Identifying and analyzing the prerequisites of access to information literacy skills among the students of Paramedical sciences faculty and compare their information literacy level

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ABSTRACT

   Information literacy is a set of individual skills and abilities to accurate identifying, accessing, using, evaluating and reviewing of information resources. Since this skills improved the student capabilities to retrieval, management and use of information; nowadays, it is considered as one of the most importantcriterion fortheevaluation of students by forums. This study is a descriptive and analytical applied survey. The systematized samples were 103 students in paramedical sciences faculty Shahid Beheshti University of medical sciences in 3 level: undergraduate (BA), master (MA) and PhD students who were studying during 2011-2012.The data collection tool is the questionnaire which published by ACRL and based on information literacy standards. This questionnaire has 55 item arranged in Likert scale. Results shows that the information literacy level in all studentwas50 % lower than the level expected of ACRL standards except Ph.D. students in basic science and MA students in medical library and information science. The level of information literacy in PhD and MA students was significantly higher than BA students while the graduate students level was not significantly different.

Keywords : Information literacy; Paramedical sciences faculty Students; ACRL.

INTRODUCTION

   The literature of Information Literacy (IL) is a comparatively recent growth and quite explicitly built on the foundation of library practice. The term "information literacy" does not appear to predate its use by Paul Zurkowski in 1974, in a report written for the US National Commission on Libraries and Information Science [1]. Information literacy is a way of thinking rather than a set of skills. It is a matrix of critical and reflective capacities as well as disciplined creative thought, that impels the student to range widely through the information environment, forming initial hypotheses, collecting information sources and data, testing and retesting search paths, formulating and reinventing search strategies [2]. Therefore Information Literacy is a multifaceted issue, as it involves educational, cultural, social, political and ethical factors, as well as information policy measures. This is observable from the specialized literature on Information Literacy (IL), but is also easily evident from the wide variety of topics covered by some recent Information Literacy related Conferences .In fact, the exercise of analyzing the call for papers of the Conferences that are announced on the National Forum on ILwebsite, reveals a large set of topics, ranging from "active learning" to "assessment of information literacy initiatives", "critical thinking", "curriculum development", "teacher education", "Bologna Process", "information literacy in the workplace", "standards", "LIS education", just to mention a few [3]. So we retrieved many topics in this field with the subject of "Information Literacy".This Topics shows that there are a positive relation between the increasing of student knowledge and enhancing the level of information literacy [4,5,6,7]. So the Education of Information Literacy (EIL) has to embodied in the main curriculum of universities

and institutions for the aim of empowering the students. As regards, Recognition andpromotion ofinformation literacy in graduate students has a main role in creating the culture of use of information and correct utilization of information technology. Now a day the EIL as an important object in the curriculumswas the main purpose of many research projects. For example El Centro College (Dallas County Community College District) librarians and the psychology faculty collaborated in bringing information and research skills into the psychology curriculum.

The sessions included (a) the research process of finding articles in professional psychology journals, (b) instruction on creating references using NoodleTools ™ (an integrated tool for note-taking, outlining, and building references), and (c) how to write in American Psychological Association (APA) style. The integration of the library sessions within the classroom setting of team teaching with the instructor suggests an ideal opportunity for educators to enhance the academic, research, and information literacy education for all students [8]. A Qualitative research project in Iran with the aim of proposing curriculum of EIL for higher education students have done in 2006. In This study was emphasized on the formal education and the curriculum was designed based on ACRL standards [9].

In this study is concentrated on assessing the rate of information literacy among the students of paramedical science faculty, Shahid Beheshti university of medical sciencesin 3 level: undergraduate (BA) , master(MA) and PhD students to advise some solutions for improving thecurrent situation.

MATERIALS AND METHODS

This study is a descriptive and analytical applied survey. The systematized samples were 103 students in paramedical sciences faculty Shahid Beheshti university of medical sciences in 3 level: undergraduate , master (MA) and PhD students who were studying during 2011-2012.The data collection tool is the questionnaire which published by ACRL (Association of College and Research Libraries) in 2000 and based on information literacy standards. This questionnaire has 55 item arranged in Likert scale [10].

RESULTS

Demographic characteristics of the participants are presented in table 1- 2 and finding in table 3-6. Table 3 show that the maximum rate of information literacy in PhD students was 50% in basic sciences field. Table 4 show that the maximum rate of information literacy in MA students was 56.64% in Medical Library & Information Science field.

Table 5 show that the maximum rate of information literacy in BA students was 45.67% in Medical Library & Information Science field. Table 6 shows that the rate of information literacy at MA and PHD students has no significant difference while this rate among BA students and post graduate students has significant difference. Table 7 shows that the rate of information literacy at the medical library and information science students (code 5)and the basic sciences students (code 6)has significant difference with others.

Table1. Demographic characteristics of participants according to the field of study

Field Code	Field of study	number	percentage
1	Biostatistics	8	7.8
2	Radiology	19	18.4
3	Health information management	27	26.2
4	Laboratory sciences	25	24.3
5	Medical library & Information Science	16	15.5
6	Basic science	8	7.8
Total		103	100.0

Table2. Demographic characteristics of participants according to the level of study

Level	Number	Percentage
BA	38	36.9
MA	38	36.9
PhD	27	26.2
Total	103	100.0

Table3. Average and standard deviation of information literacy rate among PhD students

Field of study	Average	Number	Standard Deviation
Biostatistics	39.83	6	5.419
Health information management	39.92	13	5.575
Basic Science	50	8	4.840

Table 4. Average and standard deviation of information literacy rate among MA students

Field of study	Average	Number	Standard Deviation
Biostatistics	31	2	7.071
Health information management	36.43	7	15.274
Laboratory sciences	40.33	6	5.046
Radiology	29.30	10	11.917
Medical Library & Information Science	56.64	13	7.881

Table 5. Average and standard deviation of information literacy rate among BA students

Field of study	Average	Number	Standard Deviation
Health information management	20.71	7	9.411
Laboratory sciences	24.84	19	9.130
Radiology	25.78	9	11.998
Medical Library & Information Science	45.67	3	14.468

Table 6. ANOVA test to determine the rate of information literacy at different level of students and Tukey's multiple tests to compare the paired

(I) Level	(J) Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
BA	MA	-15.789[*]	2.777	.000	-22.40	-9.18
	PhD	-16.942[*]	3.046	.000	-24.19	-9.69
MA	BA	15.789[*]	2.777	.000	9.18	22.40
	PhD	-1.152	3.046	.924	-8.40	6.10
PhD	BA	16.942[*]	3.046	.000	9.69	24.19
	MA	1.152	3.046	.924	-6.10	8.40

* The mean difference is significant at the 0.05 level.

Table 7. ANOVA test to determine the rate of information literacy at different field of study and Tukey's multiple test to compare the paired

(I) field code	(J) field code	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	9.993	4.523	.243	-3.16	23.15
	3	3.588	4.320	.961	-8.97	16.15
	4	9.065	4.360	.307	-3.61	21.74
	5	-16.812[*]	4.647	.006	-30.32	-3.30
	6	-12.375	5.366	.202	-27.98	3.23
2	**1**	-9.993	4.523	.243	-23.15	3.16
	3	-6.405	3.214	.354	-15.75	2.94
	4	-.928	3.267	1.000	-10.43	8.57
	5	-26.806[*]	3.642	.000	-37.39	-16.22
	6	-22.368[*]	4.523	.000	-35.52	-9.22
3	**1**	-3.588	4.320	.961	-16.15	8.97
	2	6.405	3.214	.354	-2.94	15.75
	4	5.477	2.979	.446	-3.18	14.14
	5	-20.400[*]	3.386	.000	-30.25	-10.56
	6	-15.963[*]	4.320	.005	-28.52	-3.40
4	**1**	-9.065	4.360	.307	-21.74	3.61
	2	.928	3.267	1.000	-8.57	10.43
	3	-5.477	2.979	.446	-14.14	3.18
	5	-25.878[*]	3.436	.000	-35.87	-15.89
	6	-21.440[*]	4.360	.000	-34.12	-8.76
5	**1**	16.812[*]	4.647	.006	3.30	30.32
	2	26.806[*]	3.642	.000	16.22	37.39
	3	20.400[*]	3.386	.000	10.56	30.25
	4	25.878[*]	3.436	.000	15.89	35.87
	6	4.438	4.647	.931	-9.07	17.95
6	**1**	12.375	5.366	.202	-3.23	27.98
	2	22.368[*]	4.523	.000	9.22	35.52
	3	15.963[*]	4.320	.005	3.40	28.52
	4	21.440[*]	4.360	.000	8.76	34.12
	5	-4.438	4.647	.931	-17.95	9.07

DISCUSSION

Information literacy education is the most important way to transfer the necessary skills to students especially in postgraduates. Cobus (2008) said that IL skills and competencies integrated into public health curricula through a collaborative partnership between public health educators and librarians can help integrate the IOM's core competencies and improve public health education[11].This subject approved by Swanson (2011) too. He believes that a critical information literacy model centers libraries within the curriculum where students find, evaluate and use information in order to conduct successful research.If we focus on ELI in the postgraduate curriculums it may be leads to empowering the students in the presence of information society in global era [12].

This approved by Kleyman&Tabaei(2012) too. They approved that Engaging academic library faculty and providing students with guided instruction has a significant positive effect on objective as well as subjective measures of students' skills.According to them the objective measures of these skills revealed an increase from 25% to 65% of the class scoring above 70% correct [13].So information literacy cannot be addressed only by librarians or only in isolated experiences. Instead, we need a holistic approach through which invested campus partners come together and advocate for the importance of information literacy and accept shared responsibility in it. Integrating information literacy across curricula is an opportunity and a challenge for which librarians are well-poised to lead campus colleagues and other stakeholders,

facilitating engagement with the issue [14].considering to findings of researches and the results of this project; we proposed that ELI should be a main course in postgraduate's curriculum in Iran because the information literacy level in all student in this research was50 % lower than the level expected of ACRL while the Persian curriculum was designed based on ACRL standards by Iranian specialists [9] If not we cannot achieve to our optimized idea in global era .

CONCLUSION

Due to information explosion; it has become increasingly clear that students cannot learn everything they need to know in their field of study, within a few years, at school or the university. Information literacy equips them with the critical skills necessary to become independent lifelong learners. This is more important when we encounter to postgraduate

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student as an effectual person in research projects. So all students, specially postgraduate ones and even the scientific society need special skills known as "Information Literacy" to meet the fast increasing information in order to use their educational and economical purposes more effectively. Information literacy education in two ways of teaching methods (formal and informal) is considered as the solution for the information explosion.

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