Information Needs, Usage and Motivation among Health Professionals at NGOs : A Study

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1. Introduction

We are living in a knowledge society, which is dominated by information in its most diverse formats. Internet and digital information sources have provided us with wealth of information in abundance. Information has gained importance in every sector of societies and health sector is not an exceptionand health professionals are increasingly finding that they have more information available than they can handle with confidence in their busy time schedules and the hardest task now is to actually locate the information required from the flood of information received. Major problem appears to be the difficulty of identifying and filtering the most useful, accurate and credible sources while searching online for health information. for conducting their activities related to human care, academic and research pursuits.

2. Aims/Objectives

Research Objectives

The primary objective of this study is to assess the information needs and usage of information by health professionals in the digital environment. Some broad research objectives are:

1. To study the information needs of health professionals in NGOs.
2. To study the purpose of collection and access to Information by health professionals .
3. To assess learning experience with their usage of the Library
4. To know the experience and motivation to use e-learning;
5. To assess the dependency of Health Professionals on Information Sources

3. Background

Overview of Statistics of NGOs

A very preliminary survey of the private non-profit sector in India, conducted by the Societyfor Participatory Research in Asia under Johns Hopkins University Comparative Non-ProfitSector Project, placed the number of such organizations at 1.2 million (Tandon and Srivastava 2005). This estimate, however, was not very appealing because of its limited coverage of merely four states and ambiguous sample frame involving the Fourth Economic Census (Rao 2005).

Lack of reliable directory information for non-profit sector was perhaps the main reason that the first ever survey of NPIs by RBI in 1988 was not aimed at building up estimatesfor this sector. Given the fact, CSO-NAD two-phase study in 2007-08 could be considered acomprehensive one designed for the NGO-sector through the census approach. InPhase-I,the study mainly compiled NPI information from the original records available with the registering authorities in different states and union territories (CSO 2009). Recordsof about 3 million NGOs were received from competent authorities with rural-urban distribution of almost 60:40. Out of the total NGOs, only around 5% were present before the seventies. The rest 95% were registered after the seventies:5% in seventies,17% in eighties,35% in nineties and35% in the first decade of the current century

Table 1

Registered NPIs in first and second phase of CSO Census

State	Registered NPIs (Phase-I)	Traced NPIs (Phase-II)	Health NPIs (Phase-II)	Registered NPIs (Statewide %)	Traced NPIs (Statewide%)
Andhra Pradesh	434,294	65,045	2,615	13.7	9.4
Maharashtra	484,004	38,319	2,395	15.3	5.5
Rajasthan	100,272	20,336	2,071	3.2	2.9
Tamil Nadu	141,322	39,720	2,007	4.5	5.7
Uttar Pradesh	439,740	214,981	1,674	13.9	31.0
Madhya Pradesh	85,752	27,472	1,621	2.7	4.0
West Bengal	169,136	35,497	1,380	5.3	5.1
Punjab	48,933	34,436	1,350	1.5	5.0
Odisha	133,573	38,345	710	4.2	5.5
Kerala	326,392	44,273	560	10.3	6.4
Bihar	22,272	3,694	491	0.7	0.5
Delhi	60,687	10,127	404	1.9	1.5
Gujarat	172,215	9,109	383	5.4	1.3
Assam	73,181	8,949	377	2.3	1.3
Manipur	14,692	8,793	317	0.5	1.3
Uttarakhand	49,954	11,167	290	1.6	1.6

Karnataka	192,487	20,268	285	6.1	2.9
Chhattisgarh	39,901	3,607	250	1.3	0.5
Haryana	60,132	20,784	208	1.9	3.0
Subgroup Total	3,048,939	654,922	19,388	96.4	94.3
Jammu & Kashmir	5,452	1,573	462	0.2	0.2
Himachal Pradesh	39,642	15,917	308	1.3	2.3
Jharkhand	4,141	2,867	253	0.1	0.4
Tripura	5,493	1,599	152	0.2	0.2
Meghalaya	15,449	3,904	83	0.5	0.6
Puducherry	14,986	3,583	72	0.5	0.5
Nagaland	7,330	2,280	53	0.2	0.3
Goa	6,598	3,267	25	0.2	0.5
Chandigarh	3,488	367	10	0.1	0.1
All India	3,164,329	694,186	21,121		

Source: CSO (2012); Andhra Pradesh includes Telangana. States/union territories with very small numberof NPIs, like Mizoram and Andaman, are not presented here.

So from the Table 1 , we could observe that there are 3,164,329 Registered NGOs in India and 694,186 are unregistered but traced out. And 21,121 NGOs among them are working on Health.

4. Data Source and Methods:

For the study, data is collected from using a mixed method approach where quantitative methods such as survey and qualitative methods such as interviews and focus group discussions techniques are used.

The survey method would be used to examine the facilities available at NGOs for accessing health information. Data collected would help in understanding the existing ICT infrastructure at NGOs and gaps in information availability and access.

Similarly, in-depth interviews would be conducted with health professionals working in these NGOs to seek individual thoughts and perceptions on most preferred information sources and services, barriers encountered by them in accessing the same, major factors that influence the usage of information. The interviews would be conducted using semi-structured interview schedules.

Focus Group discussions are used to understand the present awareness levels of information services, sources in diverse formats and how health professionals apply information seeking in their work place. Group of health professionals in their work place are asked about their perspectives about research question. A discussion guide would be used to provide a frame work for discussion and to collect data.

Focus group Discussion

Focus group discussion is frequently used as a qualitative approach to gain an in-depth understanding of social issues. The method aims to obtain data from a purposely selected group of individuals rather than from a statistically representative sample of a broader population.

Research design

The process begins with identifying the main aim and defining the key research objectives of the study.

This study focuses on capacity building of health professionals in non-government organisations in terms of access to quality health information needed for performing their duties and based upon the research objectives, a list of questions (schedule or script) is prepared as guidance for focus group discussion session this is followed by seeking ethics clearance.

As Kruger said Willingness to fully engage in a group discussion is instrumental in generating useful data and can be achieved more readily within a homogenous group (Krueger, 1994), Another important consideration is the number of respondents to be invited for discussion. Although it is generallyaccepted that between six and eight participants are sufficient (Krueger & Casey, 2000).

So homogenous group of 7 people working for Primary Health were chosen which included Administrators of NGOs, Doctors working for NGOs and Doctors working for Government, ANM and a pharmacist.

Furthermore, evidence suggests that mixed gender groups tend to improve the quality of discussions and its outcomes (Freitas, Oliveira, Jenkins, &Popjoy, 1998).So mixed gender of 4 Men and 3 women were selected.
According to Morgan,purposive sampling was recommended since focus group discussion relies on the ability and capacity of participants to provide relevant information (Morgan, 1988).The sample considered for focus group discussion included people experienced more than 4years.

According to Smith, 1972,the next step is to identify a convenient venue for the discussion. Researchers must take into consideration participants' comfort, access to the venue, and levels of distraction. So after the permission from District Health Office,the venue chosen for discussion was

District Health Office, Tilakwadi, Belagavi. And it was well planned after the regular district level meetings of Public Health Centres.

5. Data collection

Participant observation, audio recording, note-taking were considered as main methods of data collection during a focus group discussion However, each of these methods presents different advantages and disadvantages but researcher considered noting down the context-specific issues. Regardless of the number of focus group discussion meetings, it is important to consider the duration of the meetings(Gibson, **2012**; Heary& Hennessy, **2002**), meeting duration was for 40 min.

6. Work Flow of Focus group Discussion:

There are many types of Focus Group Discussions. But researcher here preferred Single focus group.The key feature of a single focus group is the interactive discussion of a topic by a collection of all participants and a team of facilitators as one group in one place. This is the most common and classical type of focus group discussion (Morgan, **1996**). It has been widely used by both researchers and practitioners acrossdifferent disciplines (e.g. Lunt & Livingstone, **1996**; Morgan, **1996**; Wilkinson, **1998**).

1. The focus Group was cleared that this research is interested in conducting Information needs assessments and capacity building of health professionals in non-government organisations working for Public Health Centres and also observe the PHCs working for the Government and outcome of this assessment would be a policy document that would significantly influence the health information policy of different stakeholders like NGOs, state and central governments.- 5 min.

The Discussion looked at a wide range of issues, which can be grouped broadly into four categories: -10 min

1.Understanding the User – This is to understand characteristic features,needs,preferences,practices,opinions,attitudes,behaviour,evaluations etc..with respect to their present awareness and skill level in accessing information from diverse sources .

2. Learning and Ready for capacity building -

– anything that relates to the factors that influence the information usage, skills, knowledge and an individual's ability to reach their potential and be ready to serve the society in a meaningful and systematic way.

3. Understanding the Functionaries

– issues that relate to a facilities provided by parent functionary may be NGO or Government through ICT infrastructur

Organisation Resources and Barriers – 10 minutes

Participants were asked to list out the problems, issues and concerns, and then asked aboutWhat resources are available in their organisation to address these issues? And What are the barriers to accessing these resources? (List barriers next to the resource they apply to).

Solutions . – 10 minutes

Have participants look at the list of problems, issues, resources and barriers, and then asked aboutWhat actions, programs, strategies do they think would make the biggest difference in their Organisation ? (e.g., What solutions would help solve the problems and reduce/remove the barriers listed?)

Conclusion- 5 minutes

Thanked the participants for their time. Let them know about what we are expected to do like In addition to information collected through focus groups and community outreach activities, assessment data is also being compiled from surveys, the data compilation, analysis and a draft reporting. They can check back with our agenda to receive a copy of the draft report and/or participate in future planning.Analysis

Focus group discussion usually yields both qualitative and observational data where analyses can be demanding.

1. respondents are not good and have insufficient competencies in using internet effectively for information seeking purpose. Moreover, professional skill is not adequately taught in undergraduate medical education. They also revealed that they do not receive any training on internet search skills at their working place which is very essential.

2. The most highly motivating factor for the Health professionals is the research interest in their field and some are highly motivated for Self-satisfaction /improvement of related areas. And for some it is a need to qualify for higher profession and

3. Some said they need information for solving day to day problems they face in the profession, and some gave the response as that information to some extent help for understanding research project they get from authority and some others revealed that they need information to know about the background of the patients and that is the reason

4.The respondents need to collect and use information more frequently for writing and publishing papers/ articles/books/reports and to

keep abreast with the latest development in the fields related and for recent developments in treatments to the specific diseases.

5. The main barrier for the health professionals to have good technological knowledge and skills is the absence of library in the premises, Professional guide, skill development training and the lack of infrastructure facility which is hindering.

6. The administrators also accepted the view to include Training session for the capacity building of their employers from a professional person and to recommend to introduce a library in every PHC for updation and documentation.

5. Results

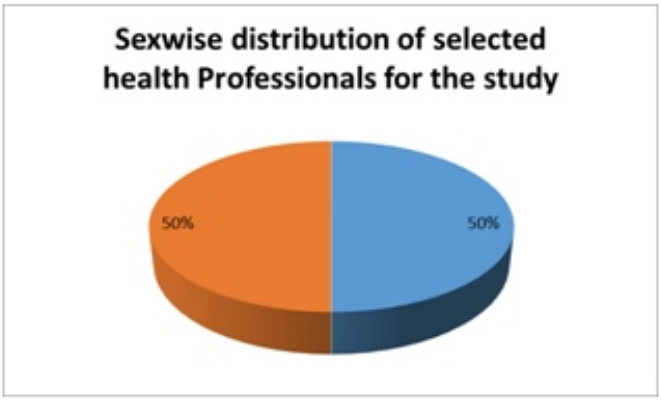
A.Profile of Health professionals

Table 2

a. Profile of health Professionals /General Information

Sex	Percentage
Male	50.0
Female	50.0
Total	100.0

Figure 1



The gender profile of the respondents is reflected in Table 2. It is observed that there is an equal distribution of respondents.

Table 3
Age group distribution

Age group	Percentage
21-25	4.5
26-30	38.6
31-35	28.4
36-40	12.5
41-45	5.7
46-50	2.3
51 and above	6.8
system	1.1
Total	100.0

Figure 2

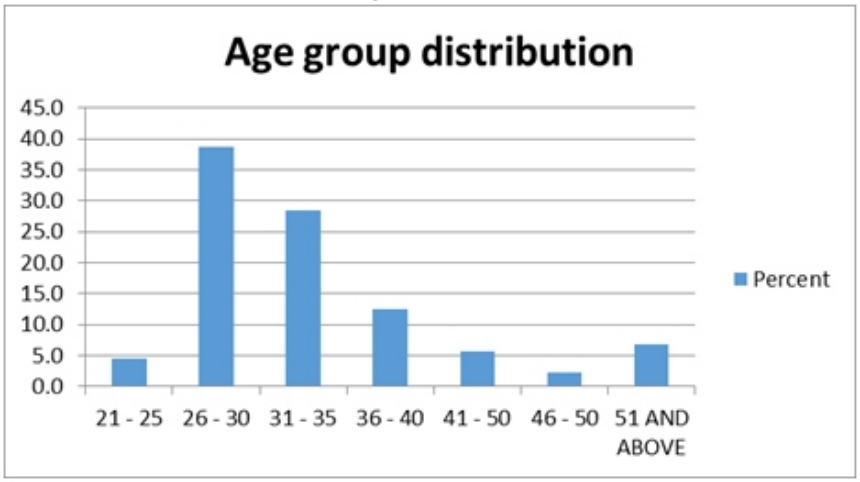


Table 3 describes the age wise distribution of respondents. Among total health professionals surveyed, 4 (4.6%) respondents belong to the age group of 21 to 25 years, 34 (39.1%) belong to 26 to 30 age group, 25 (28.7%) respondents belong to 31to 35 age group, 5(5.7%) belong to 41 to 45 years, 2 (2.3%) respondents belong to 46 to 50 age group and 7 respondents (7.95) belong to the age group 51 and above. It is observed that put together , a majority of respondents 59 (67.8%) belong to the young age group of 26 - 35 years. So from the table, it is revealed that the health professionals working in NGOs are more in the age group 26 to 30, followed by age group 31 to 35 and then 36-40 years.

Table 4

Qualification	Percentage
MD	4.5
M Sc	1.1
Diploma	52.3
Certificate	4.5
Any other	34.4
System	3.4
Total	100.0

Figure 3

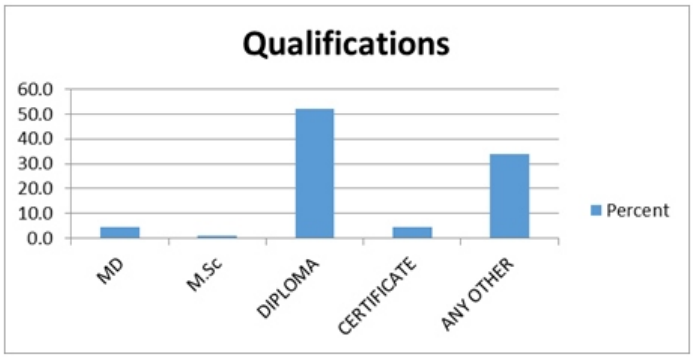


Table 4 reveals that there are 4 (4.5%) people who have done Doctor of Medicine(MD), 1(1.1%) who has done Masters of Science(MSc). However, a majority of health professionals 48 (54.5%) have Diploma as their qualification followed by 5 (5.7%) of people who have done certificate courses.

There also 30 (34.1%) respondents who have acquired a qualification which was not listed in the questionnaire(Others)

Table 5

Work location	Percentage
Urban	26.1
Rural	69.3
System	4.5
Total	100.0

Figure 4



Survey reveals that 24(27.6%) of the population works in Urban Area and 64(72.7%) of them work in rural area. Because, most of the PHC's which are run by NGO's are located in rural remote places. Hence majority of health professionals work in rural areas.

Table 6

Speci. Area	Percent
ANM	1.1
Commun Diseases	4.5
Community Medicine	1.1
DHLC	26.1
DMLT	1.1
General Medicine	6.8
GNM	1.1
HIT	23.9
Lab Technician	1.1
LHV	2.3
MLTC	4.5
Nursing	17.0
Ophalmic Technician	1.1
Pharmacy	6.8
Total	100.0

Figure 5

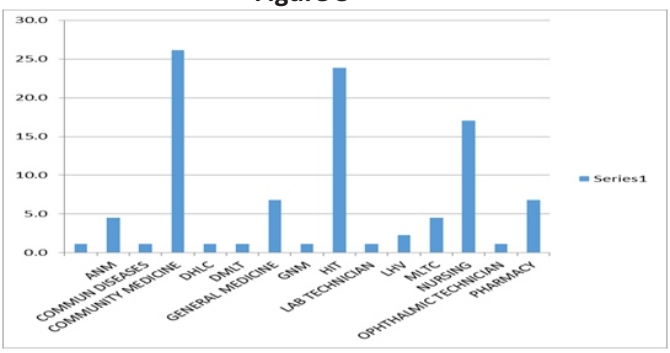
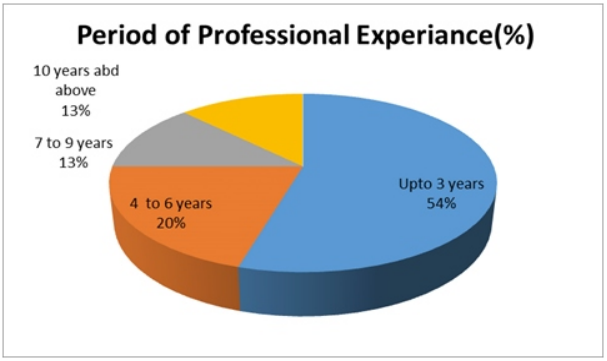


Table 7

Experience	Percentage
Up to 3 Years	54.5
4 to 6 Years	20.5
7 to 9 Years	12.5
10 Years and above	12.5
Total	100.0

Figure 6

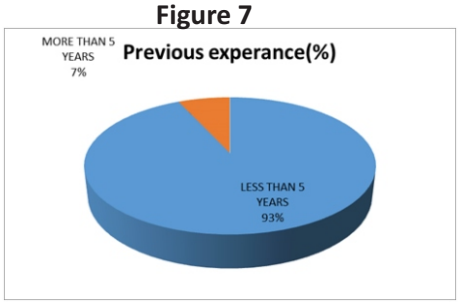


It is observed from Table 6 that highest number 23(26.1%) respondents have indicated Community Medicine as their area of specialization. This is closely followed by HIT 22(25%) , Nursing 19(21.6%), Pharmacy 6(6.8%), MLTC 4(4.5%) and 2 (2.3%) LHV. Other specialisations like Community Disease, DHLC, DMLT, GNM, Lab Technician, Ophthalmic technician have each indicated 1(1.1%) person.

Table 8

Pre-Experience	Frequency		Percentage
Less than 5 Years	81		92.0
More than 5 Years	6		6.8
Total	87		98.9
System	1		1.1
Total	88		100

Figure 7



It is observed from Table 7 that majority 48(54.5%) respondents have indicated they have upto 3 years of experience. This is followed by 18 (20.5%) respondents who have experience between 4 to 6 years. An equal 11(12.5%) professionals have an experience of 7- 9 years and 10 years and above.

From the analysis we could see that most of the employees in Public Health Centres are new entrants to the profession with upto 3 years work experience except some who have been working for more than 5 years and above.

-Significance of easy access to information

- Health science professionals need information for conducting their activities related to human care, academic and research pursuits.

b. Information Need/Purpose

Table 9

Sl. No.	Purpose of Use of Information	0	1	2	3	4	Mean	SD
1	For planning/teaching activity	3	6	8	2	3	1.82	1.22
2	For doing fundamental academic and research oriented activities	6	5	3	6	5	1.96	1.51
3	For design, develop and to acquire new drug information	7	4	3	6	12	2.38	1.62
4	For setting up and use of latest information in your area/subject	3	5	13	13	13	2.60	1.19
5	For setting up new laboratory	9	5	1	3	7	1.76	1.71
6	For treatment and disease specific information	2	3	6	8	14	2.88	1.24
7	For ensuring authenticity of available results/ data/information	3	7	5	7	4	2.08	1.29
8	For orientation to your own work with Existing body of knowledge	4	4	15	31	21	2.81	1.07
9	For writing and publishing papers/articles/books/reports	2	0	5	4	15	3.15	1.22
10	For participation of seminars/conferences/ workshops/Continuing Medical Education Programmes(CMEP)	5	1	4	5	13	2.71	1.54
11	For delivering lecture, address, etc.	3	0	7	9	7	2.65	1.23
12	For guiding a team and sharing information with members of the team	6	1	7	13	7	2.41	1.35
13	For furnishing and assisting supervisors.	3	1	7	10	5	2.50	1.21
14	For broadening areas of attention and receiving work done in related areas/ Specialization/ superspecialization.	2	4	5	6	14	2.84	1.32
15	For keeping abreast with the latest development in the fields related.	2	2	14	31	19	2.93	0.94
16	To prepare for developmental review/test for promotion/ manpower development.	5	3	9	6	2	1.88	1.24
17	Any other (please specify)	1					0	0

0 - Not used 1- Rarely used 2 - Moderately used 3 - Frequently used 4 -Most frequently used

It is observed that respondents moderately use information for planning and teaching activity(Mean= 1.82), for doing fundamental academic and research oriented activities(Mean=1.96) and for design, develop and to acquire new drug information (Mean = 2.38), for setting up new laboratory (Mean= 1.76), for ensuringa uthenticity of available results/ data/information (Mean = 2.08), for furnishing and assisting supervisors (Mean = 2.50).

They frequently use information fo settin up an use of latest information in their area/subject (Mean = 2.6), fortreatmentanddiseasespecific information(Mean=2.88),for orientation to your own work with Existing body of knowledge (Mean =2.81) for writing and publishing papers / articles /books/reports (Mean = 3.15), for participation of seminars/ conferences/ workshops/Continuing Medical Education Programmes (CMEP) (Mean = 2.71), fordeliveringlecture,address,etc. , for delivering lectures (Mean = 2.65) ,for broad eningareas of attention and receiving work done in relatedareas/ Specialization/ super specialization. (Mean = 2.84) ,forkeepingabreastwiththelatestdevelopmentinthefields related(Mean = 2.93).

It is observed that purpose of use of information is more towards for publishing papers and writing articles ,books and reports and some in keeping abreast with the latest information(2.93)and for treatment and disease specific (Mean = 2.88) and for broadening areas of attention and receiving work done in related areas (Mean = 2.84). Here it can be inferred that respondents collect and use information more frequently for writing and publishing papers/ articles/books/reports and for broadening areas of attention and receiving work done in related areas/specialization/ super specialization, and also to keep abreast with the latest development in the fields related, for orientation to their own work with existing body of knowledge and for treatment and disease specific information.

Factors that help health professionals to become aware of information sources.

Respondents were asked to as such what are the factors that help them to become aware of needed information sources in their discipline. They were given about 12 factors and were asked to indicate the degree of usefulness of these factors in creating an awareness about information sources. The data thus colected and its analysis is presented in table 8

Table 10

Sl No.	AwarenessofSources	0	1	2	3	4	Mean	SD
01	Conversationduringmeeting	4	4	8	16	49	3.26	1.14
02	Scanningofcurrentcontents	4	8	5	21	31	2.97	1.24
03	Scanningofindexing& abstracting journals	5	3	4	7	6	2.24	1.48
04	Referringcitations,indexes	4	4	7	2	6	2.09	1.44
05	Checkingreferencesinbooks/articles	5	4	5	5	6	2.12	1.48
06	Consultinggeneral&subjectbibliography	8	3	4	6	4	1.80	1.53
07	Publishersannouncements	3	8	4	7	4	2.04	1.31
08	Consultingoflibraryunioncatalogue	2	8	2	4	9	2.40	1.47
09	Seekingassistancefromlibrary staff.	6	12	13	18	15	2.38	1.29
10	Discussingwithyourfriendsandprofessionalcolleagues.	2	5	10	15	48	3.28	1.07
11	CIMS(CurrentIndexonMedicalSpecialties)MIMS(MonthlyIndexofMedicalSpecialties)	4	5	7	5	4	2.00	1.32
12	Anyother(pleasespecify)_	1					0.00	

Code: 0 - Not useful 1- Rarely useful 2 - Moderately useful 3 – Highly useful 4 - Most highly useful

It is clearly seen from the Table 10 showing the calculated mean value that health professionals working in NGOs find highly useful the sources like Conversation during meeting(Mean = 3.26), Scanning of current contents (Mean = 2.97) and discussing with friends and professional colleagues (Mean = 3.28) for upgrading their knowledge. This is followed by moderately useful factors like Scanningofindexing& abstracting journals (Mean = 2.24), referringcitations,indexes (mean = 2.09) , Checkingreferencesinbooks/articles (Mean = 2.12) , Consulting general & subjectbibliography (Mean = 1.80) , Publishersannouncements (Mean = 2.04) , Consultingoflibraryunioncatalogue (Mean = 2.40) , Seeking assistancefromlibrary staff (Mean = 2.38), CIMS(CurrentIndexonMedical Specialties)MIMS(MonthlyIndexofMedicalSpecialties) (Mean = 2.0)

Discussing with friends and colleagues is most preferable and most useful way of getting awareness about sources of information. But some feel that they get to know about the sources in conversation during meetings, they prefer scanning of current contents is highly useful. Contacting local specialists and librarian featured as their third line of enquiry. They feel they should get an information scientist or a librarian to help them in searching from an unfiltered lot and searching together would be ideal.

Some feel inhibited about approaching immediate colleagues. Here the study demonstrates the preference for electronic sources of information over consulting other people and endorses the findings.

Frequency of visit to nearby Library.

In order to update their knowledge, health professionals were asked if they visit any library and resource center nearby and its frequency. The data is presented in Table 10. The inference is not so encouraging as it is observed that majority of the respondents 47(55.3%) have indicated they visit the library once a month. About 20(23.5%) of respondents visit library once a fortnight and about 7(8.2%) do so occasionally.

Table 11

	How often you visit Library	*Frequency*		*Percentage*
a	Everyday	3		3.5
b	Once in TWO days	2		2.4
c	Twice a Week	1		1.2
d	Once a Week	5		5.9
e	Once a fortnight	20		23.5
f	Once a Month	47		55.3
g	Occasionally	7		8.2
h	Others	3		3.5

The table displays that the percentage of visit to library is found to be very less most of the respondents visit the library once a month, followed by one fourth of respondents who visit once a fortnight may be because of lack of time.

Working hours of Library

Table 12

	Is the Library Working hours Convenient to you	*Frequency*		*Percentage*
A	YES	79		89.8
B	NO	9		10.2

It is observed that majority of respondents have indicated the library timings are convenient to them. Here the table clearly mentions that 89.8% of interviewees have accepted that the library working hours is convenient to them .and only 10.2% have said that working hour is not convenient. So the working hours of library are convenient for most of them.

Library and Resource Centre Facilities

This table shows the answer for the library or resource centre they use is spacious enough and furniture is adequate. 82.9% of the respondents have said it has adequate and 2.6% have said it as non adequate and 17,1% have

mentioned it as partially adequate. So it can be revealed that maximum respondents have agreed that the library they use it for updating themselves is spacious and furniture adequate.

Table 13

	Library is spacious, furniture adequate	*Frequency*	*Percentage*
a	Adequate	73	82.9
b	Not Adequate	2	2.6
c	Partially Adequate	13	17.1

Time spent in Library

It is observed that majority of professionals 53 (60.2%) use library for about one hour during every visit to the same. About 9.1% of professionals spend about half-an hour during their visit to the library, 10.3% spend about 2hrs, 12.5% of them spend three hours and only 1.1% spend about four hours and 6.8 % of them use library for more than 5 hours.

Table 14

	Time Spent in Library during the visit	*Frequency*	*Percentage*
a	1/2 Hour	8	9.1
b	One Hour	53	60.2
c	Two Hours	9	10.3
d	three Hours	11	12.5
e	Four Hours	1	1.1
f	Five Hours of More	6	6.8

Motivating factors to seek information regularly

The respondents were asked to identify and rate the factors that really motivate them to seek information regularly. The data thus collected and its analysis is presented in table 14. basedon the calculated mean value for various statements, it is seen that majority of factors like Research interest in own field/area (Mean = 2.83) , Visibility among peers and colleagues.(Mean = 2.60) , desiretogainrecognitioninthefield/subject (mean = 2.64) , Selfsatisfaction/improvementofrelatedareas (Mean = 2.79) are all found to be highly motivating factors. Other factors like needtoqualifyforhigherprofession (Mean = 2.46) , and any other factors (Mean = 2.46) are indicated as fairly motivating factors.

Table 15

Sl.No.	Motivating factors	0	1	2	3	4	Mean	SD
1	Researchinterestinyourownfield/area (N=...)	0(0.0)	8(15.4)	13(25.0)	15(28.8)	16(30.8)	2.83	1.18
2	Visibilityamongpeersandcolleagues.	6(10.9)	9(16.4)	9(16.4)	8(14.5)	23(41.8)	2.60	1.45
3	Desiretogainrecognitioninthefield/subject	4(6.9)	7(12.1)	14(24.1)	14(24.1)	19(32.8)	2.64	1.25
4	Desiretoachieveprofessionalexcellence	5(11.9)	5(11.9)	9(21.4)	8(19.0)	15(35.7)	2.55	1.40
5	Selfsatisfaction/improvementofrelatedareas.	8(13.1)	4(6.6)	7(115)	16(26.2)	26(42.6)	2.79	1.40
6	Needtoqualifyforhigherprofession	5(8.5)	6(10.2)	18(30.5)	17(28.8)	13(22.0)	2.46	1.19
7	Anyother(pleasespecify)	4(16.7)	4(16.7)	4(16.7)	1(4.2)	11(45.8)	2.46	1.61

Code: 0 - Don't motivate 1- Slightly motivate 2 - Fairly motivate 3 – Highly

motivate 4 - Most highly motivate(Figures in parenthesis indicate percentages)

So the most highly motivating factor for the Health professionals one could see is the research interest in their field and some are highly motivated for Self satisfaction /improvement of related areas. And for some it is a need to qualify for higher profession.

Dependence on Information Sources: Print Formats

In order to understand the dependence of health professionals on different forms of information, respondents were asked to indicate their choice and extent of dependency on various print format sources for their information requirements. In order to aid their choices, 16 different print formats were provided and respondents were asked to rate their dependency on a five point scale with no dependence to most frequentlydepend. The data thus collected and its analysis is presented in .

Table 16

Sl.No	Dependency on Printresources	0	1	2	3	4	Mean	SD
1	Books(otherthanhandbooksandreferencebooks)	4	2	9	12	8	2.51	1.25
2	Handbooksandreferencebooks	6	8	17	19	21	2.58	1.26
3	Conferenceproceedingsandpapers	9	4	8	9	9	2.13	1.49
4	Articlesinperiodicals	8	6	12	5	4	1.74	1.29
5	ThesesandDissertations	8	7	8	9	3	1.77	1.31
6	Govt.Publications	6	10	9	17	5	2.11	1.24
7	PublicationofNational/International agencieslikeICMR/ PGIMER/AIIMS/ AIISH/ NIMHANS/ WHO/NLM/etc.	7	12	10	11	8	2.02	1.33
8	Annualreportsofinstitutions/hospitals	7	7	9	5	1	1.52	1.15
9	Reportsofcommissions,committeesetc.	7	9	4	5	5	1.73	1.44
10	Govt.Gazetteers/circulars/ publications	3	6	14	18	10	2.51	1.12
11	Medicaldiaries	5	10	17	12	11	2.25	1.24
12	Medicalmanuscripts/reprintarticles	7	7	7	3	5	1.72	1.41
13	Annualreviews	13	9	3	2	1	0.89	1.10
14	Indexing /Abstracting Periodicals	8	7	4	5	6	1.80	1.52
15	Medical encyclopedias	7	5	12	5	2	1.68	1.19
16	Any other (please specify)	6	13	2	3	5	1.59	1.40

Code: 0 - No dependence 1- Depend rarely 2 - Depend moderately 3 - Depend frequently 4 - Most frequently depend
(Figures in parenthesis indicate percentages)

It is observed that some of the formats like books (M=2.51) , hand books/reference books (M=2.58) , GovtGazateers/publications/Circulars (M=2.51) are considered as most frequently depended sources. Majority of formats fell under choice of forms that are depended frequnelty. These are Conferenceproceedingsandpapers (M=2.13), Articles in periodicals (M=1.74) ,ThesesandDissertations (M=1.77), Govt. Publications (M=2.11), PublicationsofNational/International agencies

(M=2.02),Annual report sofinstitutions/hospitals (M=1.52), Report sofcommissions, committeesetc. (M=1.73),Medical manuscripts/ reprintarticles (M=1.72), Indexing /Abstracting Periodicals (M=1.80) ,Medicalencyclopedias (M=1.68) etc.

Here the mean value reveals that most of the Health Professionals depend most frequently on handbook and reference books to meet their information requirements. And depend frequently on Books (other than reference books) and also on Govt. Gazetteers/circulars/publications and Depend moderately on Medical diaries and Govt. Publications and also On Publication of National /International agencies like ICMR/ PGIMER/AIIMS/ AIISH/NIMHANS/ WHO /NLM/ etc.

Dependence on Information Sources : Electronic Formats

In order to understand the dependence of health professionals on different forms of information, respondents were asked to indicate their choice and extent of dependency on various print format sources for their information requirements. In order to aid their choices, 14 different electronic formats were provided and respondents were asked to rate their dependency on a five point scale with no dependence to most frequently depend. The data thus collected and its analysis is presented in Table 15

Table 17

Sl. No	Dependency on Electronic Sources	0	1	2	3	4	Mean	SD
01	E-books	2	4	3	4	4	2.24	1.39
02	E-journals	4	13	10	16	10	2.28	1.25
03	E-medicalrecords	7	6	9	8	8	2.11	1.41
04	E-bibliographicaldatabases	5	5	9	3	5	1.93	1.36
05	E-clinicalguidelines	8	4	6	3	4	1.64	1.47
06	E-conferenceproceedings	3	7	8	3	6	2.07	1.33
07	E-druginformation	4	6	6	6	5	2.07	1.36
08	Websitesofprofessionalbodies	4	3	6	8	8	2.45	1.38
09	Commercialwebsites	5	5	12	2	4	1.82	1.25
10	MedlineDatabases	7	7	2	6	5	1.81	1.52
11	Healthsoftware	**5**	**2**	**7**	9	6	2.31	1.37
12	Multimedia	5	4	6	14	7	2.39	1.32
13	Audio-visualAids	3	7	11	17	8	2.43	1.15
14	Anyother(Pleasespecify)	9	6	6	10	1	1.63	1.29

Code: 0 - No dependence 1- Depend rarely 2 - Depend moderately 3 - Depend frequently 4 - Most frequentl depend
(Figures in parenthesis indicate percentages)

It is observed that majority of electronic formats facll under the category of "depend moderately" by respondents. They are e-Books (M=2.24), E-journals (M=2.28), E-Medical records (M=2.11), E-bibliographical databases (M=1.93) ,E-clinical guidelines (M=1.64), e-conference

proceedings (M=2.07) , E-drug Information (M=2.07), Websites of professional bodies (M=2.45), Commercial Websites (M=1.82), Medline Databases (M=1.81), Health Software (M=2.31), Multimedia (M=2.39), Audio-Visual Aids (M=2.43).

In electronic sources, the health professionals especially ANMs, junior health assistants and in PHCs depend frequently on audio-visual aids and multimedia because they need some of the Government programmes to bring it to the notice of public through public awareness programs. And some depend moderately on Health software; most of the Doctors depend on the e-journals and e-books to cope up with the latest research and also on e-conference proceedings and E-drug information, Websites of professional bodies, Commercial websites and Medline Databases

6. Conclusion

1. Establishing a library and appointing a library professional to train the health professionals in better usage of information is the new concept to primary Health Centres

2. To offer library and information services to hospitals within a relatively short time and reap the economies of scale, networking of hospitals into library service consortia offering mutually accessible facilities, collections, and services was regarded as a feasible solution

3. Inclusion of Infrastructure development factor in the budget of the Government towards Primary Health Management.

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