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Health Information Seeking Behavior (HISB): A Study of a Developing Country

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Health Information Seeking Behavior (HISB) of people and some related factors; a study in developing country

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Abstract:

The purpose of this study was to increase the understanding of the ways that people find health information in Iran, as a developing country, and also to identify how they evaluate the roles of public libraries in providing their users with health information.

The setting of the study is public libraries of Qazvin City of Iran. The four main public libraries in different areas of the city were selected for research. Sample size of this study was 200(n=200). To collect data a structured questionnaire was used. Data were summarized using frequency (%) for qualitative variables. The Chi -Square tests were also used to test the association between the socio-demographic variables and health information seeking behavior.

The study indicates that health information seekers in Iran are passive information seekers rather than active ones. The results showed that most common resources for seeking health information were “TV” and “discussions with others”. Among the persons used internet for search health information, search engines such as "Google" or "Yahoo" were more used. Also results indicated that among persons going to public libraries, there was a group that referred to public library for finding information about health and for using information sources such as medical magazines, books and etc. In review of relationship between socio-demographic properties such as age, gender, education and job and the use of health information resource conclude that there is a meaningful-relationship between education level and use of internet for getting health information and between age, job and “discussions with family, relatives or close friends” for receiving health information.

This study suggests that one of the key issues in public libraries could be educating the citizens (its members at least) until people become familiar with

available health resources in the library and even librarians teach them how to search on the authentic websites.

Key word: information seeking behavior, health information, public library

Introduction:

Currently, Health Information Seeking Behavior (HISB) is broadly viewed as the ways by which individuals obtain information about health, illness, health promotion and risks to health (Lambert & Loiselle, 2007).

Public health literacy seems to be confusing. People read a lot of promotional material but they do not understand it completely. Background knowledge of individuals is different. There is not enough time to discuss with physicians and pharmacists about all "marginal" questions which can turn out to be very important(Nada &Mirjana). A survey in the United States came to the result that, overall, a physician sees each patient for 13 to 16 minutes (Medscape Physician Compensation Report, 2012). With limited time to ask questions, the more patients are informed about specific medical conditions affecting their health, the smarter the questions they will ask their doctors. And the place that many people go to find answer to their questions and other health information is their local public library (Medical Library Association and the Consumer and Patient Health Information Section (CAPHISIMLA), 1996).

A public library is an organization established, supported and funded by the community, either through local, regional or national government or through some other forms of community organization. It provides access to knowledge, information and works of the imagination through a range of resources and services and is equally available to all members of the community regardless of race, nationality, age, gender, religion, language, disability, economic and employment status and educational attainment. The public library must provide services based on an analysis of the library and information needs of the local community (De Gruyter, 2010).

Public libraries are often the first place where individuals seek consumer health information. Librarians must evaluate, select, organize, and store information

as well as provide a range of health information services on a limited budget (Nada &Mirjana).

Linnan and et al (2004) concluded that creating public library/public health partnerships holds much promise for enhancing the ability of community members to access desired health information.

Regardless of the importance of HIBS studies in effectiveness of library services, small number of studies have been done on the information behavior of the citizens of developing countries particularly the rural poor areas (Dutta, 2009).On the other hand, the rate of health literacy is low according to the study which has studied the level of health literacy in five provinces of Iran (Including Qazvin)(Tehrani Banihashemi& et al, 2007).

To offer better health information service in public libraries it is important to know the health information seeking behavior of people.Therefore; in this study, health information seeking behavior of public libraries' members was investigated and the impact of some factors such as age, gender, education and job was evaluated.

OBJECTIVES

The purpose of this study was to increase the understanding of the ways that people find health information in Iran as a developing country and also to identify how they evaluate the roles of public libraries in providing their users with health information

The design of the survey is based on the following objectives:

1. What for/Why do people usually seek health information?
2. How do people seek and find health information? Are they active or passive information seekers?
3. What channels and resources do people seek health information from?
4. What sources do people usually search on the Internet for health information?
5. Does the public library have a role in the health information seeking behavior of people?
6. Is there any association between socio-demographic of people (such as age, gender, education, and job) and their health information seeking behavior?

The review of related literature

As medical information becomes increasingly available and individuals take a more active role in managing their personal health, it is essential for scholars to better understand the general public's information-seeking behavior (Rains, 2007).

The PubMed and Web of Science information platforms were searched to access the related researches in the area of people's health information seeking behavior. There was little study to refer to people's health information seeking behavior. Most studies of health information seeking behavior were doing among students or academics or a certain group. Also there was no study to investigate the Iranian people's health information seeking behavior. The studies were done among the people, described in the following.

Bakar (2011) surveyed information seeking behaviors of rural women in Malaysia. A sample of 80 housewives was selected and each was given a questionnaire to fill in. Housewives in this study were all married. The purpose of this study was to identify the women's information needs, determine the information sources used by rural women in a village of the District of

Gombak, in the State of Selangor, to determine their information seeking behaviors and identify any access barriers to those sources of information. He concluded that the women depend mostly on mass media such as newspapers, magazines, television and radio for information on health. It is most likely that they choose the popular magazines which have some sections on health information. At least 10 percent recorded the use of Internet for accessing health information and most of the housewives use the relevant websites or homepages to get the needed information. Women also consulted other sources such as family and friends. In other study, women were surveyed that why and how use the public library and information technology, and how they learned to use the technology. This research took place at the Chester County Library in Exton, Pennsylvania, the USA and female library patrons aging 18 years and older participated. The survey consisted of questions about library use, information sought, information seeking behavior, technology used, and how the respondents learned to use the technology. Results suggested that in terms of library use, out of the 184 respondents, 42% came to the library monthly, while 36% visited the library weekly. As for reasons for library use, the most prominent response was to borrow books rather than buying them. The library was also used as a place of solitude, where women could find a place and time for themselves. Ninety eight percent of women who used the Internet used a search engine such as Google or Yahoo to find information. Frequently mentioned topics were medical and travel information, information for their children, and shopping. The Internet was the number one choice for finding health information. The library was the first place to find a good book. Results indicated that although women use libraries to find information, they use the internet more, as libraries were at least third on the list of places women looked for most of the topics inquired about. In particular, results around how female patrons would like training delivered, their lack of understanding of databases,

and their use of the library as it reflects their familial role, can all be helpful when planning public library programming (Fidishun, 2007). One of the studies assessed the process of seeking health information (women's health information needs, the search strategies they employed for filling the information need, and the use of the health information found, and their awareness of specific health and medical information resources. A convenience sample was taken of 300 women. Fifty-three percent of the surveys were distributed in person and 47% by mail in the following: public libraries, senior centers, churches...; Survey results indicated that women are indeed active seekers and respondents generally did make use of the information they located to improve their health behaviors. The fact that the respondents were highly educated and that most visit a public library on a regular basis adds concern to the finding that a high percentage uses a general search engine for their health related Web searches and a high percentage has never heard of the Web sites located. Their study demonstrated the high use of family and friends as a health information seeking method (Warner and Procaccino, 2004). A study was done in a rural, medically under-serviced area of Ontario, Canada, that surveyed of 253 people living in a rural and related to their searching for and using health information. Results stated eighty-two percent of the respondents who had looked for health information did so for themselves and 18% sought information on behalf of someone else. The two sources of health information most frequently consulted were doctors and the internet. Many of those surveyed used the information they found to look after themselves or someone else, to decide whether to seek assistance from a professional health care provider, and/or make treatment decisions. Only 7% of the respondents who had looked for health information in the past year reported that they used a library to help them in their search. The items used in the library included books (92% of respondents), magazines and journals

(75%), and the internet (17%). All of the thirteen respondents who used the library told the interviewer that the library had been helpful. The results of this investigation reveal that rural residents are active seekers of health information (Harris, Wathen & Fear, 2006). Also Gollop (1997) studied the ways in which urban, older, African American women obtain health information and some of the factors that influence such activity. The respondents ranged in age from sixty-three to eighty-eight years old. The findings indicated that respondents were interested in health information and that they used a wide variety of sources of such information and generally indicated that receive health information from their physicians, the mass media, family members, and close friends. The results of his research also indicated that members of this population have a highly positive perception of the public library, although only a small segment uses the library regularly, and that it may be in the interest of the library to investigate the role it could play in providing health information to older adults.

The study identified the information-seeking dimension and the sources of information people use and examine whether there is an association between these and individual health status. Multiple regression analysis was then used to determine socio-demographic, attitudinal and behavioral variables related to a tendency not to seek health information and to be at risk for preventable diseases. The findings had implications for the development of future health promotion programs in provincial Australian cities. Both age and sex were significant in predicting where people obtain information on health. Women were more likely than men to seek health information and their sources of information reflected this proactive attitude to health. While there was no significant difference between the perceived health status of males and females, reported behavioral risk factors were much more prevalent in males. Most respondents had consulted a general practitioner in the previous twelve

months and stated that they would change their behavior on the advice of a medical practitioner. However, few nominated medical practitioners as their main source of health information (Kassulke& et al, 1993).

Some of the studies surveyed health information seeking behavior on the patient that how they sought health information for treatment of their disease. For example in Iran, the study was conducted on patients of teaching hospitals and clinics in Tabriz, Iran. Results of this study indicated that receiving reliable health information and information prescription was remarkably demanded by the majority of the surveyed patients. Patients' information need is generally related to basic issues of health. The level of literacy impacts neither the demand for health information nor the patients' preferred channel to receive CHI and information prescription (Gavgani, 2010).

Review of literature showed that there is a gap in research related to the health information seeking behavior of public in Iran specially those who seek for information from public libraries, and whether public consider a role for public libraries to meet their information needs or no. Therefore; it is very crucial to find out the HIBS of public in Iran, the way they find information, the role public libraries play in fulfilling the public' health information. This study aims to detect the HIBS of people in Iran for meeting their health information needs, and it will also study the public's Ideas about the role of public libraries in meeting health information needs of public

METHODOLOGY

This study is a descriptive survey. The setting of the study is public libraries of Qazvin City of Iran. The study was done for one month, from 21th of February to 13th of March 2012. The four main public libraries in different areas of the city were selected for research i.e. Central library of Emam

Khomeini with 7489 members, Allam-e-Rafiee library with 6752 members, Aref-e-Qazvini library with 5532 members and Shohada library with 5051 members. These libraries were selected for research due to the number and diversity of their users which were ranked as the best and the main among others by the council of public libraries .The population of the study were the members of public library who visited the library for meeting their health information needs. Sample size of this study was 200(n=200). Some authors recommend that 5 or more participants per item constitute an acceptable sample size for factor analysis (Bryant &Yarnold, 1995); others suggest that a sample size of 200 is adequate in most cases of factor analysis (DeVellis, 2003).We considered the sample size of at least 200people valid for studying, because the validity of the questionnaire was evaluated by the factor analysis. Sampling randomly was conducted using Excel software and a number of 200 people who were the member of the selected libraries were included in the study. The distribution of member in each library was as follows: 45 members from Aref-e-Qazvini library, 41 members from Shohada library, 60members from Emam Khomeini library and 54 members Allam-e-Rafiee library. Inclusion criteria of participant was least educated, and membership in the public libraries. The number of people who were randomly selected, but didn't refer long time to the library, was removed from the study.

To collect data a structured questionnaire was used. The questionnaire was made by the researcher and based on purposes of the study. It was consisted of two main parts; I) demographic data such as age, gender, literacy etc. II) Questions based on the objectives. And one optional section in which they are asked to state any role they consider for public libraries to support their health information need and service. To measure the validity of the questionnaire we used the following two methods: 1- Content validity: After the initial design of the questionnaire, 8 library and information professionals reviewed it and

scored based on the related content. The mean of CVI was 0.87, and accordingly the necessary changes were implemented; 2- construct validity (factor analysis): Amounts that obtained from the analysis were shown in result section.

To investigate the construct validity of the measure, Factor structure of the measure was extracted using Exploratory Factor Analysis (EFA), utilizing principal axis factoring and Varimax rotation. Factor-item loading values higher than 0.3 were considered as satisfactory for allocation of that item to the factor.

To test the reliability of the questionnaire, the Chronbace's alpha was used. The Chrobach's alpha for each section of questionnaire with 0.634 to 0.856 were known valid (>.6 in descriptive studies).

The questionnaires were distributed among the members of the libraries who were visiting the library during the given days, and they were asked to answer the questions if they are consent to participate in the study. If each member of the sample did not come to the library in this period, in collaboration with library staff, they would be informed to come to the library and fill in the questionnaire, by a telephonic communication.

Data were summarized using frequency (%) for qualitative variables. The Chi-Square tests also were used to test the association between the socio-demographic variables and health information seeking behavior (using of resources and channels for seeking health information). The analyses were performed using SPSS version 13 (SPSS Inc, IL, Chicago, USA) at 0.05 significance level.

Ethical consideration

Before starting the study, we asked the participants to sign the informed consent and announce their agreement with participating in this survey. They

were asked to return the questionnaire blank if they do not agree with participating in the study. In the questionnaire, we were committed to the respondents to keep secret the personal information and using the information in general.

The study was confirmed by the ethic committee of Tabriz University of Medical Science for its ethical warrantee.

Results:

Respondents' socio-demography

The study was done among 200 people who were the member of public libraries in Qazvin city of Iran. The socio-demographic analysis of data showed that the greater proportion (72.5%) of public library users in Qazvin city was female (Table 1).

Table 1: The characteristics of the respondents' gender, age, education and job

socio-demographic characteristics	Sample % (raw number)
Gender	
Men	27.5% (55)
Women	72.5% (145)
Total	100% (200)
Age	
≤10	1.5% (3)
11-20	33.5% (67)
21-30	37% (74)
31-40	18% (36)

41-50	5.5% (11)
51-60	3% (6)
61-70	1.5% (3)
71≤	0% (0)
Total	100% (200)
Education	
Ability to read and write	0% (0)
Primary	11% (22)
High school diploma	36.5% (73)
University	52.5% (105)
Total	100% (200)
Job	
Student	25%(50)
Collegian	22.5% (45)
Employee	24% (48)
Housewife	22% (44)
Self- employed	6.5% (13)
Total	100% (200)

Most of the library users who were seeking health information through public libraries were young (21-30-year-olds) (37%) and 11-20 years (33.5%). More than half of the health information seekers who responded to the questionnaire (52.5%) held university degrees. Job analysis also indicated that more members of public the libraries, in a descending order, were high school students (25%) and employees (24%) and with little difference, collegians(22.5%) and housewives (22%).

Factorial (construct) validity

Exploratory factor analysis with Varimax rotation extracted three factors (based on scree test) from the DQOL-BCI accounting for 61.7%, 76.79%, and 57.7%of total variance. Kaser–Meier–Olkin (KMO) value of 0.62, 0.60 and 0.72 and P<0.001 of Bartelet test in all cases) confirmed the adequacy off actor model too. The scree test confirmed the 6-factor, 7-factor and 3-factor structure respectively of the dimensions of the questionnaire at which a gap could be observed between third and fourth factor Eigen-values. In addition, all factors loading were >0.3 indicated the considerable item-factor relationships.

Need for health information

Indeed it was important to know if the members of the public libraries need health information and whether they approach to library for seeking health information or no; thus we asked them how often they need health information. The greater proportion of the people stated that they always need and seek for health information (Table 2).

Table 2: Degree of need for health information among female members of public libraries

Scales	Frequency	Percent
Always	76	38.0
Often	69	34.5
Sometimes	49	24.5
Seldom	5	2.5
Never	1	0.5
Total	200	100.0

More of the respondents (38%) stated that "always" needed for health information in their daily lives and in sum 59% stated "Often" and

"Sometimes"; and only one of them checked "Never" in needing health information.

The classification of public's health information need and the stages of health journey in which the need for information may be felt by people

People may need health information in different stages i.e. before or after a physician's visit, and on and during visit (Gavgani, 2009).

On the other hand; the need for information may differ from individual to individual. Some of the health information may be kept secret for cultural issues especially in countries with religious background like Iran. Therefore; it was important to know why people search health information and how their main health information is classified we asked them to indicate their purpose and label it by "always" (main priority); "Often"; "Sometimes" and "Never" (no priority). Then we categorized the purposes according to the stages of information therapy application (Gavgani, 2009; 2013).

Table 3: The classification of public's health information need

Stage	purpose	Always %	Often %	Sometimes %	Never %	No response %
Before a doctor's visit	**Public health data collection**	**60** 30	**74** 37	**39** 19.5	**5** 2.5	**22** 11
	The awareness of new health issues	**63** 31.5	**71** 35.5	**42** 21	**5** 2.5	**19** 9.5
	To collect information for disease prevention	**111** 55.5	**68** 34	**13** 6.5	**1** 0.5	**7** 3.5
After a doctor's visit	**To collect information before or after a doctor's visit**	**36** 18	**37** 18.5	**67** 33.5	**24** 12	**36** 18
On and during	**to make a decision about** medical diagnosis, ailment and treatment choices	**80** 40	**64** 32	**28** 14	**7** 3.5	**21** 10.5

visit for decision making	**To collect drug and medication information**	**31** 15.5	**40** 20	**69** 34.5	**22** 11	**38** 19

The main priorities for people to search for health information were"prevention" (55.5%); "awareness" (31.5%), "public health and hygiene" (30%) in the stage of before being visited by a physician that was indicated by "always" in different stages of peoples' health journey (Table 3). The other significant stages were the stages of "visiting" and "post visiting" in which the purpose of the health information seeking was to decision support information on medical diagnosis, ailment and treatment choices (40%) and collect drug and medication information (15.5%).

The ways by which people seek and find health information as an active or passive information seeker

The information users can be categorized as active users who search for information and passive users who receive information arbitrator and accidently like watching TV advertisements, without any intention to act on the information given (Wilson, 2000). Therefore; in order to find out how people seek and find health information or whether they are active or passive information in seeking health information. We asked the participants if they receive information from media, friends and family accidently and passively or they search for information in the moment of care actively

Table 4: people's reaction at the moment of health information need

People's attitudes toward their health information needs	**Always**	**Often**	**Sometimes**	**Seldom**	**Never**	**No response**	**Mean Rank**
Receiving information from radio, television, and ... accidentally (being passive)	**1** (0.5%)	**59** (29.5%)	**83** (41.5%)	**37** (18.5%)	**7** (3.5%)	**13** (6.5%)	**1.6**

Targeted search for health information (being active)	**3** (1.5%)	**25** (12.5%)	**63** (31.5%)	**72** (36%)	**30** (15%)	**7** (3.5%)	**1.4**

The majority of people in this study (71%) checked “often” and “sometimes” and1.5% strongly checked "always" as passive health information seekers when they need health information and they may receive arbitrary from media (TV., Radio, …etc.)(Table4). To prioritize the results, we evaluated the ranges of "Never" to "Always" from1 to 5 and the data were ranked by Friedman test in SPSS. The results of ranking indicated that mean rank of passive seeking was 1.6 and active seeking was 1.4. Therefore; with slight differences in mean rank it can be stated that most people are passive health information seekers.

Channels and resources used by people in seeking health information

Information Seeking Behavior is the purposeful seeking for information as a consequence of a need to satisfy some goals. In the course of seeking, the individual may interact with manual information systems (such as a newspaper or a library), or with computer-based systems (such as the World Wide Web) (Wilson, 2000). Here, the resources and channels that people refer to when they need health information have been questioned. Do they usually seek for information among printed documents or do they rely on their physician directed information? For this purpose, the respondents were asked which one of the following resources and channels they sought health information from. A list of ten information resources and channels was presented to people and they were asked to give an answer about every source on the scale 1-5, where 1 is "Never" and 5 is "Always". The information resources were grouped into four information channels named: 'Print resources', 'Non-print resources', 'Health specialists' and 'Interpersonal sources' (Table 5).

Table 5: Health information channels and resources

Health information channels and resources	Always N(%)	Often N(%)	Sometimes N(%)	Never N(%)	No response N(%)	Mean Rank
Print resources						
Book	46 (23%)	67(33.5%)	45(22.5%)	10(5%)	32(16%)	**6.83**
Newspapers	16(8%)	23(11.5%)	70(35%)	45(22.5%)	46(23%)	4.66
Journal	18(9%)	35(17.5%)	81(40.5%)	23(11.5%)	43(21.5%)	5.25
Brochure	7(3.5%)	33(16.5%)	79(39.5%)	36(18%)	45(22.5%)	4.70
Non-print resources						
TV	36(18%)	77(38.5%)	61(30.5%)	6(3%)	20(10%)	**7.01**
Radio	6(3%)	20(10%)	59(29.5%)	79(39.5%)	36(18%)	4.01
Internet	31(15.5%)	58(29%)	54(27%)	30(15%)	27(13.5%)	6.16
Health specialists						
Discussions with health professionals	25(12.5%)	54(27%)	73(36.5%)	19(9.5%)	29(14.5%)	5.93
Attending seminars and congresses	3(1.5%)	7(3.5%)	53(26.5%)	96(48%)	41(20.5%)	3.51
Interpersonal sources						
Discussions with family, relatives or close friends	39(19.5%)	69(34.5%)	60(30%)	12(6%)	20(10%)	**6.95**

The mean rank was computed for each channel. Based on this ranking, the most used resources of information were: TV (7.01), Discussions with family, relatives or close friends (6.95) and book (6.83). Internet (6.16) was also included among useful resources. According to these findings we can also infer

that people are passive information seeker than active in this sample size because the highest mean rank refers to TV.

Use of Internet sources in people health information seeking behavior

The people who stated they search the web for health information (N=143), were asked about the resources they search for information on the web (Table 5). They were authorized to have more than one choice.

Table 6: Information sources on the internet

Search in internet	N	%
Search engines and directories (like Google, Yahoo …)	128	64%
Authorized medical and health Web sites such as government websites, university, hospitals and health centers	33	16.5%
Social networking sites (like Facebook, Cloob,…etc)	23	11.5%
Blogs	16	8%
Patient stories; reading and following the stories of patients about their disease, to live with their disease and disease processes	4	2%
Discussion groups	4	2%

Most of the people (64%) searched for health information by search engines and directories (such as Google and Yahoo …) and only 16.5% of them used health specific and authorized web sites and databases. The social networks, blogs, and

discussion groups, as applications of web2.0, were used by the lowest number of the people in this study (Table 6.)

The role of the public libraries in people health information seeking behavior

People refer to public libraries for meeting their different information needs. In this survey, the respondents were asked why they chose public libraries as a place/source for meeting their health information needs. (Table7).

Table 7: Respondent's reason for referring to the public library

Respondent's reason for referring to the public library	**N(%)**
Proper number of health resources	42(21%)
Simple and exoteric resources	61(30.5%)
Accessible resources, while feeling need for health information	59(29.5%)
Aim and guidance of librarians	40(20%)
Spending lower cost in acquiring health resources	**88**(44%)

Observation of responses stated that people usually referred to the public library because they spend lower cost in acquiring health information resources(44%), also 30.5% of the respondents believed that public libraries provide simple and exoteric resources for their users.

In second section of question, they were requested that they observe how much the public library had effectual roles in providing health information (Table 8).

Table8: Scale of public library effectual roles

Scale	N(%)
Very low	4(2%)

Low	10(5%)
Medial	42(21%)
Much	**65**(32.5%)
Very much	**66**(33%)
No response	13(6.5%)

Of respondents, 33% prize the public libraries role in health information "very much" and 32.5%,"much". Only 2% said that the public libraries have "very low" effectual roles (Table 8).

Association between socio-demographic quality of people (such as age, gender, education, and job) and their health information seeking behavior

Some socio-demographic characteristics of people such as age, sex, and education (Table 1) and their health information seeking behavior including channels and resources are used to examine whether the relationship among them is statistically significant or no.). The analyses were performed at 0.05 significance level .Data analysis indicates that there is no significant statistical relation between gender of people and each component of health information seeking behavior (HISB). Other analyses were reported below and the results of analyses were showed in (table 9).

Table9: Association between socio-demographic properties of people and using of health information channels and resources

Data of T-test	Df	$\chi 2$	**P Value**

socio-demographic and channels, resources				
Print resources				
Book	Age	24	24.472	0.435
	Gender	4	0.124	0.998
	Education	24	26.064	0.350
	Job	24	22.381	0.557
Newspapers	**Age**	24	28.767	0.229
	Gender	4	6.547	0.162
	Education	24	23.958	0.464
	Job	24	24.197	0.450
Journal	Age	24	28.139	0.254
	Gender	4	3.847	0.427
	Education	24	25.361	0.386
	Job	24	28.265	0.249
Brochure	**Age**	24	33.739	0.089
	Gender	4	6.249	0.181
	Education	24	19.028	0.750
	Job	24	26.656	0.321
Non-print resources				
TV	Age	24	18.961	0.754
	Gender	4	8.372	0.079
	Education	24	30.136	0.180

	Job	24	26.782	0.315
Radio	**Age**	24	30.564	0.167
	Gender	4	0.623	0.960
	Education	24	26.009	0.353
	Job	24	36.206	0.052
Internet	Age	24	28.189	0.252
	Gender	4	1.570	0.814
	Education	24	37.317	**0.041**
	Job	24	26.251	0.341
Health specialists				
Discussions with health professionals	**Age**	24	19.401	0.730
	Gender	4	2.886	0.577
	Education	24	24.949	0.409
	Job	24	17.531	0.825
Attending seminars and congresses	Age	24	30.706	0.162
	Gender	4	1.187	0.880
	Education	24	25.835	0.362
	Job	24	22.979	0.521
Interpersonal sources				
Discussions with other people such as family, relatives or close friends	**Age**	24	45.880	0.005
	Gender	4	4.323	0.364
	Education	24	22.649	0.541
	Job	24	41.411	**0.015**

The study found statistically significant relationship between education level and use of internet for seeking health information (p= 0.041). Also there was a statistically significant relationship between peoples' age (p=0.005) and job (p=.015) and "Discussions with other people such as family, relatives or close friends" for meeting health information need. But the study did not find a statistically significant relationship between other socio-demographic factors such as "Gender" and "Education' with “Discussion with others people such as family, friends” and use of “Internet” (p>0.005) (Table 9).

Discussion

This study surveyed the Iranians', who were member of public libraries in five big public libraries of Qazvin city of Iran, health information seeking behavior. And it found that, almost all people feel to need health information in daily life (table 2), but unfortunately many people obtained information accidentally from radio and TV and many of them are passive health information seeker (Ybarra & et al, 2008). More than half of them say that they always seek health information for preventing diseases and it can be inferred that Iranian people are aware of the value of information in their health and prevention of diseases. In sources and channels used for health information, "TV" is in the first place and then lies "discussions with family, relatives or close friends" and these results confirm the claim that most of them rely on health information received accidentally. According to the findings of the study presented in (table 5), it becomes clear that although information and communication technology has developed and many Internet information sources have been created nowadays, book is still an important and common information recourse. Among the persons used internet for search health information, search engines such as "Google" or "Yahoo" were more used (Table 6) (Fidishun, 2007) whereas there

are many health websites that have been established through national and international institutions and organizations. Perhaps these results are related to the lack of peoples' consciousness toward the existence of health websites or language problems in international level.

Also results indicated that among persons going to public libraries, there was a group that referred to public library for finding information about health and for using information sources such as medical magazines, books and etc. Half of them are using public libraries because they can acquire information with a low cost and find simple and understandable resources (table 7).

This topic shows that people tend to pay the lowest cost for obtaining health information, collecting public health data, awareness of new health issues, preventing diseases and …, in terms of both cost and time. Perhaps having this feature in public library has caused that in sum 66.5% of people said that public libraries have a vital role in the improvement of health information seeking behavior (Courtright, 2004; Gollop, 1997).

In review of relationship between socio-demographic properties such as age, gender, education and job and the use of health information resource conclude that there is a meaningful-relationship in three cases. First, between education level and use of internet for getting health information (see, for example, Lam & Lam, 2012); second and third, between age, job and "discussions with family, relatives or close friends" for receiving health information (table 9).

According to the results, people who are more educated than others use internet for seeking health information and students and people that were 11-20 years try "discussions with family, relatives or close friends". In this study, there is no meaningful relationship between gender and using health information resources such as magazines, newspapers, TV and etc…

Conclusion

The study indicates that health information seekers in Iran are passive information seekers rather than active ones. Although the sample of this study was selected from the people who referred to public libraries to meet their health information needs, the socio-demographic characteristics were totally different from the education, age and gender point of view. The results showed that most common resources for seeking health information were “TV” and “discussions with others”. However; to generalize and publicize the result to all of the society we need to conduct similar studies in other stratum of society. This study suggests that one of the key issues in public libraries could be educating the citizens (its members at least) until people become familiar with available health resources in the library and even librarians teach them how to search on the authentic websites.

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References

At Work, Issue 40, Spring 2005: Institute for Work & Health, Toronto. Available at: www.iwh.on.ca/system/files/at-work/at_work_40.pdf

Bryant, FB &Yarnold, PR(1995.). *Principal components analysis and exploratory and confirmatory factor analysis,* In: L.G. Grimm, & R.R. Yarnold (Eds.), Reading and understanding multivariate statistics (pp. 99-136). Washington, DC American Psychological Association

Courtright, C. (2004). *Health information-seeking among Latino newcomers: an exploratory study*.Information Research, 10(2) paper 224. Available at http://InformationR.net/ir/10-2/paper224.html

De Gruyter, Saur (2010). *The Public library service: IFLA/UNESCO guidelines for development*/[International Federation of Library Associations and Institutions]. Ed. for the Section of Public Libraries by Philip Gill et. al. Available at: http://www.degruyter.com/view/product/43971

DeVellis, RF(2003). *Scale development: Theory and application* (2nd edn.). Thousand Oaks: CA: Sage.

Fidishun, Dolores (2007). Women *and the Public Library: Using Technology, Using the Library*. Library Trends, 56.2, 328-43.

Gavgani VZ. (2009) Role of Medical Librarians in *Information Therapy (Ix): study of problems and prospects in Iran and India*. PhD theses, Submitted to Osmania University, Hyderabad, India.

Gavgani VZ (2010). Health Information Need and Seeking Behavior of Patients in Developing Countries' Context; an Iranian Experience. 1st ACM International Health Informatics Conference, November 2010, Virginia, Washington DC, USA.

Gollop, Claudia J.(1997). *Health information-seeking behavior and older African American women*. Bull Med LibrAssoc April;85(2).Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC226241/pdf/mlab00095-0043.pdf

Harris, R.M., Wathen, C.N. & Fear, J.M. (2006).*Searching for health information in rural Canada. Where do residents look for health information and what do they do when they find it*?*Information Research*, 12(1) paper 274. [Available at http://InformationR.net/ir/12-1/paper274.html]

Kassulke, D., Stenner-Day, K., Coory, M. and Ring, I. (1993) Information-seeking behaviour and sources of health information: associations with risk factor status in an analysis of three Queensland electorates.*Australian Journal of Public Health*, *17* 1: 51-57.

Lam, Mary K. & Lam, Lawrence T.(2012).*Health information-seeking behaviour on the Internet and health literacy among older Australians*.electronic Journal of Health Informatics; Vol 7(2):e15

Lambert, S. D.&Loiselle, C. G.(2007). *Health information – seeking behavior*. Qualitative Health Research, 17(8), 1006-1019.

Linnan, Laura A. and et al (2004). *Public Librarians as a Resource for Promoting Health: Results from the Health for Everyone in Libraries Project (HELP) Librarian Survey*. Health Promot Pract, 5: 182.

Medical Library Association and the Consumer and Patient Health Information Section (CAPHISIMLA) (1996*). The librarian's role in the provision of consumer health information and patient education*. Bull Med LibrAssoc [serial online]. April 1996; 84(2): 238-239. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC299415/pdf/mlab00375-0088.pdf

Medscape Physician Compensation Report: 2012. Available From: http://www.medscape.com/features/slideshow/compensation/2012/publicMedscape Physician Compensation Report: 2012.

Nada, Trzan-Herman&Mirjana, Becele.*WorkingOn Public Health Information in Public Libraries.Ministry of Health*, Ljubljana, Založka 29, Slovenia. Available From: http://www.ctk.uni-lj.si/ddis/Publikacije/Nada%20TH-Working%20on%20public%20health%20information%20in%20public%20libraries.htm

Rains,Stephen A.(2007). *Perceptions of Traditional Information Sources andUse of the World Wide Web to Seek Health Information: Findings From the Health Information National Trends Survey*. Journal of Health Communication, 12:667–680.

TehraniBanihashemi, Seyed-Arash& et al.(2007) *Health Literacy and the Influencing Factors: A Study in Five Provinces of Iran*. Strides in Development of Medical Education,4(1). http://www.sdmej.com/english/abstract.asp?articleID=2416(accessed 3 Dec 2012).

Wilson, T.D. (2000). *Human information behavior*.Informing Science, 3(2), 49-56. Retrieved 21 November, 2007 from http://inform.nu/Articles/Vol3/v3n2p49-56.pdf

Ybarra, Michele L. & et al.(2008*). Health information seeking among Mbararan adolescents: results from the Uganda Media and You survey*. Health education research.23(2), Pages 249–258