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THE INVESTIGATING OF LIBRARIANS' ROLE IN INFOTHERAPY AT HOSPITAL LIBRARIES AFFILIATED TO MEDICINE SCIENCES

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ABSTRACT

This paper attempts to study librarians' role in providing infotherapy at hospital libraries affiliated to Medicine Sciences of Tehran, ShahidBeheshti and Iran Universities. The research method is analytic – survey of applied type. The research society consists of 66 librarians working in hospital libraries affiliated to Medicine Sciences of Iran, Tehran, and ShahidBeheshti Universities. The research data were gathered with the questionnaires completed by 55 librarians. The data analysis was implemented with spss20 application, Chi-square, and Spearman correlation tests. The findings indicate that 74.4% of the librarians believe that the rate of relations with physicians for providing infotherapy service is above average while 85% of them evaluate librarians' role for developing infotherapy to patients below average with or without physicians' information prescription over hospitalization, release, and presence in different hospital departments. Up to 72% and 75% of the librarians state that sufficiency rate of information sources for providing infotherapy and librarians' use of infotherapy methods could be above and below average respectively. In addition, 70% of them evaluate administrative barriers for developing infotherapy service above average. The data indicate that the rate of librarians' role in infotherapy is above average dealing just with physicians but it is below due to patients and their families over hospitalization, release, and presence in different hospital departments. The main reason is considered administrative barriers for providing infotherapy service by librarians.

Keywords: *Decision Making, Hospital Librarians, Information Prescription, Infotherapy*

INTRODUCTION

Infotherapy signifies prescribing appropriate information, in an appropriate time, for an appropriate person (Kemper, 2004). Infotherapy has originated from two terms, information and therapy indicating healing power of knowledge. Infotherapy deals with prescribing documentary and evidence-centered data to satisfy clients' information needs and facilitate their decision making. Selecting and collecting data, thus, seems necessary.

The purpose of infotherapy is to preserve and improve people's physical/mental health (Noroozi, 2011). Now, a question could be suggested; "How well would these data be presented? And who may establish them? Due to numerous pieces of information and lack of knowledge on data bases and required facts, if a patient tends to search by himself, he will be puzzled and cannot obtain appropriate information in a short time. On the other hand, if physicians attempt to search for data relevant to evidence by themselves, they will face time shortage and other problems.

In this case, the role of librarians' as information experts will be determined in a specific period of time. Librarians consulting physicians are capable to offer impressive help. In developed countries, infotherapy is suggested by a therapeutic team consisting of a physician, a librarian, and a patient. Mollaei (2001), in his study, "Reviewing the effect of information prior to hernia repair surgery on the anxiety and pain after patients' hospitalization", concludes that pre-surgery information could relieve post-surgery anxiety. ZarehGavgani (2012), in her study, "Information therapy and patients' preferences", states that patients' literacy level, nation's economic/cultural aspects, and use limitations of technological applied/communicative plans to successfully implement infotherapy in a developing country will be effective.

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MATERIALS AND METHODS

This is an analytic-survey research. The studied statistical society consists of the whole 66 staff members working in hospital libraries of Tehran Medical Sciences, ShahidBeheshti, and Iran universities. Because of the small statistical society conducted with census method, this research needs no sampling. The instrument used for data gathering is a researcher-made questionnaire developed and formulated with a faculty counselor’s viewpoints. 55 questionnaires containing general and specific questions have been completed.

RESULTS AND DISCUSSION

Results

To respond to the research main question No.1 “How efficient would librarians’ contribution be at infotherapy” the following data have been achieved.

Table 1: Frequency distribution of the role of librarians in infotherapy

	Very much Frequency	%	Much Frequency	%	Average Frequency	%	A little Frequency	%	Very little Frequency	%	Total Frequency	%
Do you agree that librarians have active role in infotherapy?	21	38.2	18	32.7	10	18.2	4	7.3	2	3.6	55	100
Do you agree that librarians have direct role in infotherapy?	8	14.5	16	29.1	15	27.3	11	20.0	5	9.1	55	100
To provide infotherapy service, I monitor different hospital departments	2	3.6	2	3.6	9	16.4	12	21.8	30	54.5	55	100
I send information to released patients	2	3.6	5	9.1	3	5.5	11	20.0	34	61.8	55	100
I keep in touch with patients until they gain perfect health	3	5.5	4	7.3	6	10.9	6	10.9	36	65.5	55	100
I communicate with physicians for providing infotherapy service (indirect infotherapy)	15	27.2	16	29.1	10	18.1	5	9.09	16	9	55	100
I communicate with patients’ families for providing infotherapy service	2	3.6	4	7.3	11	20.0	7	12.7	31	56.4	55	100

As show in table 1, the responses to the question, “Do you agree that librarians have active role in infotherapy?” include; 38.2% very much, 32.7% much, 18.2% average, 7.3% a little, and 3.6% very little. The participants’ responses to “Do you agree that librarians have direct role in infotherapy” include; 14.5% very much, 29.1% much, 27.3% average, 20.0% a little, and 9.1% very little. Their responses “To provide infotherapy service, I monitor different hospital departments” include; 3.6% very much, 3.6% much, 16.4% average, 21.8% a little, and 54.5% very little. The librarians’ responses to “I send information to released patients” include; 3.6% very much, 9.1% much, 5.5% average, 20% a little, and 61.8% very little.

The responses to “I keep in touch with patients until they gain perfect health” include; 5.5% very much, 7.3% much, 10.9% average, 10.9% little, and 69.5% very little. The responses to “I communicate with physicians for providing infotherapy service (indirect infotherapy)” include; 27.2% very much, 29.1% much, 18.1% average, 9.9% a little, and 16% very little. The responses to “I communicate with patients’ families for providing infotherapy service” include; 3.6% very much, 7.3% much, 20.0% average, 12.7% a little, and 56.4% very little.

To respond to “How much value added service would librarians use for providing infotherapy service” the following data have been achieved.

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Table 2: Frequency distribution of value added service use for infotherapy by librarians

	Very much Freque ncy	%	Much Freque ncy	%	Average Frequency	%	A little Frequency	%	Very little Freque ncy	%	Total Freque ncy	%
I will give information brief to patients	3	5.5	5	9.1	7	12.7	11	20.0	29	52.7	55	100
I will give simplified information to patients	3	5.5	3	5.5	8	14.5	9	16.4	32	58.2	55	100
I will give translated information to patients	3	5.5	2	3.6	9	16.4	9	16.4	32	58.2	55	100
I will modify information pattern based on patients' capability	3	5.5	3	5.5	8	14.5	12	21.8	29	52.7	55	100
I will make information readable for patients	3	5.5	5	9.1	9	16.4	8	14.5	30	54.5	55	100
I will develop links of infotherapy sources on my website for patients' access	2	3.6	4	7.3	8	14.5	10	18.2	31	56.4	55	100

Table 3: Frequency distribution of the rate of access to information sources on infotherapy

	Very much Freque ncy	%	Much Freque ncy	%	Average Freque ncy	%	A little Frequency	%	Very little Freque ncy	%	Total Freque ncy	%
I access adequately to update medical books	18	32.7	19	34.5	8	14.5	5	9.1	5	9.1	55	100
I access adequately to printed medical journals	15	27.3	14	25.5	11	20.0	6	10.9	9	16.4	55	100
I access adequately to electronic medical journals	21	38.2	16	29.1	11	20.0	1	1.8	6	10.9	55	100
I access adequately to the internet	23	41.8	18	32.7	5	9.1	6	10.9	3	5.5	55	100
I access adequately to medical data bases	22	40.0	19	34.5	5	9.1	3	5.5	6	10.9	55	100

As shown in table 2, the responses to the statement “I will give brief information to patients” include; 55% very much, 9.1% much, 12.7% average, 20.0% a little, and 52.7% very little. The response to “I will give simplified information to patients” include; 5.5% very much, 5.5% much, 14.5% average, 16.4% a little, and 58.2% very little. The responses to “I will give translated information to patients” include; 5.5% very much, 3.6% much, 16.4% average, 16.4% a little, 58.2% very little. The responses to “I modify information based on patients' capability” include; 5.5% very much, 5.5% much, 14.5% average, 21.8% a

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little, and 52.7% very little. The responses to “I make information readable for patients” include; 5.5% very much, 9.1% much, 16.4% average, 14.5% a little, and 54.5% very little. The responses to “I develop links to appropriate infotherapy sources on my website for patients’ access to information” include; 3.6% very much, 7.3% much, 14.5% average, 18.2% a little, and 56.4% very little.

To respond to the research main question “How adequate are information sources to provide infotherapy by librarians” the following data have been achieved.

As shown in table 3, the responses to the statement “I access adequately to updated medical books” include; 32.7% very much, 54.5% much, 14.5% average, 9.1% a little, and 9.1% very little. The responses to “I access adequately to printed medical journals” include; 27.3% very much, 25.5% much, 20% average, 10.9% a little, and 16.4% very little. The responses to “I access adequately to electronic medical journals” include; 38.2% very much, 29.1% much, 20% average, 1.8% a little, and 10.9% very little. The responses to “I access adequately to the internet” include 41.8% very much, 32.7% much, 9.1% average, 10.9% a little, 5.5% very little. The responses to “I access adequately to medical data bases” include; 40% very much, 34.5% much, 9.1% average, 5.5% a little, and 10.9% very little.

To respond to the research main question “To what extent can librarians use the procedures of providing infotherapy service?” the following data have been achieved.

Table 4: Frequency distribution of the use rate of providing infotherapy service procedures

	Very much		Much		Average		A little		Very little		Total	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
I use verbal communication for infotherapy	3	5.5	9	16.4	15	27.3	10	18.2	18	32.7	55	100
I use messages for infotherapy	1	1.8	4	7.3	6	10.9	12	21.8	32	58.2	55	100
I use e-mail for infotherapy	3	5.5	3	5.5	13	23.6	8	14.5	28	50.9	55	100
I use social networks for infotherapy	0	0	6	10.9	15	27.3	8	14.5	26	47.3	55	100
I use health care brochures and pamphlets for infotherapy	3	5.5	1	10.9	20	36.4	10	18.2	16	29.1	55	100
I use current infotherapy service of infotherapy	-	-	13	23.6	15	27.3	11	20.0	16	29.1	55	100
I offer referral and bibliographic service to patients	3	5.5	10	18.2	12	21.8	11	20.0	19	34.5	55	100
I offer advisory service about infotherapy to patients	4	7.3	4	7.3	15	27.3	8	14.5	24	43.6	55	100
I teach patients how to access to information about infotherapy	5	9.1	3	5.5	19	34.5	9	16.4	19	34.5	55	100
I use portals of infotherapy	5	9.1	9	16.4	11	20.0	9	16.4	21	38.2	55	100
I use weblogs of infotherapy	4	7.3	6	10.9	9	16.4	10	18.2	26	47.3	55	100

As shown in table 4, the responses to the statement “I use verbal communication for infotherapy” includes; 5.5% very much, 16.4% much, 27.3% average, 18.2% a little, and 32.7% very little. The responses to “I use messages for infotherapy” include; 1.8% very much, 7.3% much, 10.9% average,

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21.8% a little, and 58.2% very little. The responses to “I use e-mail for infotherapy” include; 5.5% very much, 5.5% much, 23.6% average, 14.5% a little, and 50.9% very little. The responses to “I use social networks for infotherapy” include; 10.9% much, 27.3% average, 14.5% a little, 47.3% very little. The responses to “I use health care brochures and pamphlets for infotherapy” include; 5.5% very much, 10.9% much, 36.4% average, 18.2% a little, and 29.1% very little. The responses to “I use current information service of infotherapy” include; 23.6% much, 27.3% average, 20% a little, and 29.1% very little. To response to “I offer referral and bibliographic service to patients” include; 5.5% very much, 18.2% much, 21.8% average, 20% a little, and 34.5% very little. The responses to “I offer advisory service about infotherapy to patients” include; 7.3% very much, 7.3% much, 27.3% average, 14.5% a little, and 43.6% very little. The responses to “I teach patients how to access to information about infotherapy” include; 9.1% very much, 5.5% much, 34.5% average, 16.4% a little, and 34.5% very little. The responses to “I use portals of infotherapy include; 9.1% very much, 16.4% much, 20% average, 16.4% a little, and 38.2% very little. The responses to “I use weblogs of infotherapy” include; 7.3% very much, 10.9% much, 16.4% average, 18.2% a little, and 47.3% very little.

To respond to the research main question” To what extent would librarians face challenges of providing infotherapy service” the following data have been achieved.

Table 5: Frequency distribution of administrative problems and barriers of providing infotherapy service

	Very much Frequency	%	Much Frequency	%	Average Frequency	%	A little Frequency	%	Very little Frequency	%	Total Frequency	%
Government policy failures on infotherapy	19	34.5	11	20.0	15	27.3	5	9.1	5	9.1	55	100
Administrative/organizational policy failures	19	34.5	13	23.6	15	27.3	3	5.5	5	9.1	55	100
Trained librarians shortage	19	34.5	13	23.6	12	21.8	4	7.3	7	12.7	55	100
Shortage of professional databases for patients' information	16	29.1	14	25.5	11	20.0	4	7.3	10	18.2	55	100
Financial support deficiency	20	36.4	16	29.1	11	20.0	4	7.3	4	7.3	55	100
Deficiency of executive support and encouragement	21	38.2	17	30.9	10	18.2	2	3.6	5	9.1	55	100
Shortage of educational facilities	15	27.3	20	36.4	12	21.8	3	5.5	5	9.1	55	100
Inaccessibility to patients' clinical records	14	25.5	13	23.6	12	21.8	4	7.3	12	21.8	55	100
Inaccessibility to electronic medical records	17	30.9	9	16.4	16	29.1	4	7.3	9	16.4	55	100
Appointing no authority to librarians	19	34.5	14	25.5	12	21.8	5	9.1	5	9.1	55	100
Lack of e-governmental service	13	23.6	20	36.4	9	16.4	7	12.7	6	10.9	55	100
Deficient competency of source access	10	18.2	12	21.8	13	23.6	6	10.9	14	25.5	55	100
Lack of	19	34.5	11	20.0	9	16.4	6	10.9	10	18.2	55	100

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physicians' trust in librarians													
Challenges of knowledge development between patients	15	27.3	15	27.3	15	27.3	2	3.6	8	14.5	55	100	
Patients' picture due to their privacy interference	11	20.0	13	23.6	18	32.7	6	10.9	7	12.7	55	100	
Lack of patients' trust in librarians	7	12.7	13	23.6	17	30.9	9	16.4	9	16.4	55	100	
Failure of using non-Persian databases	8	14.5	10	18.2	13	23.6	11	20.0	13	23.6	55	100	

As shown in table 5, the responses to “Government policy failures on infotherapy” include; 34.5% very much, 20% much, 27.3% average, 9.1% a little, and 9.1% very little. The responses to “Administrative/organizational policy failures” include; 34.5% very much, 23.6% much, 27.3% average, 5.5% a little, and 9.1% very little. The responses to “Trained librarians shortage” include; 34.5% very much, 23.6% much, 27.3% average, 5.5% a little, and 9.1% very little.

The responses to “shortage of professional databases for patients’ information” include; 29.1% very much, 25.5% much, 20% average, 7.3% a little, and 18.2% very little. The responses to “Financial support deficiency” include; 36.4% very much, 29.1% much, 20% average, 7.3% a little, and 7.3% very little.

The responses to” Deficiency of executive support and encouragement” include; 38.2% very much, 30.9% much, 18.2% average, 3.6% a little, and 9.1% very little. The responses to “Shortage of educational facilities” include; 27.3% very much, 36.4% much, 21.8% average, 5.5% a little, and 9.1% very little. The responses to” Inaccessibility to patients’ clinical records” include; 25.5% very much, 23.6% much, 21.8% average, 7.3% a little, and 21.8% very little.

The responses to “Inaccessibility to electronic medical records” include; 30.9% very much, 16.4% much, 29.1% average, 7.3% a little, and 16.4% very little. The responses to “Appointing no authority to librarians” include; 34.5% very much, 25.5% much, 21.8% average, 9.1% a little, and 9.1% very little. The responses to “Lack of e-governmental service” include; 23.6% very much, 36.4% much, 16.4% average, 12.7% a little, and 10.9% very little.

The responses to “Deficient competency of sources access” include; 18.2% very much, 21.8% much, 23.6% average, 10.9% a little, and 25.5% very little. The responses to “Lack of physicians’ trust in librarians” include; 34.5% very much, 20% much, 16.4% average, 10.9% a little, and 18.2% very little.

The responses to “Challenges of knowledge development between patients” include; 27.3% very much, 27.3% much, 27.3% average, 3.6% a little, and 14.5% very little.

The responses to “Patients’ picture due to their privacy interference” include; 20% very much, 23.6% much, 32.7% average, 10.9% a little, and 12.7% very little. The responses to “Lack of patients’ trust in librarians” include; 12.7% very much, 23.6% much, 30.9% average, 16.4% a little, and 16.4% very little. The responses to “Failure of using non-Persian databases” include; 14.5% very much, 18.2% much, 23.6% average, 20% a little, and 23.6% very little.

Research Hypotheses: To test the first research hypothesis, “Demographic features (e. g. gender, education, foreign languages) affect the rate of librarians’ infotherapy”, the data have been achieved as follows:

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Table 6: Gender-Infotherapy

		Infotherapy		Total
		Low level	High level	
Gender	Male	9	11	20
	Female	19	16	35
Total		28	27	55

Table 7: Chi-Square Tests

	Value	Freedom degree	Two-range Significance Level
Chi-Square value	0439(b)	1	0.508
Relevance modification	0146	1	0.702
Accuracy value	0440	1	0.507
Fisher value			
Linear modification	0431	1	0.511
Total	55		

Table 8: Education-Infotherapy

Education	Infotherapy		Total
	Low level	High level	
D.H.E of Medical Librarianship	1	1	2
B.S of Medical Librarianship	11	7	18
B.S of Non-Medical Librarianship	4	4	8
M.S of Medical Librarianship	2	2	4
M.S of Non-Medical Librarianship	6	3	9
Ph.D.	0	1	1
Others	4	9	13
Total	28	27	55

Table 9: Chi-Square Tests

	Value	Freedom degree	Two-range Significance Level
Chi-Square value	4.795(a)	6	0.570
Accuracy ratio	5.257	6	0.511
Linear relation	1.958	1	0.162
Total	55		

Table 10: Language-Infotherapy

		Infotherapy		Total
		Low level	High level	
Languages	Very much	5	1	
	Much	10	5	
	Average	12	15	
	A little	1	4	
	Very little	0	2	
Total		28	27	55

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Table 11: Chi-Square Tests

	Value	Freedom degree	Two-range Significance Level
Chi-Square value	8.451	4	0.76
Accuracy ratio	9.626	4	0.47
Linear relation	8.244	1	0.04
Total	55		

The test data of the relationship between demographic (e. g. gender, education, knowledge of foreign languages) and infotherapy using chi-square test have been measured. Due to the significance level higher than 0.05, the data indicate that there is no relationship between the variables. To test the second research hypothesis, “There is a significant relationship between adequate information sources and the rate of librarians’ infotherapy “, the data have been achieved as follows:

Table 12: Correlation between information sources and infotherapy

		Adequate information sources	Infotherapy service
Adequate Information Sources	Pearson correlation	1	0.828(**)
	Two-range Significance Level	0	0.000
	Total	55	55
Infotherapy Service	Pearson correlation	0.828(**)	1
	Two-range Significance Level	0.000	0
	Total	55	55

The data of the correlation between two variables of adequate information sources and infotherapy service rate using correlation coefficient Pearson test indicate that the research hypothesis will be confirmed ($0.000 < 0.05$) . The correlation value (0.828) is positively high, thus, increasing adequate information sources could improve infotherapy service. To test the third research hypothesis, “Administrative barriers affect librarians’ infotherapy”, the data have been achieved as follows:

Table 13: Correlation of infotherapy and administrative barriers

		Administrative Barriers	Infotherapy Service
Administrative Barriers	Pearson correlation	1	0.615(**)
	Two-range Significance Level	0	0.000
	Total	55	55
Infotherapy Service	Pearson correlation	0.615(**)	1
	Two-range Significance Level	0.000	0
	Total	55	55

The data of the correlation between two variables, administrative barriers and infotherapy service rate using Pearson correlation coefficient test indicate that the research hypothesis will be confirmed ($0.000 < 0.05$) . The correlation value (0.615) is positively high, thus, administrative barriers affect librarians’ infotherapy.

Discussion

Main question No.1; “How active would librarians be at infotherapy?” Most respondents (over 70%) agree to extreme role of librarians in infotherapy but this role has been indirectly/exclusively played by

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physicians in our country's hospital libraries. Librarians' contribution in infotherapy is indirectly weak relevant to patients and their family. The data are in conformity with ZarehGavgani's (2013). Main question No.2; "How much value added service would librarians use for providing infotherapy service?" Most librarians (Over 84%) slightly use value added service for infotherapy. Main question No. 3; "How adequate are information sources to provide infotherapy service by librarians?" The adequacy rate of information sources of infotherapy by librarians seems high. The data disagree with Poisson's (1998). Main question No.4; "To what extent can librarians use the procedures of providing infotherapy service?" The rate of librarians' use of communicative procedures to provide infotherapy service is low. Main question No.5; "To what extent would librarians face challenges of providing infotherapy service?" Most librarians think that there are lots of administrative barriers of infotherapy. The data agree with ZarehGavgani's (2011) and Poisson's (1998). Research Hypotheses: Hypothesis No.1; "Demographic features affect the rate of infotherapy". The data indicate that the features may not have effect on infotherapy. Hypothesis No.2; "There is a significant relation between adequate information sources and the rate of librarians' infotherapy service". The research hypothesis will be confirmed where increasing adequate information sources can raise the rate of providing infotherapy service. Hypothesis No.3; "Administrative barriers affect the rate of librarians' infotherapy". The research hypothesis will be confirmed and agree with ZarehGavgani's (2011) and Nancy's (1998).

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