

**Information needs of Medicine postgraduate students:
Identifying their specific needs through a literature
review and a user survey.**

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المخلص

تناولت هذه الدراسة تحديد احتياجات طلاب الدراسات العليا الطبية من المعلومات، وهو موضوع نادر بشكل مفاجئ في الأدبيات الحالية. في دراسة أجريت عام ١٩٨٤ في جامعة ولاية لويزيانا، وُضعت معايير أولية تتعلق باحتياجات الأطباء من المعلومات، ودوافعهم، ومواردهم، والتي أكدت بروز الإنترنت كمصدر رئيسي للمعلومات للأطباء. ومع ذلك، أشارت أدلة متناقضة من دراسة أجرتها جامعة ماريلاند (١٩٩٦-١٩٩٧) إلى انخفاض استخدام المكتبات. واستنادًا إلى نتائج هذه الدراسة، يتضح أن طلاب الدراسات العليا من الأطباء الذين شملهم استطلاع في كلية الطب بجامعة طرابلس أفادوا بأنهم يزورون المكتبة الطبية بحثًا عن المعلومات، ولكن التحديات التي واجهوها شملت نقص مصادر المعلومات، والإنترنت، وقواعد البيانات. ويمكن استنتاج أن الغالبية العظمى من طلاب الدراسات العليا من الأطباء يستخدمون الإنترنت، بينما أظهرت أقلية منهم استخدام المكتبة كمصدر للمعلومات.

الكلمات المفتاحية: الأطباء، الحاجة إلى المعلومات، طلاب الدراسات العليا في الطب، طلاب الطب، كلية الطب، جامعة طرابلس - ليبيا

Abstract:

This article aims to determine the information needs of medical postgraduate students, a topic surprisingly underrepresented in existing literature. On the 1984 survey in Louisiana State University established initial benchmarks regarding physicians' information need, motivations, and resources which confirmed the internet's prominence as a key information source for physicians. However, contrasting evidence from a University of Maryland (1996-1997) study indicated a low utilization of libraries,

Based on the findings of this study, it is evident that the postgraduate student Physicians questioned in a survey at the Faculty of Medicine at the University of Tripoli that they visit the medical library to seek information but the challenges that they faced included lack of source for information, internet and databases.

The study can be concluded that, the overwhelming majority of postgraduate student physicians appear to use thier internet, while the Minority of them show to use the library as a source of information.

Keywords: Physicians, Information needs, Medical postgraduate students, Medical Students, Faculty of Medicine, University of Tripoli- Libya

Introduction

‘Physicians, as health professionals, need access to information’ (Strother et al., 1986: 227). Furthermore, seeking information may be very important at the present time, but it is likely to become even more important as the study of Medicine becomes more practice-based (Corry, 2001).

In order to make this information available, librarians and other information providers, need to know what the Physicians’ precise needs are. The aim of this article is therefore to determine what kind of information needs Medical postgraduate students have.

The first part of the article will look at what has appeared already in the literature with regard to Physicians’ needs. This section will firstly focus on the reasons why Physicians seek information. It will then show the types of information sought and where this information comes from.

The second part of the article will discuss a survey of Medical postgraduate students’ information needs, carried out by the current researcher with respondents from the Faculty of Medicine the University of Tripoli. This section is divided into two parts: one will look at the methods used and the problems encountered with the questions and answers; the second will look at the results of the survey.

The third part of the article will evaluate the answers of the current survey in view of the data given in the literature review.

This will conclude that the medical postgraduate students appear to have different information needs. Namely, while the majority of them seek specific

information for their research more than anything else, and some of them are more interested in information in order to keep up-to-date with their field.

The objectives of the study

The basic purpose of this study, as presented in this article, is to determine the information needs of medical postgraduate students at the Faculty of Medicine at the University of Tripoli.

1. Literature Review

(i) Reasons for seeking information

As stated in the Introduction, Physicians have information needs. However, very little research has been carried out in this area - in fact, the information needs of professionals in general is still much under-researched, which may be because 'there is no established structure for analysing and evaluating the data (Nicolas and Martin, 1997: 43).

Nevertheless, there has been one survey which looks into the information needs of Physicians. This was carried out in 1984 by Louisiana State University's School of Medicine (U.S.A.) and had the following results regarding the reasons for seeking information:

- Eighty-nine percent of the respondents said they needed information to keep up to date with new research;
- Patient care was almost as popular, with eighty-five percent of respondents needing information for this purpose;
- Fifty-nine percent said that they needed information to manage their medicine practice;
- Thirty-six percent cited research as one of the reasons for needing information;
- Five percent gave other reasons, which included teaching, public speaking and consultant work (Strother et al, 1986).

Some of these responses are supported by evidence from other research in similar areas. For example, Schleyer et al. (1999) and Lie, et al. (2022), also found that many Physicians sought information which would help them keep up-to-date and provide patient care.

On the other hand, there are also Medicine practitioners who need highly specialised information because of the nature of their non-standard practices. These practices include Physicians in the armed forces, who must sometimes carry

out clinical work in times of combat and during humanitarian and peacekeeping missions (Schwarz, 2000).

However, Physicians do not just need to find out new information, such as the answers to specific questions and advances in technology. They also need to maintain the level of knowledge that they have already and this need increases as the Physician becomes older, his/her patient load gets bigger, or s/he has taken a career break, for instance (Buck & Newton..? Rothman, 1974) (Chen J, Bai T, et al 2024)

(ii) Types of information sought

As stated above, even though evidence of professional information needs is scarce, a survey carried out by Louisiana State University's School of Medicine in 1984 provides useful details of the Medicine professionals information needs. Thus, with regard to the types of information these people seek, the results, in descending order of frequency, are:

- New techniques in Medicine
- Products and equipment
- Temporomandibular joint
- Practice management
- Medical complications
- Health hazards
- Patient management
- Drug treatment
- Government regulations
- Specialty procedures

(Strother et al., 1986: 228).

However, one area, not specifically mentioned in the above survey results, but which is of concern to Physicians, is information they may need in a medical emergency. Even though instances of heart attacks and other emergencies are very low, Physicians feel that they need to be equipped to handle them (Girdler & Smith, 1996) and (Iezzoni, L. et al., 2021).

(iii) Sources of information

Apart from understanding why Physicians need information, it is also important to find out where they are most likely to get it from. According to the Louisiana State University School of Medicine survey, the most frequent sources cited were: professional colleagues, personal journal collections, continuing education and association meetings. In fact, ‘approximately 87% [of British Medicine practitioners] read professional journals at least once a month; just over half [attend] five or more days at professional meetings and courses [per] year’ (Buck & Newton, 2001).

On the other hand, libraries of any kind were very low on the Louisiana list (Strother et al., 1986), which is supported by the results of another survey carried out by Fishman et al. (1998). This shows that Physicians only use 4.2 percent of reference titles in the University of Maryland Health Science Library.

However, as the Louisiana survey was undertaken in 1984, there was no mention of the internet, which is now increasingly used by Physicians to find information. In fact, it would appear that most Physicians use the internet frequently both at home and in their practices to support their work (Schleyer, 1999) and (Moick, & Terlutter 2012).

Nevertheless, a survey by the Journal of the American Medicine Association (2000) and Watson (2024) showed that most Physicians prefer to read paper rather than electronic versions of journals (A. M. A. 2000) (Watson 2024). Furthermore, according to the research carried out by Fishman et al. (1998), the students who are most likely to prefer printed sources are over the age of thirty and may not know how to use electronic databases.

On the other hand, library users do not always realise that the printed sources may have an electronic equivalent and may therefore perhaps be happier to use the latter if they were aware of them (Tenopir, King, & Bush . 2004) and (Ghazavi, Moradi, Papi; 2015)

Moreover, according to the research carried out by Davies. (2011) approximately 30% of physicians in all three countries (United States, Canada and United Kingdom) reported using electronic resources “all the time,” more than 50% indicated that they used these resources to enhance their knowledge and/or skills.

2. The Survey

A survey was carried out in October 2024 by the researcher of this article to find out about the information needs of a group of medical postgraduate students who were based at The Faculty of Medicine in the university of Tripoli.

(i) Faculty of Medicine

The Faculty of Medicine at the university of Tripoli was established in 1973, to contribute to qualifying medical personnel. The faculty graduated its first batch in 1980.

The Faculty of Medicine has more than 493 faculty members, most of them are national elements who were among the first batches in this college and who contributed to providing the necessary health services in hospitals, clinics and dispensaries (About faculty of Medicine, 2025).

(ii) Higher Studies and Training Office

The University of Tripoli's Faculty of Medicine launched a post-graduate study in 2021, offering programs in Physiology, Gynaecology, Histology, and Microbiology, equipping physicians with necessary training and skills for fellowship certification (About Higher Studies and Training Office 2025).

(iii) Methods

This study was conducted in the Faculty of Medicine at the University of Tripoli, Libya. The participants consisted of a randomly selected sample of 20 in Postgraduate students.

A questionnaire was given to twenty who are currently undertaking postgraduate qualifications at The Faculty of Medicine at the University of Tripoli.

The questionnaire consisted of nine questions (see Appendix 1). Some of them provided information which correlates with the details given in Section 1 of this article. However, the answers to others are not related to this information.

One reason for this could be that the majority of the current respondents are postgraduate students, whereas those questioned in the previous surveys discussed were generally Physicians who were no longer students. Another reason for the differences between information given is that the current respondents were asked open questions. They therefore may have provided different information if they had been given choices for answers.

Apart from the differences between type of respondent and openness of questions, some of the ones in the current survey (e.g. Questions 8 and 9 in Appendix 1) are not relevant to the task, since they cannot be compared with the responses discussed in Section 1.

Finally, it would have been better to have tailored the questions to the kind of information provided by other surveys, so that similar information could have been collected more easily (e.g. the frequency with which people use certain sources of information). However, due to the difficulty in finding relevant literature, the questionnaire had to be conducted before the sources were found.

(iv) Results

The majority of the respondents in the current survey said that they need information for their studies. However, seven of them did say that they needed it to keep up-to-date with their field. Furthermore, one said that s/he sought information for personal interest.

All of the respondents said that s/he looked for information on the internet. The next most popular source of information was Medical Literature and Journals, while less than half of the respondents mentioned the library as a source for any reason. At the end of the scale, one or two individuals said that they used theses and their own field research for information.

Even though the majority of the respondents said that they used the internet as a source of information, less than half of them said that this was an information service available to them. Equally, only four mentioned the library as an information service which was available. These data could be accounted for by the fact that the question (4) was too closed (see Section 2i), as some of the respondents were very specific. For example, one said that s/he used laboratory reports, another mentioned Medical Databases and Literature and another departmental meeting.

Each of the respondents gave very specific information about the kind of information s/he needed. In other words, what they all needed was information for their specialist area of study (e.g. Physiology, Gynaecology, Histology, and Microbiology), more than anything else (see Appendix 2).

Most of the postgraduate students said that they shared information with colleagues, and a few said that they did not share information with others.

Finally, regarding access to library facilities most of them said did not know what was available, and less than half of the respondents said that they had access to library facilities. On the other hand, most of them said did not know if the interlibrary loans were available or not, and five of the respondents said that if the service were available could be better.

(v) Evaluation

While the majority of postgraduate Physicians say that they want information so that they can keep up-to-date, the focus for postgraduate Physicians is the need for information in order to carry out research. Although some of the latter also said that they seek information in order to keep up-to-date, it would appear that those in study need more specialist information than those who are not. In other words, the other postgraduate Physicians are more concerned about acquiring information that will be directly useful to their practice in general.

On the other hand, there is one big dissimilarity between of a group of medical postgraduate students who are not using the internet and those who are: this study shows the internet is an overwhelmingly popular source of information. In fact, it appears to be more important for both sets of people than using a traditional library of any kind

Another dissimilarity is in the use of Databases and Medical Literature and Journals to find out information. As discussed in Section 2i, however, it is difficult to determine how much medical postgraduate students use this in comparison with others, since there were no questions about frequency in the questionnaire used in the current survey.

Conclusion

This article looked at the information needs of medical postgraduate students, which proved to be rather difficult because of the lack of data in the literature on this subject. However, one survey was carried out in the state of Louisiana, USA, in 1984 (cf. Section 1), which provided a range of information regarding the reasons why Physicians needed information, what they needed and where they found it.

In addition to the Louisiana survey, which was carried out before the Internet became available, this article discussed the findings of another survey which looked specifically at Physicians' use of the internet (c.f. Section 1iii). From

this it was clear that internet usage was a popular way to find information in this field.

On the other hand, a survey carried out at the University of Maryland Health Services Library from March 1996 to February 1997 supported the findings of the Louisiana survey, which suggested that libraries were not a popular way to find information. However, journals kept by Physicians themselves appeared to be more popular than online versions and were much used by Physicians.

The study can be concluded that, the medical postgraduate students questioned in a survey at the Faculty of Medicine at the University of Tripoli this year by the current researcher, which was the focus of the second part of the article, supported the findings discussed in Section 1. That is, the overwhelming majority of the medical postgraduate students appear to use the internet as a source of information but are less likely to use the library.

Furthermore, the postgraduate students appear to have different information needs. Namely, while the majority of them seek specific information for their research more than anything else, and some of them are more interested in information in order to keep up-to-date with their field.

Recommendations

- ❖ The Medicine library should consistently inform medical postgraduate students that it is the most reliable source for obtaining necessary information.
- ❖ The study suggests that the improvement of library services and information sources for postgraduate students is necessary to cater to their diverse information needs.
- ❖ The study suggests that providing medical postgraduate students with the necessary information can enhance their performance and aid their studies and research.
- ❖ The Medicine library ought to use more inventive approaches in the packaging and repackaging of information, as well as offer informational materials for postgraduate students in many formats.

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Appendix 1

Questionnaire

USER PROFILE – Medicine postgraduate students

I am Dafer Elmrabet a Lecturer at the Azzaytuna University, and I am conducting research into the information needs of Medicine postgraduate students. I would therefore be very grateful if you could answer these questions for me.

Thank you very much

1. Demographic Information?

Would you please introduce yourself, your department, your area of specification

.....

2. Why do you need information?

To keep-up to date ☐ Information needed for research ☐ Personal interest ☐

3. Where do you look for your information?

Library ☐ Internet ☐ Online Medical Databases (such as PubMed) ☐
Medical Literature and Journals ☐ Field research ☐

4. What kind of information services are available to you?

Internet ☐ Library ☐ Medical Databases and Literature ☐
Lab reports ☐ Department meeting ☐

5. Do you share information with others?

Yes, I do share info. ☐ I sometimes share info. ☐ No, I do not share info. ☐

6. Do you have access to library facilities?

Yes, access to Library facility ☐ No, access to Library facility ☐ I do not know ☐

7. Does the medicine library provide interlibrary service loans?

Yes, (access to interlibrary loan) ☐ No, (access to interlibrary loan) ☐
could be better if there is service ☐ I do not know ☐

8. How would you evaluate your skill at finding information?

.....
.....
.....
.....

9. How could your search for information be improved?

.....
.....
.....

Appendix 2

Questionnaire responses

Table 1: Why do you need information?

| Reason | No. of responses |
|---------------------------------|------------------|
| To keep-up to date | 7 |
| Information needed for research | 12 |
| Personal interest | 1 |

Table 2: Where do you look for information?

| Location | No. of responses |
|---------------------------------|------------------|
| Library | 5 |
| Internet | 10 |
| Databases (such as PubMed) | 1 |
| Medical Literature and Journals | 8 |
| Field research | 2 |

Table 3: What kind of information services are available to you?

| Type of service | No. of responses |
|----------------------------------|------------------|
| Internet | 10 |
| Library | 5 |
| Lab reports | 1 |
| Medical Databases and Literature | 1 |
| Department meeting | 1 |

Table 4: Do you share information with others?

| | |
|--------------------------|----|
| Yes, I do share info. | 12 |
| I sometimes share info. | 6 |
| No, I do not share info. | 2 |

Table 5: Do you have access to library facilities?

| Type of response | No. of responses |
|---------------------------------|------------------|
| Yes, access to Library facility | 5 |
| I do not know what available | 12 |
| No, access to Library facility | 1 |

Does the medicine library provide interlibrary loans?

| Type of response | No. of responses |
|-------------------------------------|------------------|
| Yes, (access to interlibrary loan) | 1 |
| I do not know | 12 |
| No, (access to interlibrary loan) | 1 |
| could be better if there is service | 5 |