

Information Literacy among Educational Academic Members of Zabol University of Medical Sciences, Zabol, Iran

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ABSTRACT

Introduction: Development of information literacy is considered a required factor for instructors of higher education system due to its impact on educational and research activities, and performance of educational academic members is a main factor that affects the output of system. The aim of this study was to report and compare the information literacy among the academic members of departments of clinical and basic biomedical sciences in 2011. **Methods:** A cross-sectional survey was performed using a valid and reliable questionnaire distributed among 48 full-time equivalent academic members of Zabol University of Medical Sciences in both clinical (19 members) and basic biomedical departments (29 members). Data were analyzed using Fisher, Mann-Whitney and Chi-square statistics in SPSS 17. **Results:** Information literacy of the members was at an average level at both knowledge and attitude levels but it was low at the practice. There was a significant difference between two groups in terms of awareness about information resources; however, the difference was not significant for the utilization of information resources. **Conclusion:** Members of department of basic biomedical sciences were more aware than those of clinical department about the information resources but such awareness has not resulted in more use of resources in the educational and research activities. Despite positive attitude of all members towards the application of electronic information resources in both educational and research activities, their awareness of information literacy skills and practicing were not satisfying in educational and research sections. As a final point, Information literacy is hence suggested as a part of continuing medical education courses.

Introduction

The skill an individual needs to live within an information society is called 'information literacy' (IL).¹ The term indicates that an informational literate individual should be trained to use information resources to solve his/her problems using the information.² IL consists of three skills of finding problems, resolving them, and decision-making.³ In addition, awareness about information resources and their location to answer the questions are fundamentals of IL. In 1980s, IL was enriched by technology element, too. Changes in higher education through information revolution and information technology paradigm led in the necessity of development of IL in higher education.⁴ While the rapid developments in healthcare system necessitate changes in higher education, in the new approach of higher education, knowledge is the cornerstone for all the

activities that empowers the role of academia to change and revise the missions and strategies of higher education.⁵ The society in twenty one century is a learning society and living there needs equipments of learning since acquiring information and information retrieval skills are characteristics of an information society. Obviously, accessing information among large amounts of growing information requires skills such as IL.⁶⁻¹⁰ On the other hand, research and education as main activities in the universities are highly dependent on the IL skills of academic members as cores of information society in the university that their unawareness about resources, retrieval methods and information resources is a barrier for their activities.¹¹

The study aimed to determine current status of different aspects of IL among academic members of departments of

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clinical and basic biomedical sciences in newly established Zabol University of Medical Sciences to assess their knowledge, attitude and practice in information resources. The results of this study may help other newly founded education and research institutes in the development of IL plans. Also, regarding the different educational and research roles of members of each department in healthcare system, we compared the departments to display new aspects which should be considered in medical education by each academic staff.

Methods

All 48 academic members of Zabol University of Medical Sciences in departments of clinical (19 members) as well as basic biomedical sciences (29 members) participated in this cross-sectional study and filled out the questionnaire. Basic medical sciences department consisted of biostatistics and epidemiology, parasitology, occupational health, environmental health, biochemistry, pharmacology, health economics, pharmaceuticals, medical physics, fungology, immunology, medical records, health administration, anatomy, pathology, toxicology, and nutrition members. And clinical department had internal surgery, neonatology, pediatrics, anesthesiology, gastroenterology, midwifery and nursing, dermatology, psychiatry and clinical psychology members. All members participated voluntarily in the study and they were aware about the aim of study, confidentiality of names, and future applications of the results.

We used a three-part valid and reliable questionnaire to assess the IL status.¹² The first part included participants' demographic data while the second part, containing questions 14-25, assessed the awareness about the specialized information resources of participants' field. The last part of the questionnaire, including questions 26-38, gathered the data about usage status of the specialized information resources among the participants. At the end of some of multi-optional questions, we asked participants to list some titles of their specialized resources to create more precise answers and control possible fake replies. Unreliable, unfilled, and incomplete questions were withdrawn from the study. The second and third parts of the questionnaire were designed as 6-level Likert options scored 0-5. We considered the average score of each section as its IL score.

Results

Participants composed of 35.4% females and 64.6% males. The academic level of most members was instructor (77.1%) and the rest were assistant professors. Teaching history was ranged between six months and over 19 years. Most of them were passing first academic years; so, learning IL skills was important for their educational and

research activities.

There was a significant difference between two groups in terms of awareness about information resources (Table 1, $P = 0.028$) and members affiliated to basic biomedical sciences, acquired better scores. However, there was no difference among the departments in using information resources in both print and electronic forms (Table 2, $P = 0.396$).

Although the members of basic medical sciences department were aware of information resources (Table 3), such awareness did not quarantine the use of resources (Table 4). In addition, all participants were ranged at average IL level.

Table 1. Comparing departments on the awareness about information resources

Department	Count	Mean	Mann-Whitney	P
Basic Biomedical Sciences	24	21.88	87	0.028
Clinical Sciences	13	13.69		

Table 2. Comparing departments on the use of information resources

Department	Count	Mean	Mann-Whitney	P
Basic Biomedical Sciences	20	18.50	107	0.396
Clinical Sciences	13	15.23		

Table 3. Awareness levels about information resources in the departments

Department	Basic Biomedical Sciences		Clinical Sciences		Test Results
	No.	%	No.	%	
Low	6	46.1	2	08.4	Fisher = 7.32 P = 0.024
Moderate	5	38.5	11	45.8	
High	2	15.4	11	45.8	
Total	13	100	24	100	

Table 4. Usage levels of information resources in the departments

Department	Basic Biomedical Sciences		Clinical Sciences		Test Results
	No.	%	No.	%	
Low	5	25	5	38.4	Fisher = 0.767 P = 0.744
Moderate	8	40	4	30.8	
High	7	35	4	30.8	
Total	20	100	13	100	

Discussion

The study highlights that the members of basic biomedical sciences department are more aware than the clinical department members about the specialized information resources. There is a possibility that clinicians spend mostly their time to practice in clinical settings so they do not have enough time to acquire information. Also, we found that higher awareness among the basic

biomedical sciences members about the information resources does not quarantine using the resources. This may be related to the lack of enough encouragements and motivation for educational and research initiatives. As IL skills are pre-requisites for scientific production in the universities, Fattahi declared that training IL leads in the encouragement and motivation of research.¹³ Considering the specific status of Zabol University of Medical Sciences as a newly established university in a deprived region of Iran, it is more likely that the members spend most of their time for healthcare practical services instead of education and research. As a result, it was found that IL level was low among the members; since the need for clinical and laboratory services could be more important than research and education in the area.

We could not find any similar study which had compared two departments so it could be considered by other researchers for further future comprehensive studies. However, we found a related study that stated the necessity of assessing the influence of IL in the provision of evidence for achieving the goals of IL plans.^{14,15} In addition, Parirokh and Moghaddaszadeh focused on librarians' roles in training and supporting IL programs,¹⁶ especially where the librarians presented evidences of most students who were not too skilled to pass some of their academic courses. So talking about life-long learning was useless.¹⁷ Moreover, our findings were in line with the study of Farajpahlou and Moradi Moghadam in that it showed the necessity of promoting and empowering the IL skills among academic members.¹⁸ All these studies confirm the importance of holding IL training workshops as Reghabi and Sharifi's study declared that participants of IL workshops exposed the effectiveness of training in the identification, access, and retrieval of their required information.¹⁹

In brief, the study demonstrates the need for IL training as a part of medical education plans including academic curricula and continuing medical education courses. Furthermore, there should be policies to give the members encouragement to integrate their educational, research, and practical activities which will brighten IL gaps and training requirement among them.

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Competing interests

Authors declared no competing interests.

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