

## **Research Adventure: Lessons Learned Through Research on Information-Seeking Behaviour and Needs Among Medical Professionals in Malaysia**

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### **ABSTRACT**

Medical professionals are very busy, and every second is precious to them. Their role is crucial to determining the outcome of one's life. Medical professionals need the information to save people, especially on the latest advancements in their field, to make the treatment of their patients faster and better. Therefore, the methods they use to acquire information resources, use them, and evaluate them are very important. This paper aims to describe the adventurous nature in which this survey was conducted on the information-seeking behaviour and needs among medical professionals and the discovery of the procedures involved. Survey was used as the research methodology to gather data among medical professionals in medical institutions with libraries throughout Malaysia. The Medical Library Groups (Malaysia) was used as a platform, and each member was responsible for distributing questionnaires. The data were analysed using SPSS, and descriptive statistics were applied to present the findings. The findings covered medical professionals' information needs, the methods used to acquire information, and the satisfaction level with using library information services. Ultimately, this will help a library improve and enhance its facilities and services provided to future users.

**Keywords:** Survey, Information-Seeking Behaviour, Information Needs, Medical Professional, Medical Library Groups, Lesson Learned

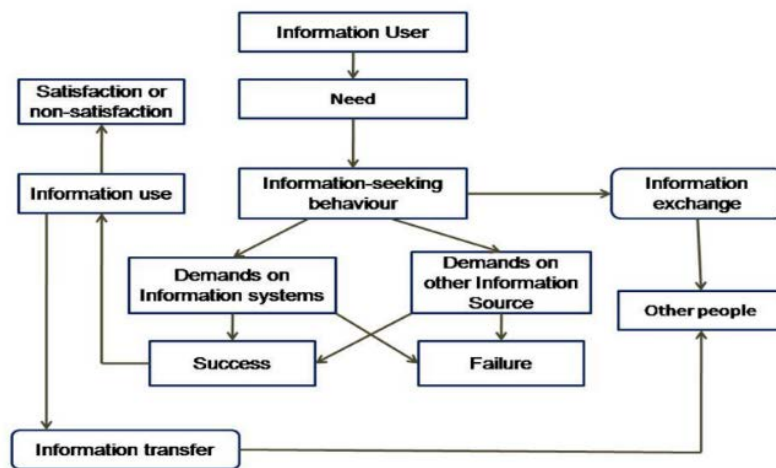
### **INTRODUCTION**

A library acts as a nucleus of an organization to supply information resources, services, and facilities. It is substantially noted that communication between a library and its user community has become more difficult and challenging. In this age of the World Wide Web and

networked information resources, users no longer have to come to a physical library to access information. This has created a physical distance between the library and its community.

The continuously advancing discipline of health science greatly contributes to the proliferation of medical information. Access to information is vital to respond quickly and effectively to the challenges and complexities of the health research environment. Consequently, information has become an integrated element in supporting medical research, teaching, and clinical services (Zawawi & Majid, 2001).

There are various models of information-seeking behaviour constructed by information specialists to describe the pattern of humans when seeking for information. A general reference was made to a variation on Wilson's model of 1981 (Figure 1). The aim of this model was to outline the various areas covered by the term "information-seeking behaviour" and "information needs", but it is clear that the scope of the diagram is much greater and that it attempts to cover most of what is included here as "information behaviour".



**Figure 1: Variation on Wilson's model of 1981**

According to (Wilson, 1999), the model was created to illustrate the process involved in seeking information and whether the results satisfy or do not satisfy the information seeker. The information can also be exchanged or transferred to other people. Some other models are Ellis' Behavioural Model of Information Seeking, Kuhlthau's Information Search Process (ISP) Model, Dervin's Sense-making approach, Cheuk Wai-Yi's Information Seeking and Using (ISU) Process Model, Sandstrom's Optimal Foraging Theory, Choo's Behavioural Model of Information Seeking on the Web, Blom's Task Performance Model and Leckie's et al. General Model of the Information-Seeking of professionals.

It is realized that medical librarians need to clearly understand the medical community's level of awareness regarding information resources and services that are available throughout the library. Adequate understanding of the information needs and information-seeking behaviour among medical professionals is also necessary for proper planning and improved collection building, as well as formulation of value-added services and facilities of medical libraries. Therefore, it would be important and appropriate to study the information-seeking behaviour among medical professionals in Malaysia.

## **THE RESEARCH PROCESS**

In the current scenario, it is hard to get feedback from library users on library performance and its ability to provide for their needs and requirements. Thus, the library management must think of necessary strategies and possible means that can be used to get their users' feedback. Besides knowing the local users' needs, we need to improve and compare ourselves with other institutions to meet global needs. Thus, a library needs to conduct research to find out the user's needs. According to Walsh (2001), research is very important to produce useful knowledge and develop human understanding of the field of study. The findings of the research investigation will lead to new theories, and the useful findings influence and help policy makers working in a certain field such as health, welfare, and education.

The research planning started in July 2015, and it took three months to prepare a research proposal to be submitted for the university's short-term grant application. Funding was needed to bear the cost of travelling for discussions and meetings with all the Medical Library Group Members (MLG) regarding this research, postage, and mailing questionnaires for distribution and other costs. As a result, the study can have an inclusive data collection and represent the needs of medical professionals in Malaysia. The proposal was returned with minor corrections and approved after research proposal defence sessions and meetings. In the literature review, many of the previous studies on information-seeking behaviour and needs were from various fields, such as dental hygienists, health professionals in Hong Kong, dental practitioners, and others, but not medical professionals.

In 1996, a research was conducted to study the information-seeking behaviour of health professionals in Hong Kong (Cheng & Lam, 1996). The medical staff, nurses, allied health professionals, hospital executives, managers, and other professional staff from 37 hospitals were involved. Respondents were selected using a proportional, stratified, random sampling method. A sample of approximately 6% (1,257) of the total user population was used. A more recent study in this area was done in Kuwait, focusing on doctors working in government hospitals (Al-Dousari, 2009). The participants of the research included all categories of doctors (consultants, senior specialists, specialists, senior registrar, registrar, assistant registrar, and trainees). Focus group sessions involving 20 doctors were conducted to obtain data for the study.

This research intends to explore the information needs and information-seeking behaviour of medical professionals in Malaysia.

- i) To obtain a demographic understanding of the respondents.
- ii) To ascertain the information needs of medical professionals effectively and efficiently.
- iii) To verify the methods used by medical professionals in Malaysia when acquiring the needed information.
- iv) To determine the satisfaction level of medical professionals with the information services provided by libraries.

After receiving approval from the short-term grant committee, the next procedure was applying for ethical approval because the study involved surveys among medical professionals in the Medical Library Groups in Malaysia. The study received ethical approval from the Human Research Ethics Committee of Universiti Sains Malaysia [Reference No: USM/JEPeM/15040147].

The Raosoft Sample Size Calculator was used to calculate the minimum recommended sample size. Using a 5% margin of error and a confidence level of 95%, it was recommended for this study to have a minimum of 336 respondents in order to get the critical value for normal distribution (Raosoft, 2004).

No.	INSTITUTION	TYPES	TOTAL MEDICAL PROFESSIONAL
1	UKM	Research University	356
2	UPM	Research University	286
3	USM	Research University	484
4	UM	Research University	450
5	IMR	Public University (Non-RU)	48
6	UIA	Public University (Non-RU)	100
7	UiTM	Public University (Non-RU)	148
8	UMS	Public University (Non-RU)	66
9	UNIMAS	Public University (Non-RU)	56
10	UniSZA	Public University (Non-RU)	68
11	UPNM	Public University (Non-RU)	55
12	USIM	Public University (Non-RU)	83
13	AIMST	Private University	28
14	Cyberjaya	Private University	55
15	IJN	Private University	80
16	IMU	Private University	100
17	MSU	Private University	45
18	Newcastle	Private University	48
19	PU	Private University	52
20	USCI	Private University	40
<b>TOTAL</b>			<b>2,648</b>

**Table 1: Number of medical professionals in the medical institutions with libraries**

## **SURVEY METHOD**

A part of the research methodology to get feedback from the library users was through a survey. According to (Connaway & Powell, 2010), the research by survey method is better to study a large number of cases that are geographically dispersed. It is also appropriate to study personal factors and analyse exploratory relationships. They also mentioned that the advantages of using questionnaires for collecting survey data are, among others; the respondent tends to encourage frank answers, eliminate interviewer bias, eliminate variation in the questioning process, questions can be answered at the leisure of the respondents, and the quantitative data is easier to collect and analyse.

Before conducting the actual survey to other libraries, a pilot test must be run to validate the questionnaire constructed to ensure the questionnaire understandable and meet the objectives of the study. A pilot study is one of the most important parts of the research methodology. As mentioned by Van Teijlingen and Hundley (2010), by conducting a pilot study it might give assumption the bottle neck of the project, examine the research protocol procedures or to measure the appropriateness of the instruments used. Thirty sets of questionnaires were distributed in the university campus to test the validation and reliability of the questionnaire designed for this project. This pilot study also to measure the questionnaire used in previous research is still reliable and applicable according to the situation for the current

research. The questionnaire was distributed to a small group of medical professionals in a few medical libraries in a pilot survey to test the validity of the questionnaires.

In the Malaysian context, research was done to explore biomedical scientists' information needs and seeking behavior at the Institute for Medical Research (IMR), Malaysia (Zawawi & Majid, 2001). A total of 84 questionnaires were distributed to the biomedical scientists, and 54 filled-in questionnaires were returned with an overall response rate of 64.3 percent. This study chose medical professionals as respondents because there has been no study yet in Malaysia to discover their information-seeking behavior and needs. Thus, based on that study, the same questionnaire was adopted and adapted to be used in this study. Questionnaires were distributed to medical professionals in selected institutions throughout Malaysia. The questionnaires were divided into four sections, which are:

- i) Section A - Demographic
- ii) Section B - Information and Research Needs
- iii) Section C - Methods for Acquiring Needed Information
- iv) Section D - Satisfaction with Information Services

There are 20 institutions that are listed as members of the Medical Library Group (MLG), which consists of four (4) research universities, eight (8) public universities, and eight (8) private institutions of higher learning. The cluster sampling method will be used to select respondents for this survey by administering the criteria below:

- i) Research universities – all four (4) universities are purposely included due to their significance in research outputs, which demonstrate a good amount of information-seeking behaviour.
- ii) Public universities – out of eight (8) universities, four (4) will be randomly selected.
- iii) Private institutions of higher learning – out of eight (8) institutions, only two (2) will be randomly selected.

Therefore, a total of 10 institutions will be selected to be included in this survey. Librarians at the respective institutions will assist the respondents in answering the questionnaire. This study is collaborative research between librarians who are members of the Medical Library Group. In order to qualify to answer the self-administered questionnaire for this research, respondents need to be medical professionals who are legitimately registered with the Malaysian Medical Council (MMC), and medical professionals should also include those who are under professional training in the university. However, public members, general practitioners, and dental practitioners were excluded from this study. Therefore, only nineteen institutions were eligible to participate in this research based on the criteria that the respondents must be registered with the Malaysian Medical Council (MMC).

Each librarian representative from the Medical Library Group was appointed as an enumerator to help and guide respondents in answering the questionnaires. According to Sullivan (2001), the survey via questionnaires must provide clear direction to indicate and guide respondents to answer, and questions should be ordered so that early questions maximize the response rate but do not affect the response to later questions. The respondents were given ample time to answer the survey. Besides that, the data were gathered from secondary sources, including monographs, journals, articles, proceedings, the internet, magazines, etc. The actual survey began in November 2016 and ended in April 2017.

## **FINDINGS AND DATA ANALYSIS**

The next step is analyzing data gathered through the survey. In this part, a good statistician is really needed to guide and assist the team on how to analyze the data and interpret the findings

to meet the research objectives. Interpreting datasets using a simple way and making them understandable by the readers is very important to make it beneficial and as a reference source to all the members in library fields. Creswell and Creswell (2018) recommended research tips for presenting data analysis:

- i) report information about the number of participants in the sample who did and did not return the survey.
- ii) discuss the method by which response bias will be determined.
- iii) discuss a plan to provide a descriptive analysis of data for all independent and dependent variables in the study.
- iv) if the instrument contains multi-item scale or plan to develop scale, must mention reliability checks for the internal consistency of scales.
- v) identify the statistics and the statistical computer program for testing the major inferential research questions or hypotheses in the proposed study.

In this research, the data were analyzed using IBM SPSS (version 24). Descriptive statistics were applied to present the findings. The appropriate graphical presentation was applied to present the numerical and categorical data findings. A good statistician assisted greatly in the data analysis to make it more valuable and precise.

## **RESULTS**

To sum up, the results showed that medical professionals in Malaysia mostly prefer to get information from the internet (61.8%) and the methods used by surfing the internet (64.8%). In terms of information resources format, they prefer to refer to electronic resources (83.8%) compared to printed (68.2%). Overall satisfaction towards services and facilities provided by the library showed that 81.3% were satisfied. This finding was presented during the Medical Library Group meeting and international conference and published in indexed journals.

## **LESSONS LEARNED**

Proper planning and time management are very important to complete the research within the time frame given successfully. This research has been extended twice and the transition of principal investigator due to unavoidable circumstances, which left some impact on the research planning. Financial control is important to ensure that the expenses are spent wisely. Some of the activities required expenses which came out of the researcher's own pocket to avoid delay in the research progress. The most important aspect is strong teamwork and support from the research team.

Communication is a very crucial factor in achieving research targets and, the distribution of tasks among the team members will lead to successful research. In fact, it is hard to make sure all members give full commitment to make sure the research finishes in time. As librarians, the real focus is on the field of work rather than research, which is added value only. The last part is that publishing papers regarding your research findings will take time. Reading a lot of literature will help in comparing research findings with previous studies to know the current situation of the respondents. Publishing in prestigious journals requires grants to support the publication and will increase the university's ranking as well. Finally, do not ever start the research if you are not ready to sacrifice your time and money. The obstacles and challenges while doing the research will upgrade your librarianship skill instead of teaching the theory of

research methodology to the students and library users, you also may apply and share the real research experience among the library users.

## **CONCLUSION**

Survey research is very important to understand the users' needs and evaluate the services and facilities provided to them. In this paper, we shared our real experiences and lesson learned while conducting this research. We hope that the research conducted gave a valuable experience that can be shared with other communities and make research more visible to other networks to benchmark and improve the quality of library services and review collections. The results from the research were referred to enhance collection development and services among the members of the Medical Library Group (MLG). The high impact of the research was it gave a new thought and ideas of current medical professionals needs toward their libraries compared to previous studies. All the current library users looking forward for online services and digital collections.

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