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Attitude towards the Usage of Electronic Information Resources in Medical Library, University of Jaffna, Sri Lanka

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Abstract

Purpose- The purpose of the study is to find out whether there are any significant mean differences among personal characteristics such as readers' type, gender, user category, age group and the year of study towards attitude of using electronic information resources in Medical Library, University of Jaffna, Sri Lanka during the year 2013.

Research Design-The study used the questionnaire as a research instrument and a total of 258 usable responses were obtained using random sampling technique. Further, the study employs independent samples t-test and One-way ANOVA (f-test) for the purpose of data analysis.

Findings- The results revealed that readers' type such as academic staff and students, the year of study of the students and user category (Lecturer, Senior Lecturer, Professor and students) have shown significant mean difference towards the attitude of usage of electronic information resources ($P < 0.05$). But, gender both male and female readers and age group have roughly same level of opinion, which is insignificant.

Research Limitation-As the study was limited to the academic staff and medical students at the Faculty of Medicine, a challenge may occur in terms of generalization of the results widely.

Originality-The findings of this research could be generalized to the studies similar to this category.

Keywords: Attitude, Electronic Information Resources, Medical Library, University of Jaffna.

1. Introduction

Several studies on use of electronic information resources have been carried out by students, research scholars, and teachers of various institutions all over the world (Olatokunbo, 2012). They have enhanced accessibility, increased usability, effectiveness and established new ways for information users in using information for more productivity in their endeavors and offer a multitude of advantages to the readers as well as to the knowledge seekers, enabling them to get satisfied with thirst of information needs. Electronic information resources like e-books, digital libraries, online journal, magazine, e-learning tutors, on line test e-journals, e-discussions, e-news, data archives and e-mail on line chatting can be accessed through computers or other electronic devices directly connected to the computer such as a CD-ROM drive or remotely via network such as the internet. Having access to relevant resource is highly essential for a user, who is a significant component in an information system. Recent global advances in communications infrastructure, digital media, network services, and electronic commerce present transformational opportunities and fundamental challenges for libraries. Developments in these areas appear to offer opportunities for increasing and enhancing library service offerings, reducing costs, and for improving organizational performance (Young, 2001).

Libraries now have both printed document as well as electronic information resources in their collection. The electronic documents can be stored, accessed, and delivered as and when required; therefore the services of libraries are not confined within the four walls but are integrated into local, regional, national, and international networks. The use of e-resources has been increasing rapidly across the world and users are increasingly expected to use these resources in order to fulfill their requirements. Herman (2001) pointed out that integration of electronic media into academic work is

progressively harnessing the new technologies to scholarly information activity of the university faculty in an increasingly electronic environment. According to David and Felix (2006), the dynamics of globalization, plus the introduction of information and communication technologies (ICT) resulted in a tidal wave of information that has, in many cases, overwhelmed many countries around the world. The current study tries to compare the significant mean differences between the readers' attitude towards usage of electronic information resources and the personal characteristics of readers, who are using Medical Library attached to the Faculty of Medicine, University of Jaffna.

2. Review of Literature and Hypotheses Development

Attitudes are the feelings and beliefs that largely determine how employees will perceive their environment, commit themselves to intended actions, and ultimately behave (Velnampy, 2006 & 2008). Paul et al., (2007) citing Taiwo (1998) …. Attitudes are "inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears, and convictions about any specific topic". He then cited Allport (1935), who states that an attitude "is a mental and neutral state of readiness organized through experience exerting a directive or dynamic influences upon individual's response to all objects or situations with which it is associated". Nor Shahriza (2007) citing Alexander and Filler (1976)…..attitudes towards reading are defined as an "individual's feeling about reading, causing learners to approach or avoid a reading situation". He further added that attitude and interest toward reading can be related in association with feeling and with learners' spirit to learn or in this situation it can be said best with the readers' spirit to read.

Attitudes regarding environment and electronic information resources vary among people. According to Walberg and Tsai (1985), a positive attitude towards reading is one of the strongest correlates of reading achievement. A study by Partin (2002) on the relationship between positive adolescent attitudes toward reading and home environments show that a positive reading attitude of students is significantly related to and fostered by the literary environment. But, Ray and Day (1998) carried out a study on students attitudes towards electronic resources. Their study reveals that a large number of students leave universities without necessary skills to cope within the information based society. Liew et al. (2000) argue that while reading an e journal is not the same as reading a printed issue, many students now acknowledge that electronic documents offer users advanced features and novel forms of functionality beyond those possible in printed form. In addition, a research done by Rajagopal and Chinnasamy (2012) on users' attitudes and approaches towards e-r-resources and services in Academic Libraries showed that there is a growing interest in electronic information resources among the engineering users at affiliated colleges of Pondicherry University. Olatokunbo (2012) confirmed through his study on Electronic Information Resources awareness, attitude, and use by academic staff members of University of Lagos, Nigeria that 55% of academic staff members indicated that the level of awareness of the subscribed electronic information resources by the Library Management is rather low. The study finds that the web site is seen as an increasingly important reading source. Significant differences exist between academic programs and types of reading materials and reading resources particularly use the web sites. Some differences in reading habits and attitudes were also observed between male and female participants.

Some scholars analyzed that internet is one of the electronic resources regularly used by the users and people tend to read printed materials. In relation to this, Ahmad et al., (2011) cited Abdul Karim and Hasan (2007), who figured out that the internet is a resource frequently used by 46 percent of students. Their study revealed no significant difference between the attitude of men and women towards reading. They further referred to gender differences in digital media, investigating the differences between women and men in terms of reading in a continuous media/environment, in

order to indicate to what extent there is difference between women and men in their choice of reading medium and satisfaction of continuous reading, which was studied by Liu (2008). In another analysis, Ahmad et al., (2011) quoted McKnight (1997) who found out that people do not tend to read from computer screens and they prefer to print out texts for reading. Considering the development of electronic resources, it is of importance to analyze reading in this environment.

Adoption of e-resources has made changes in the trend of information behavior of university teachers. In a related study by Brennan et al., (2002), they centered on how the adoption of electronic information resources has affected academics' information behavior and revealed that academics make fewer visits to the library and read more e-journals than the print era. Candela Olle and Angel Borrego (2010) analyzed on Librarians' perceptions on the use of electronic resources at Catalan academic libraries and found that academics' perceptions of the usefulness of bibliographic management software have increased dramatically during the last few years, especially among PhD students. Further, they mentioned that librarians stated that most of the complaints they receive from users were to do with platform breakdowns, difficulties in accessing resources off-campus, and discontinued resources.

Electronic information resources can assist to enhance and improve several field of study. In this way, Sivathaasan et al., (2013) focused on a research of demographic variables and usage of Electronic information resources using a sample of 75 university teachers, employed at the University of Jaffna and indentified a statistically significant difference between the mean number of usage of electronic information resources and gender ($t = 5.099$, $p < 0.05$) with the highest mean value of male university teachers using independent samples t-test. Further, they concluded that there are significant mean differences among age group, teaching language and experiences of teachers on the usage of electronic information resources, whereas mean usage of electronic information resources do not differ significantly among five different faculties ($F = 2.075$, $p > 0.05$). In another study done by Sivathaasan and Velnampy(2013), on use of electronic information resources and academic performance of university teachers, they jointly indicated that usage of electronic information resources has a strong positive association with academic performance ($r = 0.623$, $p < 0.01$) and it has an impact on academic performance at the rate of 38.8 % ($R^2 = 0.388$).

The following null hypotheses with respect to personal characteristics were formulated for the purpose of this research.

H_{o1} – There is no significant mean difference between the perception of academic staff and students of Faculty of Medicine, University of Jaffna relating to the attitude of usage of electronic information resources.

H_{o2} – There is no significant mean difference between the perception of male and female users about the attitude of usage of electronic information resources.

H_{o3} – There is no significant mean difference in relation to attitude of using electronic information resources among four different user categories.

H_{o4} – There is no significant mean difference in relation to attitude of using electronic information resources among students from 2nd year MBBS to Final year.

H_{o5} – There is no significant mean difference between age group of users and the attitude of using electronic information resources.

3. Methodology

3.1. Population and Sample

A well-planned research design will facilitate the collection of relevant evidence and information for the research, efficiently (Kothari, 1990). This study was conducted during the period from March to Oct 2013 at the Medical Library, University of Jaffna and the participants invited to participate in the research were the academicians as well as the students from Faculty of Medicine. A sample of 265 readers who were using the medical library at the time of the survey, out of total population was randomly selected according to the table for determining sample size from a given population (Krejcie and Morgan, 1970) at 96.5% of confidence level. Following table shows the sample size determined for the purpose of data collection.

Table 1: Number of Users Selected as a Sample

No	User Category	Total Population	Sample Size
1	Academic Staff	50	
2	Students-2nd Year MBBS	101	
3	Students- 3rd Year MBBS (Part I)	96	265
4	Students- 3rd Year MBBS (Part II)	95	
5	Students-Final Year	70	

3.2. Data Collection

In this study, the survey method is a questionnaire which pleads for data from academic staff and students from Faculty of Medicine, University of Jaffna. A structured questionnaire was designed to collect data from the academic staff members and students from Faculty of Medicine, keeping in mind the basis objective of the study. The researchers being the staff of the university personally distributed and retrieved the questionnaire from the academicians as well as from the students. 258 questionnaires were gathered, yielding a response rate of 97.4 per cent. Table 2 provides a summary of respondents who returned the questionnaires in a completed manner.

Table 2: Number of Respondents by User Category and Gender Wise

No	User Category	Male	Female	Total
1	Academic Staff	27	19	46
2	Students-2nd Year MBBS	30	20	50
3	Students- 3rd Year MBBS (Part I)	48	16	64
4	Students- 3rd Year MBBS (Part II)	20	28	48
5	Students-Final Year	12	38	50
	Total Number of Respondents	**137**	**121**	**258**

3.3. Development of Research Instrument

Research instrument uses five-point likert scales ranging from strongly agree to strongly disagree. Self-administered questionnaire which was developed as a tool for data collection is composed of two parts such as Part A and Part B. Part A of the questionnaire has the personal variables of the users, which consist of gender category, user category (Lecturer, Senior Lecturer, Professor and Student), the year of study in which they are reading if the user is student and age group. Part B is used to find out the users' opinion about the usage of electronic information resources which consist

of twelve statements measured based on the above scales. The first five responses were treated as a pilot study which was excluded by the researcher.

3.4. Mode of Analysis

Primary and secondary data were used for the study. Primary data were collected through the questionnaire, and secondary data were collected from the books, journals, magazines, etc. Data were analyzed using descriptive and inferential statistics that measure the relationship between variables. Independent samples t- test and one -way Anova (f-test) were run using Statistical Package for Social Science (SPSS).

4. Results and Discussion

4.1. Independent Samples t-test

This test compares the average value of the dependent variable for one group to the average value of the dependent variable for the other group.

4.1.1. T-Test for Academic Staff and Students

In this study, Independent Samples t-test was performed to find out the significant mean difference between the perception of academic staff and students in relation to the attitude of using electronic information resources.

Table 3 (a): Descriptive Statistics for Academic Staff and Students

Attitude of usage of EIR	**Readers' Type**	**N**	**Mean**	**Std. Deviation (SD)**	**Std. Error Mean**
	Academic Staff	46	2.2446	.28675	.04228
	Students	212	2.0778	.32721	.02247

Table 3 (b): Inferential Statistics for Academic Staff and Students

T-test Variable	**t-test for Equality of Means**			
	t-value	**df**	**P-Value (2-tailed)**	**Mean Difference**
Attitude of usage of EIR	3.199	256	0.002	.16674

According to table 3(a & b), P-value is less than the 5 % significant level ($P < 0.05$). Hence, null hypothesis (H_{o1}) is rejected. This means that a significant difference was found between academic staff and students in terms of attitude of usage of electronic information resources. Further, academic staff averaged 2.2446 (*SD = .28675*) and students averaged 2.0778 (*SD = .32721*), which revealed that academic staff have the higher level of opinion or attitude towards the usage of electronic information resources than students.

4.1.2. T-Test for Male and Female Readers

T-test was performed to find out the significant mean difference between the perception of gender category and attitude of usage of electronic information resources.

Table 4 (a): Descriptive Statistics for Male and Female Readers

Attitude of usage of EIR	**Gender**	**N**	**Mean**	**Std. Deviation (SD)**	**Std. Error Mean**
	Male	137	2.0918	.32672	.02791
	Female	121	2.1253	.32598	.02963

Table 4(b): Inferential Statistics for Male and Female Readers

T-test Variable	t-test for Equality of Means			
	t-value	df	P-Value (2-tailed)	Mean Difference
Attitude of usage of EIR	-.823	256	.411	-.03350

It is observed from the above table that P-value is insignificant at the levels of 5 % (P > 0.05). Hence, it failed to reveal a statistically reliable difference between gender and their attitude on the usage of electronic information resources. This supports to the acceptance of null hypothesis of (H_{o2}). Moreover, both male and female readers have roughly same level of opinion with regard to the usage of electronic information resources.

4.2. One-Way ANOVA (f-test)

The one-way Anova (F-test) is used to compare the significant differences, existing between two or more groups. As user category, year of study and age have more than two levels, f-test was performed.

4.2.1. F-Test for User Category and Attitude

F-test was carried out to find out the significant mean difference on the attitude towards usage of electronic information resources among user category such as Lecturer, Senior Lecturer, Professor and Student from Faculty of Medicine.

Table 5: Results of F-Test – User category Vs Attitude

Description	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.214	3	.405	3.935	.009
Within Groups	26.127	254	.103	-	-
Total	27.342	257	-	-	-

According to the above table, the p-value is less than the 0.05 levels (P < 0.05, F -3.935). It means, f-test revealed that there is a significant mean difference across user categories in terms of their attitude towards the usage of electronic information resources. Hence, null hypothesis (H_{o3}) is rejected.

This can also be explained by the mean plot in the f-test. Statistics revealed that Senior Lecturers have higher level of attitude than others in the direction of usage of electronic information resources.

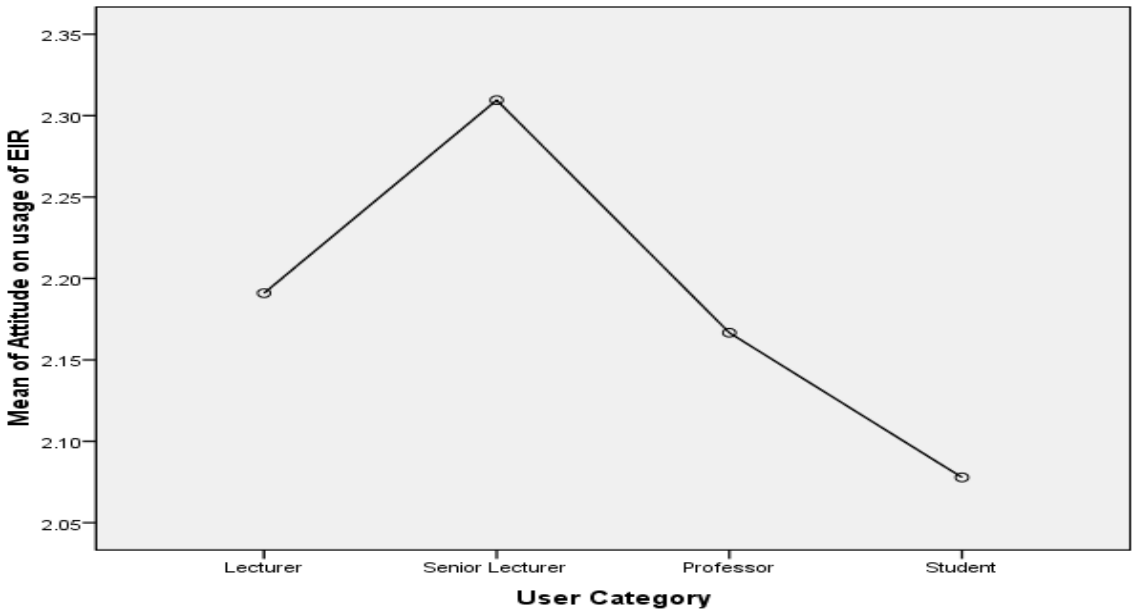

Figure 1: Mean Plot

4.2.2. F-Test for Year of Study and Attitude

A significant mean difference was found through f-test among the students, reading at different year of study such as 2nd year, 3rd year MBBS (Part I), 3rd year MBBS (Part II) and final year. According to table 6 (a), F-test clearly indicated that there is a significant mean difference between the attitude and the year of study of students, as P- value is less than 0.05 levels ($F = 4.994$, $p < 0.05$). Hence, null hypothesis (H_{o4}) is rejected.

Table 6(a): Results of F-Test – Year of Study Vs Attitude

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.518	3	.506	4.994	.002
Within Groups	21.073	208	.101		-
Total	22.591	211		-	-

The table 6(b) summaries the mean difference between all four levels of study. Among four levels of study, 3rd year MBBS (Part I) have given their highest level of opinion towards the usage of electronic information resources, compared to other levels of study.

Table 6(b): Descriptive Statistics –Year of Study Vs Attitude

Year of Study	N	Mean	Std. Deviation	Std. Error
2nd Year MBBS	50	2.1367	.25630	.03625
3rd year MBBS Part I	64	2.1406	.28825	.03603
3rd Year MBBS Part II	48	1.9271	.41064	.05927
Final Year	50	2.0833	.30952	.04377
Total	212	2.0778	.32721	.02247

4.2.3. F-Test for Age and Attitude

Table 7 provides the results of f-test carried out to indentify the mean difference between age groups and the attitude towards the usage of electronic information resources.

Table 7: Results of F-Test – Age Vs Attitude

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.965	4	.241	2.315	.058
Within Groups	26.376	253	.104	-	-
Total	27.341	257	-	-	-

The f-test revealed that no significant difference was found between the mean numbers of attitude of usage of electronic information resources among different age groups ($F = 2.315$, $P < 0.05$). Hence, the null hypothesis (H_{o5}) is accepted. This can be concluded that age groups such as below 25 years, 26-35 years, 36-45 years, 46-55 years, and over 55 years have the same level of opinion relating to the usage of electronic information resources.

Five hypotheses were formulated and tested through the study. Table 8 summarizes the results of them with the tools used for evaluation.

Table 8: Results of Hypotheses

No	Results of Null Hypotheses	Results of Alternative Hypotheses	Tools
H_{o1}	rejected	accepted	T-Test
H_{02}	accepted	rejected	T-Test
H_{o3}	rejected	accepted	F-Test
H_{04}	rejected	accepted	F-Test
H_{05}	accepted	rejected	F-Test

5. Conclusion

In the 21st century, advancement of computer and networking technologies had revolutionized information usage and access across the globe in a systematic way (Sivathaasan et al., 2013). In this study, influence of personal characteristics such as readers' type, gender, user category, age group and the year of study (if the user is student) was analyzed using independent samples t-test and the one-way ANOVA (f-test). The results of t-test revealed that there is a statistically significant mean difference between readers' type such as academic staff and students in terms of attitude of usage of electronic information resources ($t = 3.199$, $p < 0.05$). But, in relation to gender, both male and female readers have roughly same level of opinion with regard to the usage of electronic information resources, which is insignificant at 0.05 levels. According to f-test, user category (Lecturer, Senior Lecturer, Professor and students) and the year of study of the students have shown significant mean difference towards the attitude of usage of electronic information resources ($P < 0.05$), while attitude among age group have same level of perception. As mean differences were observed, necessary awareness programs have to be initiated in order to increase the usage of electronic information resources.

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