AWARENESS AND UTILITY OF HELINET CONSORTIUM RESOURCES BY STUDENTS AND FACULTY OF MEDICAL COLLEGES

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Abstract:

With the advent of Internet in the end of the 20th century, the scholarly communication speed has taken into new shape. The traditional print journals have been added with the online or e-version of the same journals along with the print versions. So is the case with the medical journals, where in the speed of publishing new science discoveries, new methods, new procedures, new processes and drug discoveries are deemed to be published in a speedy manner to reach the medical practitioners.

This article discussed about successful implementation HELINET consortium, which is first of its kind in the country in the medical higher education originated out of the state of Karnataka. He access to HELINET resources provided to over 45 medical colleges imparting PG, MS and doctoral studies affiliated to Rajiv Gandhi University of health sciences (RGUHS). The study has been aimed to find the Awareness of access to HELINET resources; Availability of e-journals under HELINET; and Usefulness of E-Resources provided by HELINET are analysed according to Institute, Subject as well as Subject Cluster wise.

Keywords: Digital Libraries – E-journals, Consortium, Resource sharing, Networking, RGUHS

Introduction

The scholarly communication has a long history. As he firs journal started in 1665 in the form of "transactions of the royal society" by 'Henry Oldenberg' and his associates in royal society of London. Later the system of peer review has been introduced 'peer review' to maintain the quality of the work done by the author. This system of peer review has been existence for around 300 years. Most of the publishing was done by the societies and non-profit professional associations. The entry of commercial publishers in to the journal publishing has renewed the vigour of the science communication. In the later part of the 20th century, during 1970's to be precise, the journal costs have started increasing above the inflation rates. His phenomenon is called the 'serial crisis'. Many small

(but niche) publishing houses were either bought-out by the bigger publishing houses or closed their operations by not being able to compete with the big balanced publishers.

With the advent of Internet in the end of the 20th century, the scholarly communication speed has taken into new shape. The traditional print journals have been added with the online or e-version of the same journals along with the print versions. So is the case with the medical journals, where in the speed of publishing new science discoveries, new methods, new procedures, new processes and drug discoveries are deemed to be published in a speedy manner to reach the medical practitioners.

With the emergence of interdisciplinary and multidisciplinary nature of the subjects, many specialised journals have started to emerge. This has made the libraries to subscribe each and every journal to cater o he needs of their user needs within the available budget. His phenomenon has given rise to the concept called consortia, wherein, group of similar libraries coming together and subscribing to a particular publisher or subject journals at a discounted prices to counter the budgetary constraints.

Definition and meaning

Consortium is a Latin word, meaning "partnership", "association" or "society" and derives from consors 'partner', itself from con- 'together' and sors 'fate', meaning owner of means or comrade. The word 'Consortia' is the plural form of 'Consortium'. It is derived from the Latin word for Fellowship. A library consortium is a formal association of libraries, not under the same institutional control, but usually, restricted to a specific geographical area or region, number of Libraries, types of materials, or subject interest, which is established to develop and implement resources sharing among member libraries.

About Consortium

A consortium in the specific sense for libraries is an association of two or more libraries, companies, organizations with the objective of participating in a common activity or pooling their resources for achieving a common goal. In the present millennium, the explosion of information and the telecommunication technologies are increasing day-by-day and therefore it is essential to develop the appropriate information infrastructure and organize the Library and Information centres in such a way that the organization must satisfy the relevant needs of the information society. No library is self-sufficient to purchase all the books, Journals, databases and other library documents within their library budgetary limits. So different institutions or universities may purchase an electronic product and share its cost creating a "Consortium".

About HELINET

The acronym, HELINET stands for 'Health Science Library and Information Network'. The idea of HELINET conceived byRajiv Gandhi University of health sciences and successfully implemented

which is first of its kind in the country in the medical higher education. The consortium was started with a vision to improve the quality of education and research in the Health Science institutions (medical colleges imparting both UG, PG and doctoral studies) of the state of Karnatakathrough enhanced access to high quality medical information. HELINET's goal is to deliver information to users' desk-top, with round-the-clock access.

The major benefit of this consortium was expanded access to core international e-journals. Prior to the launch of the HELINET consortium, access to medical journals by each college was limited to around 100. HELINET has made it possible for each college to access and share the contents of more than 600 journals, in effect increasing the access provision by six times.

HELINET works on the basis of a set mission such as "To network all the Health Science libraries, for minimizing the cost of acquisition and maintenance of learning resources and maximizing their utilization among the faculty, students and researchers in the health science colleges and institutions".

Need for the study

Access to resources is now considered more important than collection building especially, if the access is perpetual in nature. The consortium facilitates the libraries to get the benefit of wider access to electronic resources at affordable cost and at the best terms of licenses. Journals, databases being expensive resources and their collection size being inadequate in most libraries as discussed earlier.

The HELINET initiative was to develop adequate resource base and access infrastructure through consortia model of purchasing/licensing shared access to journal literature. The process of developing an e-Journal consortium was thought to be initiated for the Medical Colleges as the first test case, and extended to other faculties on the demand and success. It has been a decade, since the HELINET consortium has been in existence. Most of the affiliated medical colleges of RGUHS in Karnataka are members of the HELINET consortium. The statistics provided by the consortium administration has been encouraging.

Hence, this study is aimed to determine the awareness and utility of resources in the HELINET consortium topost graduate students and faculty of medical colleges affiliated to RGHUS.

Objectives of the study:

- To know the awareness of HELINET Consortium resources
- To know the usefulness of HELINET Consortium resources
- To know the availability of required journals access provided under HELINET Consortium

Institution	Yes	%	No	%	Can't say	%	Grand Total					
AAMC	16	61.5	6	23.1	4	15.4	26					
AIMS	22	61.1	11	30.6	3	8.3	36					
AJIMS	28	93.3	1	3.3	1	3.3	30					
AMC	13	54.2	5	20.8	6	25.0	24					
BIMS	15	68.2	6	27.3	1	4.5	22					
BIMSB	15	65.2	6	26.1	2	8.7	23					
BMC	25	69.4	8	22.2	3	8.3	36					
BMCH	13	56.5	5	21.7	5	21.7	23					
BMPMC	11	68.8	4	25.0	1	6.3	16					
ESIC	20	71.4	8	28.6		0.0	28					
FMMC	25	78.1	6	18.8	1	3.1	32					
GMC	12	48.0	10	40.0	3	12.0	25					
HIMS	14	56.0	8	32.0	3	12.0	25					
JJMMC	22	78.6	4	14.3	2	7.1	28					
JNMC	11	25.0	22	50.0	11	25.0	44					
JSSMC	18	52.9	14	41.2	2	5.9	34					
KIMS-B	20	64.5	11	35.5		0.0	31					
KIMS-H	11	78.6	3	21.4		0.0	14					
KMC	26	74.3	5	14.3	4	11.4	35					
KMCM	22	66.7	9	27.3	2	6.1	33					
KSHM	23	76.7	6	20.0	1	3.3	30					
KVGM	27	77.1	5	14.3	3	8.6	35					
MIMS	24	75.0	6	18.8	2	6.3	32					
MRMC	26	49.1	21	39.6	6	11.3	53					
MSRMC	25	73.5	7	20.6	2	5.9	34					
MVJMC	20	95.2		0.0	1	4.8	21					
NMC	5	26.3	8	42.1	6	31.6	19					
RIMC	19	76.0	5	20.0	1	4.0	25					
RMC	17	70.8	5	20.8	2	8.3	24					
SDMMC	38	88.4	5	11.6		0.0	43					
SDUMC	24	70.6	10	29.4		0.0	34					
SIMS	14	56.0	8	32.0	3	12.0	25					
SJMC	5	35.7	6	42.9	3	21.4	14					
SNMC	21	67.7	8	25.8	2	6.5	31					
SSIMC	27	77.1	8	22.9		0.0	35					
SSMC	17	51.5	13	39.4	3	9.1	33					
VIMC	33	94.3		0.0	2	5.7	35					
VIMS	21	65.6	9	28.1	2	6.3	32					
YMC	27	65.9	7	17.1	7	17.1	41					
Grand Total	772	66.5	289	24.9	100	8.6	1161					
Mean	19.8	66.3	7.8	24.8	3.0	8.9	29.8					
S.D. +/-	7.1	16.0	4.3	11.4	2.2	7.6	8.2					
Chi Square					1.752E2							
Sig.	0.000											

Table-1:Awareness of access to HELINET resources – Institute wise

Out of total respondents from various colleges, 66.5 percent were aware of access to HELINET resources of library; only 24.9 percent respondents were not aware and very least i.e. 8.6percent

respondents could not say anything about awareness of access to HELINET. Results were significant and significantly largest number of respondents were aware (Chi square 1.752E2 at P=0.000). Among therespondents various colleges who are aware of access to HELINET were less than 50 percent in JNMC, MRMC, NMC and SJMC colleges. Where as in all other colleges, respondents were >50 percent who were aware about access to HELINET.

Subject	Yes	%	No	%	Can't say	%	Grand Total		
Anatomy	96	78.7	16	13.1	10	8.2	122		
Anaesthesiology	8	42.1	11	57.9		0.0	19		
Biochemistry	41	48.8	22	26.2	21	25.0	84		
Cardiology	7	77.8	2	22.2		0.0	9		
Community Medicine	110	72.4	33	21.7	9	5.9	152		
Critical Care		0.0		0.0	2	100.0	2		
Dermatology	66	47.8	62	44.9	10	7.2	138		
ENT	23	100.0		0.0		0.0	23		
Forensic medicine	16	100.0		0.0		0.0	16		
Microbiology	31	52.5	25	42.4	3	5.1	59		
Neurology	2	100.0		0.0		0.0	2		
OBG	66	74.2	17	19.1	6	6.7	89		
Ophthalmology	15	41.7	21	58.3		0.0	36		
Oral Medicine	2	100.0		0.0		0.0	2		
Orthopaedics	22	100.0		0.0		0.0	22		
Pathology	117	86.7	9	6.7	9	6.7	135		
Paediatrics	11	55.0	9	45.0		0.0	20		
Pharmacology	44	50.0	22	25.0	22	25.0	88		
Physiology	62	60.2	33	32.0	8	7.8	103		
Plastic Surgery	8	80.0	2	20.0		0.0	10		
Psychiatry		0.0	4	100.0		0.0	4		
Radiology	25	96.2	1	3.8		0.0	26		
Grand Total	772	66.5	289	24.9	100	8.6	1161		
Mean	38.6	66.5	18.1	24.5	10.0	9.0	52.8		
S.D. +/-	36.1	29.9	15.7	25.6	6.7	21.6	51.2		
Chi Square				2	2.633E2				
Sig.	0.000								

Table-2: Awareness of access to HELINET resources – Subject wise

Out of total respondents from various subjects, significantly largest number of respondents i.e. 66.5 percent were aware of access to HELINET resources of library (Chi square 2.633E2 at P=0.000). Among various subjects, respondents from anaesthesiology, biochemistry, dermatology, ophthalmology were less than fifty percent and respondents from other subjects were more than 50 percent who were aware of access to HELINET except for critical care and psychiatry where in no respondents were aware of access to HELINET.

Subject Cluster	Yes	%	No	%	Can't say	%	Grand Total			
Clinical Subjects	238	62.80	125	33.00	16	4.20	379			
Para-Clinical Subjects	318	70.70	89	19.80	43	9.60	450			
Pre-Clinical Subjects	199	64.40	71	23.00	39	12.60	309			
Super Speciality Subjects	17	73.90	4	17.40	2	8.70	23			
Grand Total	772	66.50	289	24.90	100	8.60	1161			
Mean	193.0	67.90	72.3	23.30	25.0	8.80	290.3			
S.D. +/-	127.4	5.20	50.7	6.90	19.4	3.50	187.2			
Chi Square	32.732									
Sig.	0.000									

Table-3: Awareness of access to HELINET resources - Subject Cluster wise

Out of total respondents from broadly categorised subjects, significantly more than fifty percent respondents from all subjects were aware of access to HELINET resources of library (Chi square 32.732 at P=0.000). Among various subjects, respondents from super speciality subjects were highest (73.9 percent) followed by Para-clinical subjects (70.7percent) were highest in aware of accessing HELINET.

Name of the Institution	Excellent	%	Very Good	%	Good	%	Poor	%	Very Poor	%	Grand Total
AAMC		0.0	2	7.7	21	80.8	3	11.5		0.0	26
AIMS	1	2.9	1	2.9	23	65.7	8	22.9	2	5.7	35
AJIMS	1	3.3	3	10.0	22	73.3	3	10.0	1	3.3	30
AMC	1	4.2	2	8.3	14	58.3	6	25.0	1	4.2	24
BIMS		0.0	1	4.3	18	78.3	4	17.4		0.0	23
BIMSB		0.0	2	9.5	8	38.1	8	38.1	3	14.3	21
BMC	1	2.9	7	20.6	17	50.0	8	23.5	1	2.9	34
BMCH		0.0	3	13.6	12	54.5	5	22.7	2	9.1	22
BMPMC		0.0		0.0	11	68.8	2	12.5	3	18.8	16
ESIC		0.0	3	11.1	18	66.7	4	14.8	2	7.4	27
FMMC		0.0	16	51.6	10	32.3	5	16.1		0.0	31
GMC		0.0	2	9.1	10	45.5	6	27.3	4	18.2	22
HIMS		0.0	3	16.7	8	44.4	3	16.7	4	22.2	18
JJMMC	1	3.6	1	3.6	22	78.6	4	14.3		0.0	28
JNMC		0.0	2	6.3	16	50.0	10	31.3	4	12.5	32
JSSMC		0.0	5	17.9	13	46.4	8	28.6	2	7.1	28
KIMS-B		0.0	4	14.8	11	40.7	9	33.3	3	11.1	27
KIMS-H		0.0	1	8.3	5	41.7	4	33.3	2	16.7	12
KMC	1	2.8	5	13.9	28	77.8	2	5.6		0.0	36
KMCM		0.0	4	12.5	19	59.4	6	18.8	3	9.4	32
KSHM		0.0	2	6.7	19	63.3	7	23.3	2	6.7	30
KVGM		0.0	1	2.9	24	70.6	8	23.5	1	2.9	34
MIMS		0.0	2	7.4	17	63.0	7	25.9	1	3.7	27
MRMC	1	2.3	5	11.4	30	68.2	5	11.4	3	6.8	44
MSRMC		0.0	11	35.5	14	45.2	5	16.1	1	3.2	31
MVJMC	2	10.0	4	20.0	11	55.0	1	5.0	2	10.0	20

Table-4: Availability of e-journals under HELINET – Institution wise

NMC		0.0	2	12.5	7	43.8	6	37.5	1	6.3	16
RIMC		0.0	2	9.1	15	68.2	4	18.2	1	4.5	22
RMC		0.0	2	8.7	16	69.6	3	13.0	2	8.7	23
SDMMC	1	2.4	9	21.4	25	59.5	6	14.3	1	2.4	42
SDUMC		0.0	1	2.9	27	79.4	5	14.7	1	2.9	34
SIMS	1	4.3		0.0	19	82.6	2	8.7	1	4.3	23
SJMC		0.0	2	15.4	8	61.5	2	15.4	1	7.7	13
SNMC	1	3.4	3	10.3	18	62.1	5	17.2	2	6.9	29
SSIMC		0.0	8	22.9	20	57.1	6	17.1	1	2.9	35
SSMC		0.0	2	6.7	12	40.0	11	36.7	5	16.7	30
VIMC	3	8.6	9	25.7	21	60.0	1	2.9	1	2.9	35
VIMS	1	3.4	5	17.2	20	69.0	3	10.3		0.0	29
YMC	1	2.4	8	19.5	25	61.0	6	14.6	1	2.4	41
Grand											
Total	17	1.6	145	13.4	654	60.4	201	18.6	65	6.0	1082
Mean	1.2	1.5	3.9	12.8	16.8	59.7	5.2	19.2	2.0	6.8	27.7
S.D. +/-	0.6	2.4	3.3	9.8	6.3	13.4	2.5	9.1	1.1	5.8	7.6
Chi Square						2.410E2					
Sig.	0.000										

When surveyed for awareness on availability of e journals under HELINET, Significantly largest number of respondents i.e. 60.4 percent had good awareness and 6 percent had very poor awareness among various colleges (Chi Square 2.410E2 at p=0.000). Among various colleges, respondents from BIMSB, GMC, HIMS, JSSMC, KIMS-H, MSRMC, NMC and SSMC colleges were less than fifty percent having good awareness on availability of e journals under HELINET. FMMC college respondents were just more than fifty percent having very good awareness compared to respondents of other colleges.

Subject	Excellen t	%	Very Good	%	Goo d	%	Poo r	%	Very Poor	%	Grand Total
Anatomy		0.0	7	5.5	84	66.1	34	26.8	2	1.6	127
Anaesthesiology		0.0		0.0	8	57.1	6	42.9		0.0	14
Biochemistry	1	1.4	5	6.8	48	65.8	16	21.9	3	4.1	73
Cardiology		0.0		0.0	9	100. 0		0.0		0.0	9
Community Medicine	2	1.4	46	32.4	65	45.8	14	9.9	15	10. 6	142
Critical Care		0.0	2	100. 0		0.0		0.0		0.0	2
Dermatology		0.0	5	3.9	59	45.7	50	38.8	15	11. 6	129
ENT		0.0	4	17.4	19	82.6		0.0		0.0	23
Forensic medicine		0.0	1	6.3	12	75.0	3	18.8		0.0	16
Microbiology	2	3.3		0.0	50	82.0	1	1.6	8	13. 1	61
Neurology		0.0		0.0	2	100. 0		0.0		0.0	2
OBG	9	10. 8	40	48.2	24	28.9	7	8.4	3	3.6	83
Ophthalmology		0.0		0.0	13	56.5	2	8.7	8	34. 8	23

Table-5: Availability of e-journals under HELINET – Subject wise

Oral Medicine		0.0		0.0	2	100. 0		0.0		0.0	2
Orthopaedics		0.0		0.0	14	63.6	8	36.4		0.0	22
Pathology	3	2.3	15	11.5	87	66.4	21	16.0	5	3.8	131
Paediatrics		0.0	2	14.3	9	64.3		0.0	3	21. 4	14
Pharmacology		0.0	8	10.4	59	76.6	10	13.0		0.0	77
Physiology		0.0	1	1.1	67	72.8	21	22.8	3	3.3	92
Plastic Surgery		0.0		0.0	10	100. 0		0.0		0.0	10
Psychiatry		0.0		0.0		0.0	4	100. 0		0.0	4
Radiology		0.0	9	34.6	13	50.0	4	15.4		0.0	26
Grand Total	17	1.6	145	13.4	654	60.4	201	18.6	65	6.0	1082
Mean	3.4	0.9	11.2	13.3	32.7	63.6	13.4	17.3	6.5	4.9	49.2
S.D. +/-	3.2	2.4	14.7	23.5	28.7	28.1	13.6	22.9	4.9	8.8	48.9
Chi Square	4.516E2										
Sig.	0.000										

When analysed for awareness on availability of e journals under HELINET among various subjects, Significantly largest number of respondents i.e. 60.4 percent had good awareness and 6 percent had very poor awareness among various subjects (Chi Square 4.516E2 at p=0.000). Only 1.6 percent respondents had excellent awareness. Among various subjects, respondents from community medicine, dermatology and OBG were less than fifty percent having good awareness on availability of e journals under HELINET and none were from psychiatry. Even though respondents having excellent awareness were lowest, respondents from OBG were 10.8 percent and were highest among all.

Subject Cluster	Excellent	%	Very Good	%	Good	%	Poor	%	Very Poor	%	Grand Total	
Clinical Subjects	9	2.6	60	17.6	161	47.4	81	23.8	29	8.5	340	
Para-Clinical Subjects	7	1.6	70	16.4	273	63.9	49	11.5	28	6.6	427	
Pre-Clinical Subjects	1	0.3	13	4.5	199	68.2	71	24.3	8	2.7	292	
Superspeciality Subjects		0.0	2	8.7	21	91.3		0.0		0.0	23	
Grand Total	17	1.6	145	13.4	654	60.4	201	18.6	65	6.0	1082	
Mean	5.7	1.2	36.3	11.8	163.5	67.7	67.0	14.9	21.7	4.5	270.5	
S.D. +/-	4.2	1.2	33.7	6.3	105.8	18.1	16.4	11.6	11.8	3.8	174.2	
Chi Square		84.401										
Sig.	0.000											

Table-6: Availability of e-journals under HELINET – Subject Cluster wise

Among the broad categories, respondents from super speciality subject were 91.3 percent and significantly highest among all having good awareness of availability of e-journals under HELINET followed by others (Chi Square 84.401; P=0.000). Less than fifty percent respondents were from clinical subjects having good awareness.

Institution wery Some what ver % y % at all at all % % Total AAMC 9 34.6 17 65.4 0.0 0.0 34. AIMS 15 44.1 19 55.9 0.0 0.0 30. AIMS 13 43.3 16 53.3 1 3.3 0.0 30. AMC 11 45.8 10 41.7 2 8.3 1 4.2 24. BIMS 2 9.1 16 72.7 4 18.2 0.0 22. BMC 10 47.6 10 47.6 1 4.8 0.0 21. BMC 5 33.3 9 60.0 0.0 1 6.7 15. ESIC 6 23.1 13 56.5 1 4.3 0.0 23. IMMC 9 32.1 16 57.1 2 7.1 1						Not				Gran
Institution much % what % y % at all % Total AAMC 9 34.6 17 65.4 0.0 0.0 26 AIMS 15 44.1 19 55.9 0.0 0.0 30 AMC 11 45.8 10 41.7 2 8.3 1 4.2 24 BIMS 2 9.1 16 72.7 4 18.2 0.0 0.0 22 BMC 15 45.5 18 54.5 0.0 0.0 21 BMC 33.3 9 60.0 0.0 1.6 6.7 15 ESIC 6 23.1 13 50.5 1 4.3 0.0 22 BMPMC 21 70.0 9 30.0 0.0 0.0 23 31 JIMMC 43.3 15 50.0 1 3.3 30 34 JSSMC		Very		Some		ver		Not		d
AAMC 9 34.6 17 65.4 0.0 0.0 26 AIMS 15 44.1 19 55.9 0.0 0.0 34 AIMS 13 43.3 16 53.3 1 3.3 0.0 30 AMC 111 45.8 10 41.7 2 8.3 1 4.2 24 BIMS 2 9.1 16 72.7 4 18.2 0.0 22 BMC 15 45.5 18 54.5 0.0 0.0 33 BMCH 10 47.6 10 47.6 1 4.8 0.0 21 BMPMC 5 33.3 9 60.0 0.0 1 6.7 15 ESIC 6 23.1 13 50.0 7 26.9 0.0 23 JIMMC 9 32.1 16 57.1 2 7.1 1 3.6 28 JNMC 15 44.1 16 47.1 2 5.9 1 2.9 <th>Institution</th> <th>much</th> <th>%</th> <th>what</th> <th>%</th> <th>У</th> <th>%</th> <th>at all</th> <th>%</th> <th>Total</th>	Institution	much	%	what	%	У	%	at all	%	Total
AIMS 15 44.1 19 55.9 0.0 0.0 34 AJIMS 13 43.3 16 53.3 1 3.3 0.0 30 AMC 11 45.8 10 41.7 2 8.3 1 4.2 24 BIMS 2 9.1 16 72.7 4 18.2 0.0 22 BIMS 5 22.7 14 63.6 2 9.1 1 4.5 22 BMC 10 47.6 10 47.6 1 4.8 0.0 21 BMPC 5 33.3 9 60.0 0.0 1 6.7 15 ESIC 6 23.1 13 50.0 7 26.9 0.0 23 FMMC 21 70.0 9 30.0 0.0 0.0 30 0.0 23 JIMS 4 21.1 12 63.2 2 1.1 3.3 19 34 JIMC 9 32.1 16 57.1	AAMC	9	34.6	17	65.4		0.0		0.0	26
AJIKS 13 43.3 16 53.3 1 3.3 0.0 30 AMC 11 45.8 10 41.7 2 8.3 1 4.2 24 BIMS 2 9.1 16 72.7 4 18.2 0.0 22 BMC 15 45.5 18 54.5 0.0 1 4.5 222 BMC 15 45.5 18 54.5 0.0 1 6.7 15 ESIC 6 23.1 13 50.0 7 26.9 0.0 26 FMMC 21 70.0 9 30.0 0.0 0.0 30 30 GMC 9 39.1 13 56.5 1 4.3 0.0 23 HIMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JMMC 9 32.1 16 57.1 2 7.1 1 3.8 26 KIMS-B 9 34.6 14.1 5.3	AIMS	15	44.1	19	55.9		0.0		0.0	34
AMC 11 45.8 10 41.7 2 8.3 1 4.2 24 BIMS 2 9.1 16 72.7 4 18.2 0.0 22 BIMS 5 22.7 14 63.6 2 9.1 1 4.5 22 BMC 15 45.5 18 54.5 0.0 0.0 33 BMPMC 5 33.3 9 60.0 0.0 1 6.7 15 ESIC 6 23.1 13 50.0 7 26.9 0.0 23 HMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JIMMC 9 32.1 16 57.1 2 7.1 1 3.6 28 JNMC 15 44.1 16 47.1 2 5.9 1 2.9 34 JSSMC 13 43.3 15 50.0 1 3.3 1 3.8 26 KIMS-B 9 34.6	AJIMS	13	43.3	16	53.3	1	3.3		0.0	30
BIMS 2 9.1 16 72.7 4 18.2 0.0 22 BIMSB 5 22.7 14 63.6 2 9.1 1 4.5 22 BMC 15 45.5 18 54.5 0.0 0.0 33 BMCH 10 47.6 10 47.6 1 4.8 0.0 21 BMPMC 5 33.3 9 60.0 0.0 1 6.7 15 FSIC 6 23.1 13 50.0 7 26.9 0.0 23 HIMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JIMC 9 32.1 16 57.1 2 7.7 1 3.8 26 KIMS-B 9 34.6 14 53.8 2 7.7 1 3.8 26 KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 JSSMC 13 41.9 17 2.7	AMC	11	45.8	10	41.7	2	8.3	1	4.2	24
BIMSB 5 22.7 14 63.6 2 9.1 1 4.5 22 BMC 15 45.5 18 54.5 0.0 0.0 33 BMCH 10 47.6 10 47.6 1 4.8 0.0 21 BMPMC 5 33.3 9 60.0 0.0 1 6.7 15 ESIC 6 23.1 13 50.0 7 26.9 0.0 20 GMC 9 39.1 13 56.5 1 4.3 0.0 23 HIMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JMMC 15 44.1 16 57.1 2 7.1 1 3.6 28 JNMC 15 44.1 16 47.1 2 5.9 1 2.9 34 JSSMC 13 43.3 15 50.0 1 3.3 1 3.3 30 KIMS-B 9 34.6 14	BIMS	2	9.1	16	72.7	4	18.2		0.0	22
BMC 15 45.5 18 54.5 0.0 0.0 33 BMCH 10 47.6 10 47.6 1 4.8 0.0 21 BMPMC 5 33.3 9 60.0 0.0 1 6.7 15 ESIC 6 23.1 13 50.0 7 26.9 0.0 26 FMMC 21 70.0 9 30.0 0.0 1.0.5 1.3 5.3 19 JIMC 9 32.1 16 57.1 2 10.5 1 3.3 19 JIMC 15 44.1 16 47.1 2 5.9 1 2.9 34 JSSMC 13 43.3 15 50.0 1 3.3 1 3.3 30 KMC 17 45.9 19 51.4 1 2.7 0.0 31 KMCM 13 41.9 17 54.8 1 </td <td>BIMSB</td> <td>5</td> <td>22.7</td> <td>14</td> <td>63.6</td> <td>2</td> <td>9.1</td> <td>1</td> <td>4.5</td> <td>22</td>	BIMSB	5	22.7	14	63.6	2	9.1	1	4.5	22
BMCH 10 47.6 1 4.8 0.0 21 BMPMC 5 33.3 9 60.0 0.0 1 6.7 15 ESIC 6 23.1 13 50.0 7 26.9 0.0 26 FMMC 21 70.0 9 30.0 0.0 0.0 0.0 23 GMC 9 39.1 13 56.5 1 4.3 0.0 23 HIMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JMMC 9 32.1 16 57.1 2 7.1 1 3.6 28 INMC 13 43.3 15 50.0 1 3.3 1 3.3 30 KMSH 1 7.7 11 84.6 0.0 1 7.7 13 KMCM 13 41.9 14 3.2 0.0 31 KMCM 13 41.9 1 3.2 0.0 34 KMCM	BMC	15	45.5	18	54.5		0.0		0.0	33
BMPMC 5 33.3 9 60.0 7 26.9 0.0 26 FMMC 21 70.0 9 30.0 7 26.9 0.0 20 GMC 9 39.1 13 56.5 1 4.3 0.0 23 HIMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JJMMC 9 32.1 16 57.1 2 7.1 1 3.6 28 JNMC 15 44.1 16 47.1 2 5.9 1 2.9 34 JSSMC 13 43.3 15 50.0 1 3.3 10.3 3.3 30 KIMS-B 9 34.6 14 53.8 2 7.7 1 3.8 26 KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 KMCM 13 41.9 1	ВМСН	10	47.6	10	47.6	1	4.8		0.0	21
ESIC 6 23.1 13 50.0 7 26.9 0.0 26 FMMC 21 70.0 9 30.0 0.0 0.0 30.0 GMC 9 39.1 13 56.5 1 4.3 0.0 23 IMMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JJMMC 9 32.1 16 57.1 2 7.1 1 3.6 28 JNMC 13 43.3 15 50.0 1 3.3 1 3.3 30 KIMS-B 9 34.6 14 53.8 2 7.7 1 38 26 KIMS-H 1 7.7 13 84.6 0.0 1 7.7 13 KMC 17 45.9 19 51.4 1 2.7 0.0 31 KMCM 13 41.9 17 54.8 <	BMPMC	5	33.3	9	60.0		0.0	1	6.7	15
FMMC 21 70.0 9 30.0 0.0 0.0 30.0 GMC 9 39.1 13 56.5 1 4.3 0.0.0 23 HIMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JJMMC 9 32.1 16 57.1 2 7.1 1 3.6 28 JNMC 15 44.1 16 47.1 2 5.9 1 2.9 34 JSSMC 13 43.3 15 50.0 1 3.3 1 3.3 30 KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 KMC 13 41.9 17 54.8 1 3.2 0.0 31 KMCM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1	ESIC	6	23.1	13	50.0	7	26.9		0.0	26
GMC 9 39.1 13 56.5 1 4.3 0.0 23 HIMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JJMMC 9 32.1 16 57.1 2 7.1 1 3.6 28 JNMC 15 44.1 16 47.1 2 5.9 1 2.9 34 JSSMC 13 43.3 15 50.0 1 3.3 1 3.3 30 KIMS-B 9 34.6 14 53.8 2 7.7 1 3.8 26 KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 KMC 13 41.9 17 54.8 1 3.2 0.0 31 KSHM 6 20.7 19 65.5 3 10.3 1 3.4 29 KVGM 7 20.6 26 76.5 1 2.9 0.0 31 MIMS 5 <t< td=""><td>FMMC</td><td>21</td><td>70.0</td><td>9</td><td>30.0</td><td></td><td>0.0</td><td></td><td>0.0</td><td>30</td></t<>	FMMC	21	70.0	9	30.0		0.0		0.0	30
HIMS 4 21.1 12 63.2 2 10.5 1 5.3 19 JJMMC 9 32.1 16 57.1 2 7.1 1 3.6 28 JNMC 15 44.1 16 47.1 2 5.9 1 2.9 34 JSSMC 13 43.3 15 50.0 1 3.3 10 3.3 30 KIMS-B 9 34.6 14 53.8 2 7.7 1 3.8 26 KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 KMC 17 45.9 19 51.4 1 2.7 0.0 37 KMCM 13 41.9 17 54.8 1 3.2 0.0 31 KSHM 6 20.7 19 65.5 3 10.3 1 3.4 2.9 KVGM 7 20.6 26 76.5 1 2.9 0.0 31 MIMS 5	GMC	9	39.1	13	56.5	1	4.3		0.0	23
JJMMC 9 32.1 16 57.1 2 7.1 1 3.6 28 JNMC 15 44.1 16 47.1 2 5.9 1 2.9 34 JSSMC 13 43.3 15 50.0 1 3.3 1 3.3 30 KIMS-B 9 34.6 14 53.8 2 7.7 1 3.8 26 KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 KMC 17 45.9 19 51.4 1 2.7 0.0 31 KMCM 13 41.9 17 54.8 1 3.2 0.0 31 KVGM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1 3.6 0.0 2.3 MRC 14 31.8 28 63.6 1 2.3 1 2.3 2.3 MVMC 7 35.0	HIMS	4	21.1	12	63.2	2	10.5	1	5.3	19
JNMC 15 44.1 16 47.1 2 5.9 1 2.9 34 JSSMC 13 43.3 15 50.0 1 3.3 1 3.3 30 KIMS-B 9 34.6 14 53.8 2 7.7 1 3.8 26 KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 KMC 17 45.9 19 51.4 1 2.7 0.0 37 KMCM 13 41.9 17 54.8 1 3.2 0.0 31 KSHM 6 20.7 19 65.5 3 10.3 1 3.4 29 KVGM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1 3.6 0.0 2.3 MRC 14 31.8 28 63.6 1 2.3 1 5.0 2.0 NMC 7 43.8	JJMMC	9	32.1	16	57.1	2	7.1	1	3.6	28
JSSMC 13 43.3 15 50.0 1 3.3 1 3.3 30 KIMS-B 9 34.6 14 53.8 2 7.7 1 3.8 26 KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 KMC 17 45.9 19 51.4 1 2.7 0.0 37 KMCM 13 41.9 17 54.8 1 3.2 0.0 31 KSHM 6 20.7 19 65.5 3 10.3 1 2.4 29 KVGM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1 3.6 0.0 2.8 MRMC 14 31.8 28 63.6 1 2.3 1 2.3 44 MSRMC 17 54.8 13 41.9 1 3.2 0.0 31 MVMC 7 35.0 11	JNMC	15	44.1	16	47.1	2	5.9	1	2.9	34
KIMS-B 9 34.6 14 53.8 2 7.7 1 3.8 26 KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 KMC 17 45.9 19 51.4 1 2.7 0.0 37 KMCM 13 41.9 17 54.8 1 3.2 0.0 31 KSHM 6 20.7 19 65.5 3 10.3 1 3.4 29 KVGM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1 3.6 0.0 2.3 MRMC 14 31.8 28 63.6 1 2.3 1 2.3 44 MSRMC 17 54.8 13 41.9 1 3.2 0.0 31 MVMC 7 35.0 11 55.0 1 5.0 1 4.3 23 RMC 4 16.7 20	JSSMC	13	43.3	15	50.0	1	3.3	1	3.3	30
KIMS-H 1 7.7 11 84.6 0.0 1 7.7 13 KMC 17 45.9 19 51.4 1 2.7 0.0 37 KMCM 13 41.9 17 54.8 1 3.2 0.0 31 KSHM 6 20.7 19 65.5 3 10.3 1 3.4 29 KVGM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1 3.6 0.0 28 MRC 14 31.8 28 63.6 1 2.3 1 2.3 44 MSRC 17 54.8 13 41.9 1 3.2 0.0 31 MVJMC 7 35.0 11 55.0 1 5.0 1 5.0 20 NMC 7 43.8 8 50.0 1 6.3 0.0 16 RIMC 4 16.7 20 83.3	KIMS-B	9	34.6	14	53.8	2	7.7	1	3.8	26
KMC 17 45.9 19 51.4 1 2.7 0.0 37 KMCM 13 41.9 17 54.8 1 3.2 0.0 31 KSHM 6 20.7 19 65.5 3 10.3 1 3.4 29 KVGM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1 3.6 0.0 28 MRMC 14 31.8 28 63.6 1 2.3 1 2.3 44 MSRMC 17 54.8 13 41.9 1 3.2 0.0 31 MVJMC 7 35.0 11 55.0 1 5.0 1 5.0 20 NMC 7 43.8 8 50.0 1 6.3 0.00 14.3 23 RMC 4 16.7 20 83.3 0.00 1 4.3 24 SDMMC 20 48.8 19	KIMS-H	1	7.7	11	84.6		0.0	1	7.7	13
KMCM 13 41.9 17 54.8 1 3.2 0.0 31 KSHM 6 20.7 19 65.5 3 10.3 1 3.4 29 KVGM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1 3.6 0.0 28 MRMC 14 31.8 28 63.6 1 2.3 1 2.3 44 MSRMC 17 54.8 13 41.9 1 3.2 0.0 31 MVJMC 7 35.0 11 55.0 1 5.0 1 5.0 20 NMC 7 43.8 8 50.0 1 6.3 0.0 16 RIMC 4 17.4 18 78.3 0.0 1 4.3 23 SMC 20 48.8 19 46.3 2 4.9 0.0 41 SDUMC 20 48.8 19 46.3	KMC	17	45.9	19	51.4	1	2.7		0.0	37
KSHM 6 20.7 19 65.5 3 10.3 1 3.4 29 KVGM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1 3.6 0.0 28 MRMC 14 31.8 28 63.6 1 2.3 1 2.3 44 MSRMC 17 54.8 13 41.9 1 3.2 0.0 31 MVJMC 7 35.0 11 55.0 1 5.0 1 5.0 20 NMC 7 43.8 8 50.0 1 6.3 0.0 16 RIMC 4 17.4 18 78.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 1 4.3 23 SDMMC 20 48.8 19 46.3 2 4.9 0.0 41 SDIMC 3 23.1 8 61.5	KMCM	13	41.9	17	54.8	1	3.2		0.0	31
KVGM 7 20.6 26 76.5 1 2.9 0.0 34 MIMS 5 17.9 22 78.6 1 3.6 0.0 28 MRMC 14 31.8 28 63.6 1 2.3 1 2.3 44 MSRMC 17 54.8 13 41.9 1 3.2 0.0 31 MVJMC 7 35.0 11 55.0 1 5.0 1 5.0 20 NMC 7 43.8 8 50.0 1 6.3 0.0 16 RIMC 4 17.4 18 78.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 1 3.3 23 SDMMC 20 48.8 19 46.3 2 4.9 0.0 22 SJMC 3 23.1 8 61.5 2 <t< td=""><td>KSHM</td><td>6</td><td>20.7</td><td>19</td><td>65.5</td><td>3</td><td>10.3</td><td>1</td><td>3.4</td><td>29</td></t<>	KSHM	6	20.7	19	65.5	3	10.3	1	3.4	29
MIMS 5 17.9 22 78.6 1 3.6 0.0 28 MRMC 14 31.8 28 63.6 1 2.3 1 2.3 44 MSRMC 17 54.8 13 41.9 1 3.2 0.0 31 MVJMC 7 35.0 11 55.0 1 5.0 1 5.0 20 NMC 7 43.8 8 50.0 1 6.3 0.0 16 RIMC 4 17.4 18 78.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 0.0 24 SDMMC 20 48.8 19 46.3 2 4.9 0.0 41 SDUMC 4 12.5 23 71.9 4 12.5 1 3.1 32 SIMS 3 13.6 17 77.3 2 9.1 0.0 28 SIMC 10 35.7 16 57.1 2	KVGM	7	20.6	26	76.5	1	2.9		0.0	34
MRMC 14 31.8 28 63.6 1 2.3 1 2.3 44 MSRMC 17 54.8 13 41.9 1 3.2 0.0 31 MVJMC 7 35.0 11 55.0 1 5.0 1 5.0 20 NMC 7 43.8 8 50.0 1 6.3 0.0 16 RIMC 4 17.4 18 78.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 0.0 24 SDMMC 20 48.8 19 46.3 2 4.9 0.0 41 SDMC 4 12.5 23 71.9 4 12.5 1 3.1 32 SIMS 3 13.6 17 77.3 2 9.1 0.0 28 SIMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 9 30.0 18 60.0 2	MIMS	5	17.9	22	78.6	1	3.6		0.0	28
MSRMC 17 54.8 13 41.9 1 3.2 0.0 31 MVJMC 7 35.0 11 55.0 1 5.0 1 5.0 20 NMC 7 43.8 8 50.0 1 6.3 0.0 16 RIMC 4 17.4 18 78.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 0.0 24 SDMMC 20 48.8 19 46.3 2 4.9 0.0 41 SDUMC 4 12.5 23 71.9 4 12.5 1 3.1 32 SIMS 3 13.6 17 77.3 2 9.1 0.0 22 SJMC 3 23.1 8 61.5 2 15.4 0.0 13 SNMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 9 30.0 18 60.0 2 6.7	MRMC	14	31.8	28	63.6	1	2.3	1	2.3	44
MVJMC 7 35.0 11 55.0 1 5.0 1 5.0 20 NMC 7 43.8 8 50.0 1 6.3 0.0 16 RIMC 4 17.4 18 78.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 0.0 24 SDMMC 20 48.8 19 46.3 2 4.9 0.0 41 SDUMC 4 12.5 23 71.9 4 12.5 1 3.1 32 SIMS 3 13.6 17 77.3 2 9.1 0.0 22 SJMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 9 30.0 18 60.0 2 6.7	MSRMC	17	54.8	13	41.9	1	3.2		0.0	31
NMC 7 43.8 8 50.0 1 6.3 0.0 16 RIMC 4 17.4 18 78.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 1 4.3 23 SDMMC 20 48.8 19 46.3 2 4.9 0.0 41 SDUMC 4 12.5 23 71.9 4 12.5 1 3.1 32 SIMS 3 13.6 17 77.3 2 9.1 0.0 22 SJMC 3 23.1 8 61.5 2 15.4 0.0 13 SNMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0	MVJMC	7	35.0	11	55.0	1	5.0	1	5.0	20
RIMC 4 17.4 18 78.3 0.0 1 4.3 23 RMC 4 16.7 20 83.3 0.0 0.0 24 SDMMC 20 48.8 19 46.3 2 4.9 0.0 41 SDUMC 4 12.5 23 71.9 4 12.5 1 3.1 32 SIMS 3 13.6 17 77.3 2 9.1 0.0 22 SIMC 3 23.1 8 61.5 2 15.4 0.0 22 SIMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 31 33 30 YMC 19 46.3 20 48.8 2	NMC	7	43.8	8	50.0	1	6.3		0.0	16
RMC 4 16.7 20 83.3 0.0 0.0 24 SDMMC 20 48.8 19 46.3 2 4.9 0.0 41 SDUMC 4 12.5 23 71.9 4 12.5 1 3.1 32 SIMS 3 13.6 17 77.3 2 9.1 0.0 22 SJMC 3 23.1 8 61.5 2 15.4 0.0 13 SNMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 31 33 YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand 7 7 58.5 5.4 17 1.6	RIMC	4	17.4	18	78.3		0.0	1	4.3	23
SDMMC 20 48.8 19 46.3 2 4.9 0.0 41 SDUMC 4 12.5 23 71.9 4 12.5 1 3.1 32 SIMS 3 13.6 17 77.3 2 9.1 0.0 22 SJMC 3 23.1 8 61.5 2 15.4 0.0 13 SNMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 12 34.3 18 51.4 4 11.4 1 2.9 35 SSMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 41 Grand 621 57.5 58 5.4 17 1.6 1080 Mean 9.8 34.0 15.9 58.5 2.0 <	RMC	4	16.7	20	83.3		0.0		0.0	24
SDUMC 4 12.5 23 71.9 4 12.5 1 3.1 32 SIMS 3 13.6 17 77.3 2 9.1 0.0 22 SJMC 3 23.1 8 61.5 2 15.4 0.0 13 SNMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 12 34.3 18 51.4 4 11.4 1 2.9 35 SSMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 31 YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand Mean 9.8 34.0 15.9 58.5 2.0 5.7 1.0 1.8 27.7 S.D. +/- 5.4 14.1	SDMMC	20	48.8	19	46.3	2	4.9		0.0	41
SIMS 3 13.6 17 77.3 2 9.1 0.0 22 SJMC 3 23.1 8 61.5 2 15.4 0.0 13 SNMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 12 34.3 18 51.4 4 11.4 1 2.9 35 SSMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 31 YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand Mean 9.8 34.0 15.9 58.5 2.0 5.7 1.0 1.8 27.7 S.D. +/- 5.4 14.1 4.6 12.3 1.3 5.7 0.0 2.2 7.4 Chi Square	SDUMC	4	12.5	23	71.9	4	12.5	1	3.1	32
SJMC 3 23.1 8 61.5 2 15.4 0.0 13 SNMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 12 34.3 18 51.4 4 11.4 1 2.9 35 SSMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 11 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 31 33 YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand Image: Colored Colo	SIMS	3	13.6	17	77.3	2	9.1		0.0	22
SNMC 10 35.7 16 57.1 2 7.1 0.0 28 SSIMC 12 34.3 18 51.4 4 11.4 1 2.9 35 SSMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 31 YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand	SJMC	3	23.1	8	61.5	2	15.4		0.0	13
SSIMC 12 34.3 18 51.4 4 11.4 1 2.9 35 SSMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 31 YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand	SNMC	10	35.7	16	57.1	2	7.1		0.0	28
SSMC 9 30.0 18 60.0 2 6.7 1 3.3 30 VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 31 YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand	SSIMC	12	34.3	18	51.4	4	11.4	1	2.9	35
VIMC 16 47.1 17 50.0 0.0 1 2.9 34 VIMS 15 48.4 16 51.6 0.0 0.0 31 YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand	SSMC	9	30.0	18	60.0	2	6.7	1	3.3	30
VIMS 15 48.4 16 51.6 0.0 0.0 31 YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand 10 10 15 57.5 58 5.4 17 1.6 1080 Mean 9.8 34.0 15.9 58.5 2.0 5.7 1.0 1.8 27.7 S.D. +/- 5.4 14.1 4.6 12.3 1.3 5.7 0.0 2.2 7.4 Chi Square	VIMC	16	47.1	17	50.0		0.0	1	2.9	34
YMC 19 46.3 20 48.8 2 4.9 0.0 41 Grand Angle of the state of the	VIMS	15	48.4	16	51.6		0.0	-	0.0	31
Grand 384 35.6 621 57.5 58 5.4 17 1.6 1080 Mean 9.8 34.0 15.9 58.5 2.0 5.7 1.0 1.8 27.7 S.D. +/- 5.4 14.1 4.6 12.3 1.3 5.7 0.0 2.2 7.4 Chi Square	YMC	19	46.3	20	48.8	2	4.9		0.0	41
Total 384 35.6 621 57.5 58 5.4 17 1.6 1080 Mean 9.8 34.0 15.9 58.5 2.0 5.7 1.0 1.8 27.7 S.D. +/- 5.4 14.1 4.6 12.3 1.3 5.7 0.0 2.2 7.4 Chi Square	Grand	-/				-				
Mean 9.8 34.0 15.9 58.5 2.0 5.7 1.0 1.8 27.7 S.D. +/- 5.4 14.1 4.6 12.3 1.3 5.7 0.0 2.2 7.4 Chi Square 1.680E2 Sig. 0.001	Total	384	35.6	621	57.5	58	5.4	17	1.6	1080
S.D. +/- 5.4 14.1 4.6 12.3 1.3 5.7 0.0 2.2 7.4 Chi Square 1.680E2 0.001 2.2 7.4	Mean	9.8	34.0	15.9	58.5	2.0	5.7	1.0	1.8	27.7
Chi Square 1.680E2 Sig. 0.001	S.D. +/-	5.4	14.1	4.6	12.3	1.3	5.7	0.0	2.2	7.4
Sig. 0.001	Chi Square				1.	680E2				
	Sig.					0.001				

Table-7: Usefulness of E-Resources provided by HELINET – Institution wise

Among various colleges, significantly largest number of respondents to an extent of 57.5 percent felt that E -Resources accessed from E Journal consortium like HELINET were somewhat useful followed by 35.6 percent respondents felt very useful; 5.4 percent felt not useful and 1.6 percent felt

not at all useful (Chi Square 1.680E2 at P=0.001). Among various colleges, respondents from AMC, BMCH, FMMC, JNMC, MSRMC, SDMMC and YMC were less than fifty percent and other college respondents were more than fifty percent who opined that E -Resources accessed from E Journal consortium like HELINET were somewhat useful. Respondents from MSRMC and FMMC were significantly highest and more than fifty percent who felt E -Resources accessed from E Journal consortium like HELINET were very much useful.

Subject	Very much	%	Somewha t	%	Not very	%	Not at all	%	Grand Total		
Anatomy	23	18.3	94	74.6	7	5.6	2	1.6	126		
Anaesthesiology		0.0	16	100. 0		0.0		0.0	16		
Biochemistry	37	52.1	31	43.7	3	4.2		0.0	71		
Cardiology		0.0	9	100. 0		0.0		0.0	9		
Community Medicine	77	53.1	53	36.6	15	10. 3		0.0	145		
Critical Care		0.0	2	100. 0		0.0		0.0	2		
Dermatology	18	14.5	90	72.6	6	4.8	10	8.1	124		
ENT	9	39.1	14	60.9		0.0		0.0	23		
Forensic medicine	3	18.8	13	81.3		0.0		0.0	16		
Microbiology	29	49.2	30	50.8		0.0		0.0	59		
Neurology		0.0	2	100. 0		0.0		0.0	2		
OBG	65	78.3	18	21.7		0.0		0.0	83		
Ophthalmology	5	16.7	20	66.7		0.0	5	16. 7	30		
Oral Medicine	2	100. 0		0.0		0.0		0.0	2		
Orthopaedics	7	31.8	15	68.2		0.0		0.0	22		
Pathology	47	34.8	83	61.5	5	3.7		0.0	135		
Paediatrics	2	11.8	15	88.2		0.0		0.0	17		
Pharmacology	36	49.3	26	35.6	11	15. 1		0.0	73		
Physiology	4	4.5	74	83.1	11	12. 4		0.0	89		
Plastic Surgery		0.0	10	100. 0		0.0		0.0	10		
Psychiatry											
Radiology	20	76.9	6	23.1		0.0		0.0	26		
Grand Total	384	35.6	621	57.5	58	5.4	17	1.6	1080		
Mean	24.0	30.9	31.1	65.2	8.3	2.7	5.7	1.3	51.4		
S.D. +/-	23.2	29.5	30.2	29.7	4.2	4.6	4.0	4.0	48.6		
Chi Square					3.729E2						
Sig.	0.000										

 Table-8: Usefulness of E-Resources provided by HELINET – Subject wise

When analysed for subjects, respondents from biochemistry, community medicine, OBG, pharmacology and radiology were less than fifty percent and respondents from other subjects were

more than fifty percent and significantly high to opine that E -Resources accessed from E Journal consortium like HELINET were somewhat useful (Chi Square 3.729E2 at p=0.000). Respondents from biochemistry, Community medicine, OBG, Oral medicine, radiology were more than fifty percent to opine that E -Resources accessed from E Journal consortium like HELINET were very much useful.

Subject Cluster	Very much	%	Somewhat	%	Not very	%	Not at all	%	Grand Total	
Clinical Subjects	128	37.3	194	56.6	6	1.7	15	4.4	343	
Para-Clinical Subjects	192	44.9	205	47.9	31	7.2		0.0	428	
Pre-Clinical Subjects	64	22.4	199	69.6	21	7.3	2	0.7	286	
Superspeciality Subjects		0.0	23	100.0		0.0		0.0	23	
Grand Total	384	35.6	621	57.5	58	5.4	17	1.6	1080	
Mean	128.0	26.1	155.3	68.5	19.3	4.1	8.5	1.3	270.0	
S.D. +/-	64.0	19.8	88.3	22.8	12.6	3.8	9.2	2.1	174.7	
Chi Square					94.306					
Sig.	0.000									

Table-9: Usefulness of E-Resources provided by HELINET – Subject Cluster wise

Among various categories of broad subjects, respondents from superspeciality subjects were significantly highest and 100 percent to opine that E -Resources accessed from E Journal consortium like HELINET were somewhat useful (Chi Square 94.306 at p=0.000) compared to respondents of other subjects. It is interesting to note that none from super speciality subjects opined that E - Resources accessed from E Journal consortium like HELINET were very much useful.

Major Findings

- Out of total respondents from various colleges, 66.5 percent were aware of access to HELINET resources of library. There were significant and significantly largest number of respondents was aware of access to HELINET resources.
- Among the respondents various colleges who are aware of access to HELINET were less than 50 percent in JNMC, MRMC, NMC and SJMC colleges. Where as in all other colleges, respondents were >50 percent who were aware about access to HELINET.
- Out of total respondents from various subjects, significantly largest number of respondents i.e. 66.5 percent were aware of access to HELINET resources of library.
- Among various subjects, respondents from anaesthesiology, biochemistry, dermatology, and ophthalmology were less than fifty percent and respondents from other subjects were more than 50 percent who were aware of access to HELINET.
- From broadly categorised subjects, significantly more than fifty percent respondents from all subjects were aware of access to HELINET resources of library.

- Among various subjects, respondents from super speciality subjects were highest (73.9 percent) followed by Para-clinical subjects (70.7%) were highest in aware of accessing HELINET.
- For the awareness on availability of e-journals under HELINET, Significantly largest number of respondents i.e. 60.4 percent had good awareness and 6 percent had very poor awareness among various colleges.
- Among various colleges, respondents from BIMSB, GMC, HIMS, JSSMC, KIMS-H, MSRMC, NMC and SSMC colleges were less than fifty percent having good awareness on availability of e journals under HELINET.

• Among the broad categories, respondents from super speciality subject were 91.3 percent and significantly highest among all having good awareness of availability of e-journals under HELINET followed by others. Less than fifty percent respondents were from clinical subjects having good awareness.

Recommendations

Based on the study, it is recommended that

- Librarians of each medical college needs to create more awareness on the resources provided by HELINET consortium
- HELINET consortium needs to provide an online demo on how-to-access the resources provided in the consortium
- HELINET consortium needs to provide an online demo on how-to-effectively-search the resources provided in the consortium
- HELINET consortium needs to provide regular training sessions for library professionals from participating institutions on the collection of HELINET consortium on a periodic basis at the regional levels

Conclusion

It has been understood by the study that most of the respondents were aware of access to HELINET resources of library. Among the respondents various colleges who are aware of access to HELINET were from JNMC, MRMC, NMC and SJMC colleges. Among various subjects, other than respondents from anaesthesiology, biochemistry, dermatology, and ophthalmology, were more than 50 percent who were aware of access to HELINET. Respondents from super speciality subjects were highest followed by Para-clinical subjects were aware about HELINET and the resources provided. Among the broad categories, respondents from super speciality subject were 91.3 percent and significantly highest among all having good awareness of availability of e-journals under HELINET followed by others. Less than fifty percent respondents were from clinical subjects having good awareness.

References

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