

INTERNET ACCESS AND USAGE BY THE MEDICAL COLLEGE FACULTY MEMBERS OF KERALA: A COMPARATIVE ANALYSIS

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Abstract: This paper discusses the internet access and usage by the faculty members of Government Medical Colleges in Kerala and makes a comparative analysis between Allopathy and Ayurveda college teachers. A stratified sampling method was used to select the sample of faculty members from Allopathy colleges and Ayurveda colleges. A questionnaire was the major instrument for data collection. The analysis of data reveals that there exist significant differences between Allopathy and Ayurveda college faculty members in the purpose of using internet from different access points. There also exist significant differences between Allopathy and Ayurveda faculty members of Kerala in the preference of using common engines while surfing internet and in the search strategy when searching online resources.

Keywords: Medical faculty members, Allopathy College, Ayurveda College, Kerala, Internet access, Internet usage, Search engine, Search strategy.

1.0 Introduction

Medical education has a major role to play in creating a healthier community. The key goal of education is the development of human capital. Healthcare practitioners have a significant role to play in today's social situation. They should therefore be accessed with up-to-date information. In this context, faculty members of medical colleges should be provided with both current and retrospective knowledge. The use of information products and services is essential to improve the level of knowledge. Information communication era and research and developmental activities led to the information explosion. An extensive variety of utilization of computer systems and networks in all spheres of education affected the conventional techniques of teaching and learning process. We can see the impact of ICT in healthcare education also. So the Information era and communication system have become a vital part of scientific education. Teaching and learning via the internet may also update the conventional techniques of learning and teaching activities. The benefit of this technique is that it broadens the spectrum of education from the local level to the worldwide level via internet. The information sources and services through the net gave new opportunities and scopes to all subjects. The increasing demand for such services and products is reflected in the fast increase in the use of computer systems and the internet in teaching and learning. The use of different components of the internet has become an inevitable part of faculty members. Access to information via the internet creates fast changes in the healthcare field also. The Internet performs a vital position in get right of entry to to facts resources. Internet and different software make the arena as a global village. It is the world's largest virtual library that always collects, manipulates, organizes, and retrieves information from all around the world.

Kerala is blessed with Government Medical Colleges under both Allopathy and Ayurveda systems. Very recently here started some medical colleges under Government control. In this paper five well established Allopathy Colleges, like Trivandrum Medical College, Kottayam Medical College, T.D. Medical College Alappuzha, Thrissur Medical College and Kozhikode Medical College under Government (Govt.) sector, were selected for the study. Ayurveda education has a long-standing history in Kerala. One Ayurveda School was started at Trivandrum by the then ruler of Travancore for teaching Ayurveda to the members of the ruling family. The institution was soon taken over by the State Government, and thrown open to all who desired admission. Later the school was raised to a

College and a five years' course of study was introduced. At present there are three Govt. Ayurveda Colleges in Kerala affiliated to Kerala University of Health Sciences (KUHS). They are the Govt. Ayurveda College, Trivandrum, Govt. Ayurveda College Trippunithura and Govt. Ayurveda College Kannur. Faculty members of these colleges were selected and conducted a comparative study between the faculty members of selected Allopathy colleges on the internet access and usage.1

2.0 Review of Literature

Patitunngkho and Deshpande (2005) revealed that most of the faculty members of Rajabhat Universities in Bangkok used Google search engines for gathering information from the internet. Pandian (2011) in his study 'Information needs and use pattern of users in Anna University library an analytical study', concludes with scope for any studies like a study on the access pattern of the e-resources and usage pattern of the web or computer network. Prakasan and Humayoon Kabir (2013) conducted a comparative study between Allopathy and Ayurveda college faculty members. The results of the study reveals that the medical profession desires differing types of formal and informal sources to perform well in their profession.

Satish Agrawal and Kumari (2013) conducted a study to determine the extent of use of computers and internet by expertise members within the field of medical education. Hasan Siamian, et al. (2013) in their study investigated the experience, use, and satisfaction of faculty members of Babol University of Medical Sciences. For this purpose, a descriptive and analytical survey conducted. The results of the study were faculty members have additional undemanding and convenient access to the web compared to other resources use. In a study, Sathish Naik and Padmamma (2017) deal with the usage of e-resources by faculty members of medical colleges and level of satisfaction with the information accessed by the users through the available e-resources. It is noticed that with the advent of information and communication technologies, electronic resources became a wide accepted profound resource for faculty members of medical field. The study conducted by Sumadevi and Sampath Kumar (2018) found that low net speed is that the major drawback faced by the faculty members. The study suggests that in order to overcome the low internet speed, increase the web network bandwidth within the universities.

Jan S, et al. (2018) conducted a study to find out the use of print and digital learning resources on the web by the faculty members. Most of the respondents were responded that they are using the internet for their teaching and learning activities. Shashikala and Srinivasaragavan (2019) investigated that the majority of the PG students and faculty members preferred the search engines Google and Yahoo for their information search. The findings of the study of Naik and Kumar (2019) revealed that the greater part of the respondents have significant influence in their behavioral intention on using the internet for the general purposes.

3.0 Objectives

1. To identify the preference of using common search engines while surfing the internet;
2. To identify the preference of search strategy when searching online resources;
3. To identify the ranked order of the purpose of using the internet from different access points.

4.0 Methodology

A stratified sampling method was employed for this study. The sample size is selected based on the formula of the National Education Association (1960) and the table introduced by Krejcie and Morgan (1970). According to this table, the sample size of the given population of Government Medical Colleges which are Trivandrum Medical College, Alappuzha T.D. Medical College, Kottayam Medical College, Trissur Medical College, and Kozhikode Medical College (N=929) is 273 faculty members. Similarly, the sample size selected from the population of Government Ayurveda Colleges such as Trivandrum Ayurveda College, Thrippunnithura Ayurveda College, and Kannur Ayurveda College (N=179) is 123 faculty members. A structured questionnaire was prepared to obtain data from the faculty members of Allopathy and Ayurveda systems. The questionnaire was pre-tested by administering it to the faculty. The investigator directly visited all the selected colleges of the study and distributed questionnaires among the faculty members. The collected data were analyzed using SPSS.

4.1 Gender-wise Distribution

Gender distribution of the sample, presented in the Table 1 which include 206 (52.02%) male and 190 (47.98%) female faculty members from the Government Medical and Ayurveda colleges of Kerala.

Table 1 Gender-wise Distribution

| Gender | Allopathy | | Ayurveda | | Total | |
|--------|-----------|--------|----------|--------|-------|--------|
| | no. | % | no. | % | no. | % |
| Male | 146 | 53.48 | 60 | 48.78 | 206 | 52.02 |
| Female | 127 | 46.52 | 63 | 51.22 | 190 | 47.98 |
| Total | 273 | 100.00 | 123 | 100.00 | 396 | 100.00 |

Among the Allopathy faculty members (N=273), 146 (53.48%) respondents are male and 127 (46.52%) are female faculty members. Out of the total respondents of Ayurveda colleges (N=123), 60 (48.78%) male and 63 (51.22%) are female faculty members.

4.2 Preference for Using Common Search Engines

The performance of search engines is an important factor while searching for information from the internet. The quality of a search engine depends upon the maximum relevant result on a query. The scope, coverage, and efficiency of search engines facilitate accurate answers to the questions. Google, Yahoo, Bing, and Alta Vista are the commonly used search engines. The preference of use and ranking of search engines by the faculty members of Allopathy and Ayurveda colleges is given in Table 2.

Table 2 Preference of Using Common Search Engines

| Search Engines | College | Weighted score | Rank |
|----------------|-----------|----------------|-----------------|
| Google | Allopathy | 1049 | 1 st |
| | Ayurveda | 475 | 1 st |
| Yahoo | Allopathy | 817 | 2 nd |
| | Ayurveda | 301 | 2 nd |
| Bing | Allopathy | 329 | 4 th |
| | Ayurveda | 214 | 3 rd |
| AltaVista | Allopathy | 478 | 3 rd |
| | Ayurveda | 207 | 4 th |

The weighted score and rank in Table 2 reveal that there exist some differences between Allopathy and Ayurveda college teachers. The ranked order of preference of the respondents of Allopathy colleges on the common search engine is ‘Google’, ‘Yahoo’, ‘AltaVista’, and ‘Bing’. The ranked order of preference of the respondents of Ayurveda colleges is ‘Google’, ‘Yahoo’, ‘Bing’, and ‘AltaVista’.

It is clear from the weighted score and ranked order of preference that the first and second preference of Allopathy and Ayurveda college faculty members the same order. But in the case of third and fourth preference, it is different. So there exists a significant difference in the use pattern of search engines.

4.3 Preference of Search Strategy on Online Resources

To retrieve relevant information from the online resources most often the faculty members preferring some sort of search strategies. The preference of search strategy and pattern of searching online resources is given in Table 3.

Table 3 Preference of Search Strategy on Online Resources

| Search Strategy | College | Weighted score | Rank |
|---|-----------|----------------|-----------------|
| Basic search (key words/subjects) | Allopathy | 1166 | 2 nd |
| | Ayurveda | 467 | 1 st |
| Selecting from the pre-listed subject domain/menu | Allopathy | 744 | 3 rd |
| | Ayurveda | 339 | 3 rd |

| | | | |
|---|-----------|------|-----------------|
| Using Boolean operators (AND, OR, NOT) | Allopathy | 1169 | 1 st |
| | Ayurveda | 462 | 2 nd |
| Using Medical Subject Headings (MeSH) | Allopathy | 567 | 4 th |
| | Ayurveda | 230 | 4 th |
| Advance search features like 'refine' or 'limit search' | Allopathy | 424 | 5 th |
| | Ayurveda | 280 | 5 th |

The ranked order in Table 3 reveals that there exist significant differences between Allopathy and Ayurveda college teachers. The weighted score and ranking of search strategy on online resources by the Allopathy college teachers are 'Boolean operators', 'Basic search', 'Prelisted subject menu', 'Medical subject headings', and 'Advanced search'. The ranked order of preference of the Ayurveda college teachers is 'Basic search', 'Boolean operators', 'Prelisted subject menu', 'Medical subject headings' and 'Advanced search'. It is clear from the weighted score and ranked order of preference that the Allopathy and Ayurveda college faculty members are following a different pattern of search strategy on online resources.

4.4 Purpose of Using the Internet in the College

The availability of internet facility and online resources in the college is a blessing to the students and faculty members. All medical colleges are facilitating internet facilities and IT labs in college campus. A huge collection of online databases, e-journals, e-books, e-theses, institutional repositories, etc. are facilitated through the internet. Online information sources and services and the development of ICT reduced the barriers of information communication. Different user communities are approaching the internet for different purposes. Table 4 reveals the picture of the ranked order of the purpose of using the internet in the colleges by Allopathy and Ayurveda college faculty members.

Table 4
Purpose of Using Internet in the College

| Purpose | College | Weighted score | Rank |
|---|-----------|----------------|-----------------|
| For browsing e-journals/e-books | Allopathy | 1471 | 1 st |
| | Ayurveda | 572 | 2 nd |
| For searching medical databases | Allopathy | 1236 | 2 nd |
| | Ayurveda | 644 | 1 st |
| For using institutional repositories | Allopathy | 716 | 5 th |
| | Ayurveda | 217 | 6 th |
| For using Medical information Systems | Allopathy | 620 | 6 th |
| | Ayurveda | 488 | 3 rd |
| For communicating (e-mail/chat/social networks) | Allopathy | 737 | 4 th |
| | Ayurveda | 283 | 5 th |
| For browsing WWW (for general information) | Allopathy | 875 | 3 rd |
| | Ayurveda | 307 | 4 th |

The weighted score in Table 4 reveals that there exists a significant difference between Allopathy and Ayurveda college teachers to use the internet in the college. The weighted score and ranked order in table 4 depict the order of preference to use the internet in the colleges by the faculty members of Allopathy and Ayurveda colleges. The preference of Allopathy college faculty members reveals a particular use pattern of the internet. This pattern starts with the 'for browsing e-journal/e-books', then comes 'for searching medical databases', 'for browsing for general information', 'for communicating', 'for using institutional repositories', and finally 'for using medical information systems'.

The weighted score and ranked order in table 4 given by the Ayurveda college teachers depict the order of preference for the purpose of using the internet in the colleges. The preference reveals a particular use pattern. This pattern starts with the 'for searching medical databases', 'for browsing e-journal/e-books', then comes, 'for using medical information systems', 'for browsing for general information', 'for communicating' and finally 'for using

institutional repositories'. It is clear from the ranked order that the Allopathy and Ayurveda college faculty members prefer different using patterns while approaching the internet in the colleges.

4.5 Purpose of Using the Internet in the Department

All medical colleges are giving internet facility in their department also. The faculty members can access internet facility from their departments. The purpose of using the internet from the department by the faculty members of Allopathy Ayurveda college faculty members is another important area of the study. The distribution of the ranked order of the purpose of using the internet by the faculty members in the departments is given in Table 5.

Table 5 Purpose of Using Internet in the Department

| Purpose | College | Weighted score | Rank |
|---|-----------|----------------|-----------------|
| For browsing e-journals/e-books | Allopathy | 1024 | 1 st |
| | Ayurveda | 454 | 3 rd |
| For searching medical databases | Allopathy | 974 | 2 nd |
| | Ayurveda | 573 | 1 st |
| For using institutional repositories | Allopathy | 596 | 5 th |
| | Ayurveda | 240 | 6 th |
| For using Medical information Systems | Allopathy | 531 | 6 th |
| | Ayurveda | 307 | 5 th |
| For communicating (e-mail/chat/social networks) | Allopathy | 859 | 3 rd |
| | Ayurveda | 516 | 2 nd |
| For browsing WWW (for general information) | Allopathy | 832 | 4 th |
| | Ayurveda | 336 | 4 th |

The weighted score and ranking in Table 5 reveal that there exist significant differences between Allopathy and Ayurveda college teachers for the purpose of using the internet from the department. The weighted score and ranked order in Table 5 depict the order of preference for the purpose of using the internet in the departments by the faculty members of Allopathy and Ayurveda colleges. The preference of faculty members of Allopathy college reveals the particular use pattern. This pattern starts with 'for browsing e-journal/e-books', then comes 'for searching medical databases', 'for communicating', 'for browsing for general information', 'for using institutional repositories', and finally 'for using medical information systems'.

The weighted score and ranked order in table 5 given by the Ayurveda college teachers depict the order of preference for the purpose of using the internet in the departments. The preference reveals a particular use pattern. This pattern started with 'for searching medical databases', 'for communicating (e-mail/chat/social networks)', then comes, 'for browsing e-journals/e-books', 'for browsing for general information', 'for using Medical Information Systems', and finally 'for using institutional repositories'. It is clear from the weighted score and ranked order of preference, the Allopathy and Ayurveda college faculty members prefer different use patterns while approaching the internet in the department.

4.6 Purpose of Using the Internet in the Home

Homes of faculty members are also an important access point to surf the internet for various purposes. Table 6 reveals the ranking of the purpose of using the internet in the home by Medical and Ayurveda teachers.

Table 6 Purpose of using the Internet in the home

| Purpose | College | Weighted score | Rank |
|---------------------------------|-----------|----------------|-----------------|
| For browsing e-journals/e-books | Allopathy | 1409 | 1 st |
| | Ayurveda | 468 | 2 nd |
| For searching medical databases | Allopathy | 1325 | 2 nd |

| | | | |
|---|-----------|------|-----------------|
| | Ayurveda | 361 | 5 th |
| For using institutional repositories | Allopathy | 555 | 5 th |
| | Ayurveda | 205 | 6 th |
| For using Medical information Systems | Allopathy | 416 | 6 th |
| | Ayurveda | 385 | 4 th |
| For communicating (e-mail/chat/social networks) | Allopathy | 1025 | 3 rd |
| | Ayurveda | 552 | 1 st |
| For browsing WWW (for general information) | Allopathy | 921 | 4 th |
| | Ayurveda | 468 | 3 rd |

The weighted score and ranking in Table 6 reveal that there exist significant differences between Allopathy and Ayurveda college teachers for the purpose of using internet from the home. Table 6 depicts the order of preference for the purpose of using the internet in the home by the faculty members of Allopathy and Ayurveda colleges. The preference of faculty members of Allopathy college reveals the particular use pattern. This pattern starts with 'for browsing e-journal/e-books', then comes 'for searching medical databases', 'for communicating', 'for browsing for general information', 'for using institutional repositories', and finally 'for using medical information systems'.

The weighted score and ranked order in Table 6 given by the Ayurveda college teachers depict the order of preference for the purpose of using the internet in the home. The preference reveals a particular use pattern. This pattern started with 'for communicating (e-mail/chat/social networks)', then comes, 'for browsing e-journals/e-books', 'for browsing for general information', 'for using Medical Information Systems', 'for searching medical databases' and finally 'for using institutional repositories'. It is clear from the weighted score of ranked order of preference that the Allopathy and Ayurveda college faculty members prefer different patterns of using while approaching the internet in the home.

4.7 Purpose of Using the Internet in the Laptop

With the coming Wi-Fi and data recharging facility, the use of the internet through laptop became more flexible and comfortable. Everyone can access information anytime from anywhere with the help of a laptop. The purpose of using the internet in the laptop and its ranked order preference by Allopathy and Ayurveda teachers are given in Table 7.

Table 7 Purpose of Using Internet in the Laptop

| Purpose | College | Weighted score | Rank |
|---|-----------|----------------|-----------------|
| For browsing e-journals/e-books | Allopathy | 1326 | 1 st |
| | Ayurveda | 452 | 3 rd |
| For searching medical databases | Allopathy | 1237 | 2 nd |
| | Ayurveda | 539 | 1 st |
| For using institutional repositories | Allopathy | 413 | 6 th |
| | Ayurveda | 337 | 5 th |
| For using Medical information Systems | Allopathy | 597 | 5 th |
| | Ayurveda | 274 | 6 th |
| For communicating (e-mail/chat/social networks) | Allopathy | 1132 | 3 rd |
| | Ayurveda | 522 | 2 nd |
| For browsing WWW (for general information) | Allopathy | 836 | 4 th |
| | Ayurveda | 371 | 4 th |

The weighted score and ranking in Table 7 reveal that there exist significant differences between Allopathy and Ayurveda college teachers for the purpose of using internet from the laptop. The weighted score and ranked order in table 7 depict the order of preference for the purpose of using the internet through laptop by the faculty members of Allopathy and Ayurveda colleges. The preference of faculty members of Allopathy college reveals the particular use pattern. This pattern starts with 'for browsing e-journal/e-books', then comes 'for searching medical databases', 'for

communicating', 'for browsing for general information', 'for using medical information systems' and finally 'for using institutional repositories'.

The weighted score and ranked order in table 7 given by the Ayurveda college teachers depict the order of preference for the purpose of using the internet from the laptop. The preference reveals a particular use pattern. This pattern started with 'for searching medical databases', 'for communicating (e-mail/chat/social networks)', then comes, 'for browsing e-journals/e-books', 'for browsing for general information', 'for using institutional repositories', and finally 'for using Medical Information Systems'. It is clear from the weighted score and ranked order of preference that the Allopathy and Ayurveda college faculty members prefer different patterns while surfing the internet on the laptop.

5.0 Findings

- The first objective of the study was 'To identify the preference of using common engines while surfing the internet'. The analysis and interpretation based on the weighted score and ranked order of preference that the first and second preference of Allopathy and Ayurveda college faculty members are in the same order. But in the case of third and fourth preference, it is different.
- The second objective of the study was 'To identify the preference of search strategy when searching online resources'. It is clear from the weighted score and ranked order of preference that the Allopathy and Ayurveda college faculty members are following different search strategies on online resources.
- The third objective of the study was 'To identify the ranked order of the purpose of using the internet from different access points'. The analysis and interpretation reveal that the Allopathy and Ayurveda college faculty members prefer different using patterns while approaching the internet in the Colleges, Departments, Home, and Laptop.

6.0 Suggestions

Based on the findings and observations it is realized that the faculty members of both systems were access to information from the internet for different purposes. To satisfy the information needs of faculty members they use the internet from different access points. A huge collection of medical literature is available in electronic format. To facilitate these materials to the right users at right time with the least cost, the college authorities should introduce internet services in each and every nook and corner of the campus. To make use of these resources effectively, conduct information literacy programs, computer/software literacy pieces of training, orientation programs, refresher courses, etc. regularly.

7.0 Conclusion

A user study has been considered as one of the major areas of research in the field of Library and Information Science. Information needs and uses patterns as a key component of the user's study. Medical faculty members constitute a major component as the information consumer and generator in various facets of the disciplines in medical science. This particular user group has a very specific nature of their information needs and peculiar character in information use. The resources, facilities, and services of the information system should be capable to satisfy the information needs of the faculty members. The main aim of this study was to conduct a comparative analysis between Allopathy and Ayurveda college faculty members of Kerala on their internet access and usage. The analysis reveals that there exists significant difference between the faculty members of both systems in their internet access and usage.

8.0 Reference

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