Usage of Library Collection, Services & Assistance Among Ophthalmologists - An Opinion Survey

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ABSTRACT

Accurate and reliable Information improves decision making, reduces costs, and saves time. The ophthalmic Libraries supply quality ophthalmic information to the ophthalmologists to serve the patients in a better way and stimulate the growth of ophthalmic field. This paper aims to study the usage of library collection, services and assistance among the Ophthalmologists − Eye Doctors in India. A survey method is used to obtain the ophthalmologists' usage of library collection, services and assistance. Through convenient sampling method, a structured questionnaire is circulated to the ophthalmologists in India and 633 ophthalmologists are responded. Among the 633 ophthalmologist, 82.15% of the ophthalmologists use the library collection - book. 73.46% of the ophthalmologists use the online data / journals. 89.73% of the ophthalmologists seek assistance to locate books/articles/documents. There exists a significant difference between the ophthalmologists use of Library Service and gender (p value 0.001**). There exists a significant difference between the ophthalmologists use of Library Assistance / help and designation category (p value 0.000**). There exists a significant difference between the ophthalmologists use of Library Assistance / help and working experience (p value 0.017**). There exists a significant difference between Library Services (p value 0.009**), Library Assistance / help (p value 0.000**) and institution type. The study results will help the ophthalmic libraries to serve the user better.

1. Introduction

The Ophthalmic libraries serve as the knowledge power house of the academic eye hospitals. It supports evidence based practice, research, education and lifelong learning. They acquire, preserve and provide access to the books, periodicals, reports, etc. With the help of ICT (Information and Communication Technology), the libraries extend their services in different electronic formats, provide round the clock services, etc. The library provides vital information collections both in printed

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or electronic formats to the users to enrich their knowledge. Libraries offer regular information services to its users to inform the happenings / latest updates in the field. On demand, Libraries also provide additional services to its users to help in their research work / provide specific information / utilize the libraries collections in a better manner. This paper aims to study the ophthalmologists' usage of the library collection, services & assistance.

The Objectives of the Study is as follows: a) To examine the usage of library collection with ophthalmologists' individual characteristics and institution type, b) To identify the usage pattern of library service among ophthalmologists, c) To find out the popular library assistance / helpused by the ophthalmologists, d) To identify the usage pattern of library assistance / helpamong ophthalmologists, e) To examine the usage of library assistance / helpwith ophthalmologists' individual characteristics and institution type.

2. Literature Review

Perera (2005) carried out a survey at the Medical Library of the University of Peradeniya to evaluate the services and the -usage of library materials available within the library. The methodology consisted of survey research and analysis of library statistics taken during a selected period. Results revealed 'significant variation within and among user groups, concerning various aspects of the study. Portmann and Roush (2004) conducted a study to ascertain the influence of the library orientation on community college students' library usage and skills. The data analysis of that study showed a "statically significant increase in student library use after the orientations". Examining the usage of library collection, services and assistance give proper direction for library growth and user satisfaction. Dhanavandan and Tamizhchelvan (2016) analyzed the open access books available in DOAB from the global perspectives and analyzed the e books from different perspectives.

Only very few studies were conducted about the usage of libraries among ophthalmologists. The author of this paper couldn't able to find any studies particularly among the ophthalmologists in India which leads to this study.

3. Hypotheses of the Study

a) There exists significant difference between the ophthalmologists' usage of library collection, services, assistance / help with gender.
b) There exists significant difference between ophthalmologists' usage of library collection, services, assistance / help with age group.
c) There exists significant difference between ophthalmologists' usage of library collection, services, assistance / help with designation.
d) There exists significant difference between ophthalmologists' usage of library collection, services, assistance / help withworking experience.
e) There exists significant difference between ophthalmologists' usage of library collection, services,

assistance / help with institution type.

4. Methodology

This study aims to find out the usage of library among Ophthalmologists. Through convenient random sampling method, a structured questionnaire is circulated to the ophthalmologists in India and 633 ophthalmologists are responded. The Ophthalmologists are asked to record the their usage of library sources, services and additional support. Data collected was organized using Ms-Excel and analysed through SPSS 18 PASW Statistics software. To examine whether there is any mean difference between two groups, t-test is used. ANOVA test is used to find out whether there is any mean difference between more than two groups. P value less than 0.05 are considered as statistically significant. The following terminologies were adopted.

Ophthalmologists: Doctors who completed MBBS and any ophthalmology degree like Master of Surgery (MS), Diploma of Ophthalmology (DO), Doctor of Medicine (MD), Diplomate of National Board in Ophthalmology (DNB).

5. Results and Discussions

A total of 633 ophthalmologists are included in this study. Among the 633 ophthalmologists – library users, 294 are female, 339 are male. Majority of the users are male. The male users are of 53.55% and female users are of 46.45%. 34.28% of the users are less than or equal to the age 30. 47.08% of the users' age is between 31 and 40. 14.06% of the users' age is between 41 and 50. 3.32% of the users' age is between 51 and 60. 1.26% of the users' age is 61 and above. Majority of the users are within the age group 31 to 40. 57.66% of the respondents are working as a medical officer or medical consultant or managing the hospital. 40.13% of the respondents are undergoing training in specialty clinics and serving eye patients. 2.21% of the respondents are undergoing training in advanced techniques of ophthalmology and serving eye patients. 64.93% of respondents have working experience of less than or equal to 5 years. 19.12% of ophthalmologists have 6 to 10 years experience. 6.32% of ophthalmologists have 11 to 15 years experience. 4.74% of ophthalmologists have 16 to 20 years experience. 4.90% of ophthalmologists have 21 years and above experience. Majority of the candidates are working in Not for Profit organization / Trust which is about 81.36%. 12.16% of the respondents are working in corporate eye hospitals and academic institutions. 6.48% of the respondents are working in Government eye hospitals and academic institutions.

5.1 Identifying the Popular Usage of Library Collection

A frequency Table 1 is derived based on the 11 choices of the multi response question about the ophthalmologists' usage of library collection. The table is sorted out in descending order of the total

no. of responses and shows up the popular library collection used by the ophthalmologists. Most of the ophthalmologists use the library collection book which is about 82.15%. 79.46% of the ophthalmologists use journal/periodical from library. 63.19% of the ophthalmologists use reference books.

Table 1. Usage of Library Collection among Ophthalmologists

S.no	Collection Description	Response (C)	Percentage of cases (P)	Rank
1	Books	520	82.15	1
2	Journals / Periodicals	503	79.46	2
3	Reference Books	400	63.19	3
4	Audio / Video CD	197	31.12	4
5	Clinical Images	133	21.01	5
6	Thesis / Dissertations	92	14.53	6
7	Reports	86	13.59	7
8	Bibliographies	74	11.69	8
9	Technical reports	60	9.48	9
10	Standard / patents	54	8.53	10
11	Directories	52	8.21	11
	Total	2171		

** N=633, P=C*100/N*

5.2 Identifying the Library Collection Usage Pattern

The following Table 2 shows the library collection usage pattern among ophthalmologists. The most used pattern of library collection among ophthalmologists are 3,1,2 which has the usage percentages 29.38%, 19.43%, 18.96% respectively. 6.32% of the ophthalmologists use 9 library collections. 80.57% of the ophthalmologists use more than one library collection. 19.43% of the ophthalmologists use single library collection.

Table 2. Library Collections Usage Pattern

No. of library collection	No. of Ophthalmologists used©	Percentage of cases (P)	Cumulative No. of Ophthalmologists used (C1)	Cumulative Percentage of cases (P1)
9	40	6.32	40	6.32
8	2	0.32	42	6.64
7	5	0.79	47	7.42
6	16	2.53	63	9.95
5	35	5.53	98	15.48
4	106	16.75	204	32.23
3	186	29.38	390	61.61
2	120	18.96	510	80.57
1	123	19.43	633	100.00

** N=633, P=C*100/N, P1=C1*100/N*

5.3 Identifying the Popular Usage of Library Services

A frequency Table 3 is derived based on the 12 choices of the multi response question about

the ophthalmologists' usage of library services. The table is sorted out in descending order of the total no. of responses and shows up the popular library services used by the ophthalmologists. Most of the ophthalmologists use the online data / journals which is about 73.46%. 62.40% of the ophthalmologists use book borrowing from library. 54.19% of the ophthalmologists use journal circulation.

Table 3. Frequency table on Use of Library Services

S.no	Service Description	Response (C)	Percentage of Cases (P)	Rank
1	Online database / journals	465	73.46	1
2	Book Borrowing	395	62.40	2
3	Journal Circulation	343	54.19	3
4	Printing, Copying & Scanning	210	33.18	4
5	Abstracting / Indexing service	109	17.22	5
6	Institutional repository	59	9.32	6
7	Newspapers clipping services	52	8.21	7
8	OPAC Search / Browsing	45	7.11	8
9	Current Awareness Services (CAS)	43	6.79	9
10	Interlibrary loan	28	4.42	10
11	Profile based services	28	4.42	11
12	Selective Dissemination of Information (SDI)	22	3.48	12
	Total	1799	284.20	

** N=633, P=C/N*

5.4 Identifying the Library Services Usage Pattern

Table 4 shows the library services usage pattern among ophthalmologists. The most used pattern of library services among ophthalmologists are 2,1,3 which has the usage percentages 28.91%, 22.75%, 19.12% respectively. 0.16% of the ophthalmologists use 11 library services. 77.25% of the ophthalmologists use more than one library services. 22.75% of the ophthalmologists use single library services.

Table 4. Library Services Usage Pattern

No. of Library Services	No. of Ophthalmologists Used (C)	Percentage of Cases (P)	Cumulative No. of Ophthalmologists Used	Cumulative Percentage of Cases
11	1	0.16	1	0.16
10	1	0.16	2	0.32
9	4	0.63	6	0.95
8	2	0.32	8	1.26
7	12	1.90	20	3.16
6	29	4.58	49	7.74
5	51	8.06	100	15.80
4	85	13.43	185	29.23
3	121	19.12	306	48.34
2	183	28.91	489	77.25
1	144	22.75	633	100.00

** N=633, P=C*100/N, P1=C1*100/N*

5.5 Identifying the popular Usage of Library Assistance / Help

A frequency Table 5 is derived based on the 11 choices of the multi response question about the ophthalmologists' usage of library assistance / help. The table is sorted out in descending order of the total no. of responses and shows up the popular library assistance / help used by the ophthalmologists. Most of the ophthalmologists seek assistance to locate books/articles/documents which is about 89.73%. 63.19% of the ophthalmologists need assistance to seek any information. 56.56% of the ophthalmologists need assistance to use reference books.

Table 5. Frequency table on Use of Library Assistance / Help

S.no	Assistance / Help	Response (C)	Percentage of Cases (P)	Rank
1	To locate books / articles / documents	568	89.73	1
2	To seek any information	400	63.19	2
3	To use reference books	358	56.56	3
4	Selecting journals to publish articles	215	33.97	4
5	Selection of research projects	174	27.49	5
6	Preparation of references	161	25.43	6
7	Selection of research tools	122	19.27	7
8	Give bibliographies	98	15.48	8
9	Formatting the references	80	12.64	9
10	Checking plagiarism	67	10.58	10
11	Give instruction to authors	55	8.69	11
	Total	2298		

** N=633, P=C/N*

5.6 Identifying the Library Assistance / Help Usage Pattern

The Table 6 shows up the library assistance / help usage pattern among ophthalmologists.

Table 6. Library Assistance / Help Usage Pattern

No. of Library Assistance / Help	No. of Ophthalmologists used ©	Percentage of Cases (P)	Cumulative No. of Ophthalmologists Used (C1)	Cumulative Percentage of Cases (P1)
11	18	2.84	18	2.84
10	5	0.79	23	3.63
9	11	1.74	34	5.37
8	10	1.58	44	6.95
7	39	6.16	83	13.11
6	41	6.48	124	19.59
5	56	8.85	180	28.44
4	84	13.27	264	41.71
3	130	20.54	394	62.24
2	107	16.90	501	79.15
1	132	20.8	633	100.00

** N=633, P=C*100/N, P1=C1*100/N*

The most used pattern of library assistance / help among ophthalmologists are 1,3,2 which has the usage percentages 20.85%, 20.54%, 16.90% respectively. 2.84% of the ophthalmologists use 11 library assistance / help. 79.15% of the ophthalmologists use more than one library assistance / help. 20.85% of the ophthalmologists use single library assistance / help.

Investigating the statistical relationship between Library collection, services, assistance / help usage and ophthalmologists & institution characteristics

- The items - library collection, services, assistance / help variables contain dichotomous values as 0 − not used, 1 − used. Based on the ophthalmologists response, a library collection usage score, library service usage score, library assistance / help usage score are derived for each ophthalmologist based on the dichotomous variables in each item.
- To investigate about the statistical relationship between the three item usage score and ophthalmologists & institution characteristics, the significance level (P value) is find out through the popular statistical tests. To verify the significance level with each item usage score and gender, t-test is used. The Table 7 shows up the t-test results on library collection, services, assistance / help and gender.

Table 7. T-test results on Usage of Library Collection, Services, Assistance/Help and Gender

S.no	Characteristic	No. of Ophthalmologists	Library Collection		Library Service		Library Assistance / Help	
			Mean	P value	Mean	P value	Mean	P value
			SD	F score	SD	F score	SD	F score
1	Male	339	3.20		3.07		3.73	
			1.901		1.851		2.486	
2	Female	294	3.20		2.58		3.52	
			2.127		1.428		2.360	
	P value			0.179		0.001**		0.411
	F score			1.809		11.433		0.677

** $P \leq 0.05$

The t-test results reveal that there is no significant difference between the use of library collection with gender (p value: 0.179). There is a significant difference between the use of library services with gender (p value: 0.001**). There is no significant difference between the use of library assistance / help with gender (p value: 0.441).

To verify the significance level of each item usage score and age, ANOVA test is used. The Table 8 shows up the ANOVA test results on library collection, services, assistance / help and age.

Table 8. ANOVA test results on Feedback on Library Collection, Services, Assistance / Help and Age

S.no	Characteristic	No. of Ophthalmologists	Library Collection		Library Service		Library Assistance / Help	
			Mean	P value	Mean	P value	Mean	P value
			SD	F score	SD	F score	SD	F score
1	Less than or equal to 30	217	3.13		2.78		3.80	
			1.964		1.645		2.421	
2	31 to 40	298	3.31		2.87		3.56	
			2.018		1.649		2.385	
3	41 to 50	89	3.19		2.90		3.69	
			2.044		1.771		2.489	
4	51 to 60	21	2.67		3.10		3.38	
			1.932		2.211		2.991	
5	61 and above	8	2.75		2.13		1.63	
			2.659		1.642		.916	
	P value			0.568		0.67		0.133
	Fscore			0.735		0.59		1.771

** $P \leq 0.05$

The t-test results reveal that there is no significant difference between the use of library collection with gender (p value: 0.179). There is a significant difference between the use of library services with gender (p value: 0.001**). There is no significant difference between the use of library assistance / help with gender (p value: 0.441).

To verify the significance level of each item usage score and designation category, ANOVA test is used. The Table 9 shows up the ANOVA test results on library collection, services, assistance / help and designation category.

Table 9. ANOVA test results on Usage of Library Collection, Services, Assistance / Help and Designation Category

S.no	Characteristic	No. of Ophthalmologists	Library Collection		Library Services		Library Assistance / Help	
			Mean	P value	Mean	P value	Mean	P value
			SD	F score	SD	F score	SD	F score
1	Medical Officer / Medical Consultant / Ophthalmic Teaching Staff / Management Staff	365	3.15		2.76		3.30	
			2.002		1.614		2.308	
2	Fellows	254	3.30		2.95		4.12	
			2.021		1.739		2.534	
3	Senior Residents	14	2.86		3.00		3.29	
			1.916		2.353		2.199	
	P value			0.510		0.349		0.000**
	Fscore			0.675		1.056		8.768

*** Significant at the 0.05 level*

The ANOVA test results reveal that there is no significant difference between the use of library collection with designation category (p value: 0.510). There is no significant difference between the use of library services with designation category (p value: 0.349). There is a significant difference between the use of library assistance / help with designation category (p value: 0.000**).

To verify the significance level of each item usage score and working experience, ANOVA test is used. The Table 10 shows the ANOVA test results on library collection, services, assistance / help and working experience.

Table 10. ANOVA test results on Usage of Library Collection, Services, Assistance / Help and Working experience

S.no	Characteristic	No. of Ophthalmologists	Library Collection		Library Services		Library / Help	Assistance
			Mean	P value	Mean	P value	Mean	P value
			SD	F score	SD	F score	SD	F score
1	Less than or equal to 5	411	3.17		2.82		3.71	
			1.985		1.686		2.466	
2	6 to 10	40	2.85		2.40		2.73	
			1.791		1.499		1.485	
3	11 to 15	30	3.47		2.70		3.93	
			2.255		1.393		2.625	
4	16 to 20	31	2.81		2.74		2.68	
			2.242		1.949		2.301	
5	21 and above	121	3.48		3.12		3.82	
			2.013		1.709		2.446	
	P value			0.249		0.176		0.017**
	F score			1.354		1.589		3.038

** $P \leq 0.05$

The ANOVA test results reveal that there is no significant difference between the use of library collection with working experience (p value: 0.249). There is no significant difference between the use of library services with working experience (p value: 0.176). There is a significant difference between the use of library assistance / help with working experience (p value: 0.017**).

To verify the significance level of each item usage score and institution type, ANOVA test is used. The Table 11 shows the ANOVA test results on library collection, services, assistance / help and institution type.

Table 11. ANOVA test results on Usage of Library Collection, Services, Assistance / Help and Institution tye

S.no	Characteristic	No. of Ophthalmologists	Library Collection		Library Services		Library Assistance / Help	
			Mean	P value	Mean	P value	Mean	P value
			SD	F score	SD	F score	SD	F score
1	Government	41	3.15		2.46		2.85	
			2.151		1.675		2.104	
2	Not for Profit Organization	515	3.25		2.94		3.82	
			2.017		1.687		2.412	
3	Corporate	77	2.94		2.39		2.81	
			1.859		1.582		2.476	
	P value			0.439		0.009**		0.000**
	F score			0.823		4.739		8.222

** P $\leq$ 0.05

The ANOVA test results reveal that there is no significant difference between the use of library collection with institution type (p value: 0.439). There is a significant difference between the use of library services with institution type (p value: 0.009**). There is a significant difference between the use of library assistance / help with institution type (p value: 0.0001**).

6. Conclusion

Among the 633 ophthalmologist, 82.15% of the ophthalmologists use the library collection - book. 73.46% of the ophthalmologists use the online data / journals. 89.73% of the ophthalmologists seek assistance to locate books/articles/documents. There exist a significant difference between the ophthalmologists use of Library Service and gender (p value 0.001**). There exist a significant difference between the ophthalmologists use of Library Assistance / help and designation category (p value 0.000**). There exist a significant difference between the ophthalmologists use of Library Assistance / help and working experience (p value 0.017**). There exist a significant difference between Library Services (p value 0.009**), Library Assistance / help (p value 0.000**) and institution type. The ophthalmic Libraries supply quality ophthalmic information to the ophthalmologists to serve the patients in a better way and stimulate the growth of ophthalmic field. The study results yield meaningful information to the ophthalmic libraries about their users. This information will help the libraries to serve the user better.

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