized by natural and social sciences research scholars at the University of Sargodha.

Literature Review

Information is an old English word and it appear in one of Chaucer's tale sometime between 1372 and 1386 (Schement, 1993). Capurro & Hjørland (2003) take its origin back to Latin and Greek terms of the pre-Christian era. Information seeking, a process in which humans purposefully engage in order to change their state of knowledge. Information seeking also describes the action by computers to match and display information objects" (Marchionini, 1997). Information behavior encompasses information seeking as well as the totality of other unintentional or passive behavior such as seeing or encountering information (Case, 2012).

With the emergence of internet that had completely changed the whole world functions and shifted it into developed informatics society (Tahir, Mahmood, & Shafique, 2008). Technologists believe that learning through information communication technologies improve learning skills and prepare students to effectively participate in the twenty first century (Sakina, Khalid, & Farzana, 2008). Voorbij and Ongering (2006) concludes that scientists and social sciences researchers regularly use e-journals for research purposes as it easily accessible for them in their regarding field. According to Hetrick (2002) e-resources and databases very important and useful for scholars and subject specialist to complete their research field.

Internet and e-mail has an immense impact on information searching behavior of humanity. Youth prefer to get information through internet instead of conventional way because through online usually all type of information available for them and thus they can easily get information from them (Gray et al., 2005). Many students use internet as a primary source to get general information. Lewis (2006) says that through the use of internet and other popular media sites some people individually have

access to their required information about the health as they feel it useful for them to get information without depend on others. Young people participation in internet era offer new ways of thoughts about the vital role of learning. It means that ability of learning and new opportunities accessible through networks and online resources (Ito et al., 2008).

Many librarians have started experiments with social software to become closer to their users. Research libraries devote money in millions to provide desktop access to costly copyrighted materials i.e. periodicals, books and essays for their users (Rowlands et al., 2008). Dutta (2009) points out that by understanding information seeking behavior of users of different lifestyle belongs to various environments it is found that education play key role in the information searching behavior of people. Preceding study explains that user's online comments contain valuable information and use of websites that provide services for users to define their feelings or opinions with respect to content items i.e. blogs, stories and news etc., (Ramamonjisoa, Murakami, & Chakraborty, 2015).

Abou-Auda (2008) explains that information seeking behavior of physicians and dentists in Kingdom of Saud Arabia shows that textbooks, articles, magazines, periodicals and companies representatives (details about men) is the most regular consulted sources of information about drug medication. Youth have great familiarity with the use of social learning applications. They have experience of internet use as well as with good manufacturing, design and spread of information for further use. Ethnographic study determines that young people prefer to pick up their require knowledge, information from playing with games, creative activities and virtual communication in private and societal setting (Gasser, Cortesi, Malik, & Lee, 2012).

Wan-Chik (12-13 Oct 2014) study that internet searching method provides vital information to professionals with a toolkit of skills that use in user education and information refinement. Internet search tactics that facilities scholars with different procedures that explain how to search or seek information on the network. Ganaie and Rather (2014) argues that searching manners of users greatly influenced by different reasons. Users refer to variety of available information sources to fulfill their information requirements. So it depend on information seeker's ability or skill to search precise and relevant information or data whichever it is print or non-print form.

Naveed and Ameen (2015) sum-up results that information experts adopt most useful and self-fulfillment tactics to read or deliver desire information for society. People use electronic communication channels i.e. seeing television, use of internet, social network sites during relaxation time. Internet, news reports, books and publications as high sources to gain information, Majority of people still like to read in print layout instead to read in e-print.

Research Objectives

1. To examine gender difference in the use of electronic resources while seeking information in online environment
2. To examine gender difference in time spent online for information seeking
3. To explore gender difference in preferred digital resources for information seeking
4. To explore the problems that are being faced by male and female scholars while seeking information in the digital environment

Methodology

Quantitative research approach was used to conduct this study. Survey was conducted on a sample of 311 randomly selected research students at the University of Sargodha. This study used a

questionnaire as the main instruments to collect data from population. The instrument was designed in English. The questionnaire consisted of 12 closed-ended and 1 open-ended question. The questionnaire was made up of two parts. Part One that consist on five questions, was structured to collect the demographics information about respondents, program of study, session of study and gender information. Part Two of questionnaire was consisting of 12 close-ended and 1 open-ended question to collect data on information seeking behavior of respondents in digital environment. Respondents belonged to different academic facilities at the University of Sargodha. The sample size comprising of 54.0% female and 46.0% male respondents from social sciences and natural sciences faculties. Natural sciences respondents consisted 49.5% and social sciences 50.5%. Among which 15.8% were belonged to PhD and 84.2% were from MPhil. The data was analyzed using SPSS version 20.0.

The University of Sargodha offers research level (MPhil & PhD) programs in social and natural sciences. The population of this study was limited to currently studying registered PhD and MPhil Researchers at the University of Sargodha, other students of university were excluded from this study such as BS and master students.

The sample for study was taken from those who were under course work in semester 2 or research work in semester 4, including session 2014-2018. Three hundred eleven (311) samples were taken from different faculty research students.

Data Analysis

The respondents in the sample were both male and female equally selected by fair chance of selection. Data in Table 1 shows gender wise distribution of respondents from each faculty (i.e. faculty of social science and natural science). Result shows that the high number of respondents 168 (54.0%) were females and represents the large group while 143 (46.0%) were male. Whereas, total number of respondents from social science were 157 and from natural science were 154.

Table 1: Gender Wise * Social Sciences and Natural Sciences Respondents Crosstabulation

			Social Sciences and Natural Sciences Respondents ID		
			Social Sciences	Natural Sciences	Total
Gender Wise	Male	Count	74	69	143
		Percentage	47.1%	44.8%	46.0%
	Female	Count	83	85	168
		Percentage	52.9%	55.2%	54.0%
Total		Count	157	154	311
		Percentage	100.0%	100.0%	100.0%

Similarly, gender-wise enrollment of the participants of this study is shown in Table 2 below which shows that population of this study comprised of 110 and 33 male MPhil and PhD students respectively, while 152 and 16 female MPhil and PhD students respectively.

Table 2: Gender Wise * Currently Enrolled In Crosstabulation

			Currently Enrolled In		
			MPhil	PhD	Total
Gender Wise	Male	Count	110	33	143
		Percentage	42.0%	67.3%	46.0%

	Female	Count	152	16	168
		Percentage	58.0%	32.7%	54.0%
Total		Count	262	49	311
		Percentage	100.0%	100.0%	100.0%

Gender difference in use of electronic devices

Figure shows that only 25% male and amazingly 10% female participants use computers, while 13% male and only 12% female use laptops. However, the use of smartphone is equally common between male and female research scholars at University of Sargodha.

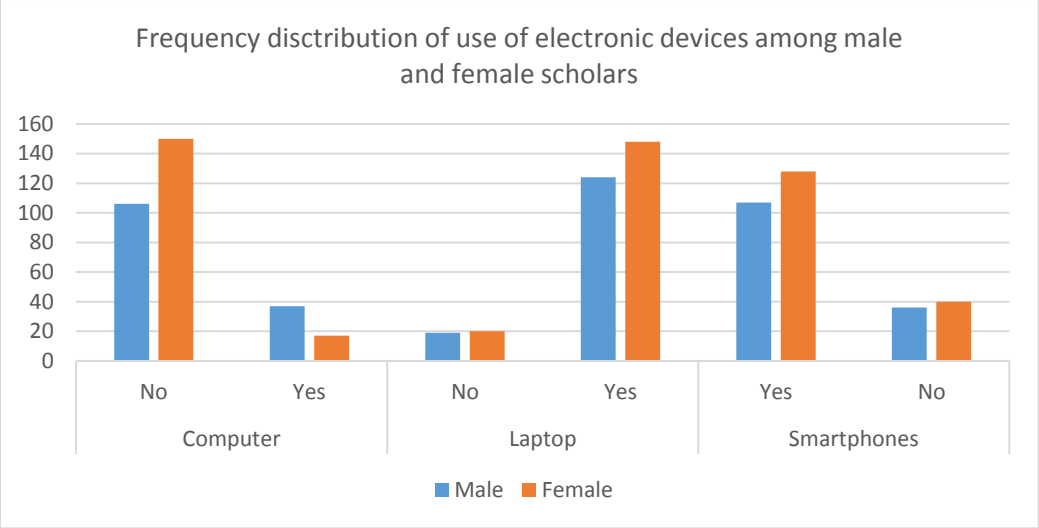

Figure 1: Gender difference in use of electronic devices for information seeking

Gender difference in the use of online sources

As shown in Figure 2 (below), female research scholars are more likely to use online journals than their male counterparts. Whereas, the use of website for information seeking is common in both male and female participants.

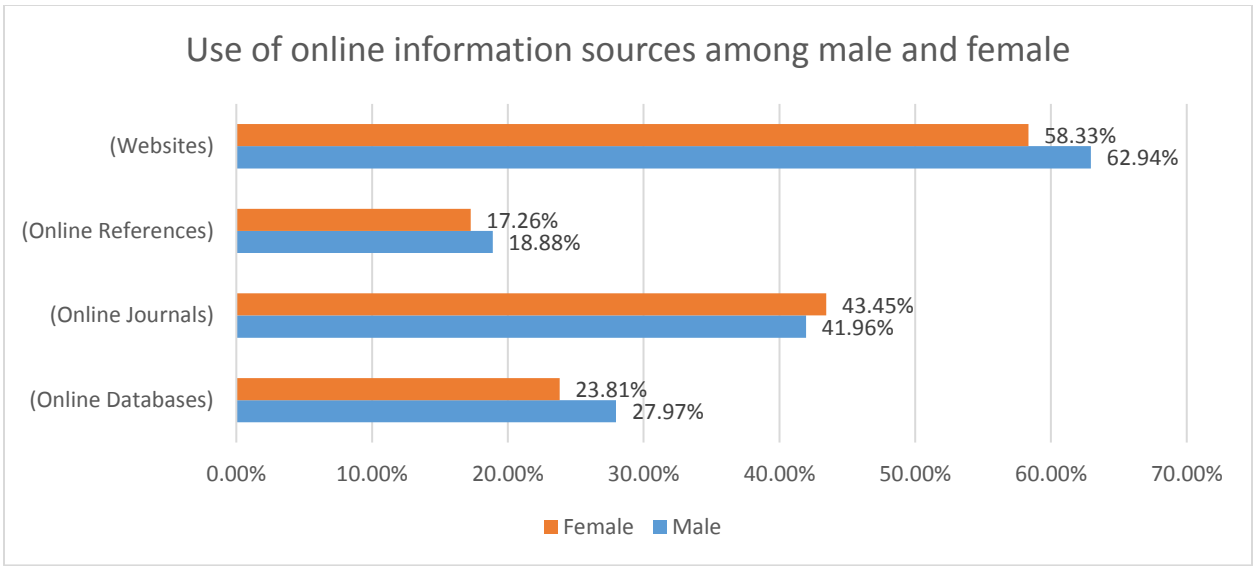

Figure 2: Use of online resources for information seeking

Faculty-wise use of online resources

Data analysis shows that commonly used online resource for information seeking among scholars of social and natural science faculties is website. Which means that research scholars (both from the fields of social and natural sciences) prefer to use websites as a primary resource for information seeking. For rest of the online resources we could not find any notable difference between the social and natural science faculty students.

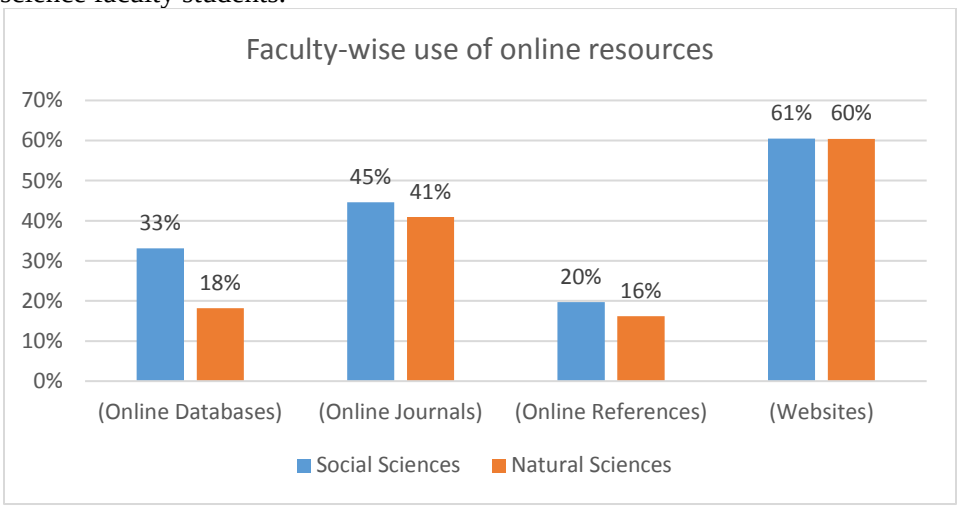

Figure 3: Faculty-wise use of online resources for information seeking

Gender difference in time spent online for information seeking

A Chi-square test was conducted to find if there's any association between gender and the time spent for information seeking. As shown in Table 3 (below) a strong positive association is found between gender and the time spent for information seeking. It appears that majority of female tend to spend 3-5 hours, while male scholars spend more time online for information seeking.

Table 3: Gender Wise * Time spend online for information seeking Crosstabulation

	Time Spend online for information seeking	Total

			0-2 hours	3-5 hours	6-8 hours	More than 8 hours	
Gender Wise	Male	Count	32	41	28	42	143
		% within Gender Wise	22.4%	28.7%	19.6%	29.4%	100.0%
		% within Time Spend Per Week On Gathering Information	35.6%	40.6%	51.9%	63.6%	46.0%
	Female	Count	58	60	26	24	168
		% within Gender Wise	34.5%	35.7%	15.5%	14.3%	100.0%
		% within Time Spend Per Week On Gathering Information	64.4%	59.4%	48.1%	36.4%	54.0%
Total		Count	90	101	54	66	311
		% within Gender Wise	28.9%	32.5%	17.4%	21.2%	100.0%
		% within Time Spend Per Week On Gathering Information	100.0%	100.0%	100.0%	100.0%	100.0%

When reading Table 3, we understand the males and females do not equally prefer to spend time on online resources for information seeking.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.150[a]	3	.003
Likelihood Ratio	14.249	3	.003
Linear-by-Linear Association	13.638	1	.000
N of Valid Cases	311		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.83.

As shown in Table 4 (above), the results of the Pearson Chi-Square row reveals X^2=14.150, p = .003, which shows statistically significant association between Gender and Time Spent online for information seeking; that is male scholars spend more time online for information seeking.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.213	.003
	Cramer's V	.213	.003
N of Valid Cases		311	

However, the Phi and Cramer's V results show that the strength of association is weak.

Gender difference in preferred digital resources for information seeking

We investigated if there is any difference between male and female scholars in preferring difference digital channels for the purpose of information seeking. A Chi-Square test was conducted for association between Gender and Preferred Digital Channel for Information Seeking.

Gender Wise * Preferred digital resources for information seeking Crosstabulation

			Preferred digital resources for information seeking				
			E-resources offline (CDs, DVDs etc.)	Internet Based digital resources	Digital resources on social media spaces	Audio/Visual digital resources	Total
Gender Wise	Male	Count	14	92	29	8	143
		Expected Count	12.0	91.5	26.7	12.9	143.0
	Female	Count	12	107	29	20	168
		Expected Count	14.0	107.5	31.3	15.1	168.0
Total		Count	26	199	58	28	311
		Expected Count	26.0	199.0	58.0	28.0	311.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.446[a]	3	.217
Likelihood Ratio	4.587	3	.205
Linear-by-Linear Association	2.100	1	.147
N of Valid Cases	311		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.95.

As shown in Table 4 (above) there is no association found between two variables, thus, we conclude that male and female research scholars equally prefer different digital resources to seek information.

Gender difference in problems faced by researchers in information seeking

Pearson Correlation Coefficient test was conducted to ascertain association between the variables of gender and problems faced by researchers in seeking information in the online environment. Results revealed that there is no relationship between two variables (r^2=.045, p=.425) which means that both gender identified similar problems that they face in the online information seeking.

Correlations

		Gender Wise	Problems faced in information seeking
Gender Wise	Pearson Correlation	1	.045
	Sig. (2-tailed)		.425
	N	311	311
Prob_comb2	Pearson Correlation	.045	1
	Sig. (2-tailed)	.425	
	N	311	311

Conclusion

Based on the data analysis and results, this study concludes that gender difference plays an important role in the information behavior of research scholars at university level among the studies population. We have found strong association between gender and Time spend online for information seeking. Similarly, examining the gender difference in use of electronic devices for information seeking, we found that the use of smartphone is equally common between male and female research scholars at University of Sargodha. Moreover, female research scholars are more likely to use online journals than their male counterparts. While, examining the use of online channels by males and females, we found no difference in the use of website for information seeking between male and female participants which means that the use of websites is equally common among both gender. Furthermore, male and female research scholars equally prefer different digital resources like offline e-resources (i.e. CDs/DVDs), internet-based digital resources (i.e. online databases, digital repositories etc.), digital resources available via social media spaces, and Audio/Visual digital resources, to seek information. Also male and female were found identifying similar problems faced during information seeking in the digital environment.

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