Evaluation of Usage and User Satisfaction of Undergraduates on Library Resources and Services: A Study based on the Library of the Institute of Indigenous Medicine (IIM), University of Colombo.

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Abstract

The study focused on usage and user satisfaction of undergraduates of the library facilities provided by the library of the Institute of Indigenous Medicine, University of Colombo. The objective of the study was to determine the users' satisfaction with information resources and services provided by the library. Also, it was aimed to investigate the purpose and frequency of library visits by undergraduates, to examine frequently used information resources and services, to find out undergraduates' perceptions regarding future developments of the library and to provide suitable recommendations to meet undergraduates' unmet needs. A structured questionnaire was used to collect data. Among the total students of Level 1 to Level 5, 20% of students from two Departments of Ayurveda and Unani were randomly selected as the sample. A number of 202 questionnaires were distributed and 154 students responded. The achieved response rate was 75.7%. Data were analyzed using SPSS and Wilcoxon signed-rank test was used to analyze the Likert scale responses. The study revealed that the majority of undergraduates, 77.3% of the Institute of the Indigenous Medicine were satisfied with the resources and services provided by the library and they had a positive perception of the library. The study especially revealed that existing electronic resources in the library were inadequate. Hence, steps should be taken to further the development of e-resources that effectively meet the needs of undergraduates. Improving the physical facilities and reading environment of the IIM library deserves high priority. Conducting more user awareness programs is a necessity. This should be apart from the orientation programs. Implementing marketing strategies on library resources and services needs to be raised.

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Introduction

Academic libraries always perform with two major purposes; support to conduct university curriculum and provide assistance to achieve research targets of faculty and students. Since university libraries play a unique and utmost important role to support the achievement of the goals of their parent body. Libraries need to organize its resources and services very active manner to meet the different learning and research needs of its user community. Identifying the real information needs of target clientele is the best way to meet user satisfaction. Information is regarded as the lifeblood of universities where learning is also at its heart. (Chandrasekar & Murugathas, 2012) Information is ranked next to the basic human needs. (Sritharan, 2018) According to S. R. Ranganathan who is credited as the father of library science, "every reader should have a book" and "every book has a reader". This implies basically that the fulfillment of user needs is the most important factor of any academic library. Providing relevant and up-to-date information to its users is positively affected the library's effectiveness and become a more user-centered place.

Using surveys is one of the most popular methods to evaluate library effectiveness vs user satisfaction. Fulfilling user needs is one of the most important aspects of library management. Conducting user surveys at regular intervals has become an invaluable guide in rearranging the existing collection. It will help library managers to organize the collection at a standard level to meet user needs and fulfilling the gaps in the collection.

History of the Institute of Indigenous Medicine (IIM)

The Institute of Indigenous Medicine, University of Colombo boasts a history of more than eight decades and is the forerunner Institute in offering degrees in Ayurveda and Unani systems of Medicine in Sri Lanka. As a result of the undying attempt of patriots and well-wishers of Ayurveda the day, in 1929, "Swadeshiya" Medical College was established with the prime objective of providing education to those who aspire to study in the field of Indigenous systems of medicine. The three medical systems of Ayurveda, Unani and Siddha were taught in Sinhala, English and Tamil medium respectively. In 1983, the Siddha system of medicine was shifted to the University of Jaffna.

By the introduction of Ayurveda Act No. 31 of 1962 the name of "Swadeshiya" Medical College was renamed as "Government Ayurvedic Medical College' and it started to offer a Diploma in Ayurveda Medicine and Surgery (DAMS) in place of the Diploma in Indigenous Medicine and Surgery (DIMS) that had been offered in 1929. The Government Ayurvedic Medical College was upgraded to the university level and affiliated with the University of Sri Lanka on 01st April 1977 and renamed "Institute of Indigenous Medicine, University of Colombo". In 1983, a new syllabus was introduced to replace the existing Diploma course with a Bachelors degree course and since then Institute of Indigenous Medicine has been offering degree certificates for Bachelor of Ayurveda Medicine and Surgery (BAMS) and Bachelor of Unani Medicine and Surgery (BUMS) in the field of Ayurveda and Unani systems of medicine respectively. (Handbook of Undergraduate Degree Programme 2016 / 2017 (2017)

The library of the Institute of Indigenous Medicine, University of Colombo was founded in 1929, the same year that the Ayurvedic College was inaugurated. The library has a wide range of medical books related to four medical systems of Ayurveda, Unani, Indigenous and western medicine in Sanskrit, Arabic, Urdu, Hindi, Sinhala, Tamil and English languages. In addition to that, the library is enriched with three special collections on Ola Leaf Manuscripts, Hand Written Manuscripts and Medicinal Plants.

Objectives of the Study

The general objective of the study was to determine user satisfaction with the information resources and services provided to the undergraduates by the library of the IIM, University of Colombo. Specific objectives of this study were as follows:

- To investigate the purpose and frequency of library visits by undergraduates
- To examine information resources and services frequently used by undergraduates
- To find out undergraduates' perceptions regarding future developments of the library

- To provide suitable recommendations to meet undergraduates' unmet needs
- To determine the level of satisfaction of students with regard to library resources and services

Review of Literature

A large number of user studies have been conducted by various researchers in various countries during the last three decades. The prime objective of all these studies was basically to assess users' needs and expectations. Senevirathne (2006) pointed out that satisfying the users is the sole aim of every information service. These surveys will help library managers to evaluate the strengths and weaknesses of libraries and provide an opportunity to focus on enhancing user satisfaction (Miraj & Naseer, 2013).

Libraries should endeavor to market library services and resources in order to demonstrate value among stakeholders. (Tetteh & Baah, 2019) A study on "Library value through user satisfaction: The case of academic libraries in Ghana" highlighted that academic libraries are of great use to both students and faculty. The library should make sure it is deeply embedded in the university community by contributing to the teaching, learning, research and other activities through the provision of relevant and accessible information services.

Adeniran (2011) examined the relationship between service quality and users' satisfaction at Redeemer's University, Nigeria. Users of Redeemer's University library were satisfied with the library services and suggested further improvement in the services is needed with the help of the academic staff in teaching and research.

Doris, Adesina and Itunu (2013) assessed service effectiveness and satisfaction with library services at Babcock University, Nigeria and revealed that photocopying, reference and circulation services were considered the most utilized and effective services. The majority of respondents indicated that they were satisfied with library services to a little extent.

A study was conducted by Amarasekara and Marasinghe (2020) at the Main library of the Open University of Sri Lanka to evaluate user satisfaction with

library resources and services. The study revealed that moderately satisfied with the available library services, satisfied with the library website and generally satisfied with the library facilities and library resources as a whole. It identified some areas like user awareness programs, providing information through social media, improving Wi-Fi facilities, increasing the availability of electronics databases etc. In 2019, Sivasanthiran investigated the information needs and usage patterns of paramedical professionals in Sri Lanka. This quantitative research has been done using 51 paramedics with a deductive approach. Establishing a library within their hospital with field-specific collections is the major solution for overcoming the encountered problems of less content on availability, cost, and lack of time.

In 2019, Sritharan assessed the resources and services available in the 26 Sri Lankan health libraries which provide support for Evidence-Based Medicine (EBM) practices. The identified major issues are lack of resources and unavailability of trained staff to cater to the needs related to the practice of EBM. Subscription for best evidence-based resources on consortium basis and training programs for health information professionals to support EBM practice were some valuable suggestions made by the participants to overcome the identified shortcomings.

Wijetunge (2018) focused on "Information seeking behaviour of the social sciences and humanities undergraduates of the University of Colombo" and highlighted that their information-seeking behaviour does not mature across the academic years. More research is required to substantiate the gravity of the issue and librarians must collaborate with the faculty to reduce the stress and uncertainty levels encountered by the undergraduates moving from print-paradigm to digital paradigm and transform the students into the digitally literate world of work with confidence.

Ranawella and Rajapaksha (2017) have stressed the need of evaluating the use and user satisfaction with Library Services and Resources of the Main Library, General Sir John Kotelawala Defense University. 455 Undergraduates of the Faculty of Engineering, Management and Social Sciences and Humanities were employed as the study population. The study raveled that the respondents were satisfied with the library resources and services as a whole. The largest proportion of the respondents visit the library once a week and it is

recommended to conduct information literacy programs as well as awareness programs at regular intervals are some of the other findings.

In a related study, Sritharan (2018) conducted a cross-sectional study to investigate the level of user satisfaction with e-resources and services available at the PGIM library, University of Colombo. A questionnaire was distributed among 100 postgraduate medical trainees using a simple random technique. Findings revealed that 98.6% of the respondents use electronic resources to study and update knowledge while 71.6% for their research purposes. Half of the respondents spent 1-2 hours daily gathering information from print and electronic resources at the library and 70.5% of the respondents use e-resources daily. Lack of computers in the library, lack of training, slow access and downloading speed and non-availability of remote access for subscribed electronic resources were identified as major issues by the respondents. The study recommended that the remote access facility should be provided for subscribed resources with the support of IT experts.

Methodology

The survey method was applied for this study. Students in Level 1 to Level 5 i.e. students of 1st Professional (Level 1 - 2018/2019), 2nd Professional (Level 2 - 2017/2018), Level 3 (2016/2017), level 4 (2015/2016) and level 5 (2014/2015) were considered as the total population. The entire population comprised 1011 students at the time of the study from August 2021 to October 2021. Students who are in the 1st Professional batch (2019/2020) were not considered in this survey as there were two 1st Professional batches and the 2019/2020 batch was not in contact with the IIM library due to the pandemic situation at the time of the survey. Also, the students in the most senior final batch, 2013/2014 were not included because there were two final batches at that time. From Level 1 to Level 5, 20% of students from the two Departments of Ayurveda and Unani were selected at random as the sample. A self - administered questionnaire was used to collect data. It is basically comprised of five parts. 202 questionnaires were distributed online and 154 students responded. The achieved response rate was 76.2%. Data were analyzed according to the SPSS package and Wilcoxon signed-rank test was used to analyze the Likert scale responses.

Results and Discussion

Two hundred and two (202) questionnaires were distributed among the randomly selected Bachelor of Ayurveda and Unani Medical undergraduates of the IIM. A total number of one hundred and fifty-four (154) completed questionnaires were received. The response rate was 76.2 %. In terms of demographic findings, the majority of respondents, viz. 72.1% were female. 27.9 % of the remaining respondents were male. Table 1 demonstrates the sample and response rates of undergraduates according to their levels of study.

Table 1 – Sample and Response Rates

Level	Total Population	Sample	Responded %
1st Professional	226	45	37
82.2%			
2nd Professional	207	41	31
75.6%			
Level 3	220	44	29
65.9%			
Level 4	182	37	31
83.8%			
Level 5	176	35	26
74.3%			
Total	**1011**	**202**	**154**

As depicted in Table 1, the majority of the respondents were fourth-year (Level 4) undergraduate students (83.8%) while the least number of respondents were third years (65.9%).

Frequency of Library Visits

There are many ways to evaluate the utilization and effectiveness of library resources. One of the major methods of evaluating library resources is studying the frequency of visits. As depicted in table 2, the majority of undergraduates, 30.5% visited the library daily. 26% of undergraduates visited twice a week and 20.8% of undergraduates visited thrice a week. These results revealed that nearly 90 undergraduates out of 154, which means more than

half of undergraduates (58.4%) visited the library twice a week or daily, is a
positive point of use of library facilities.

Table 2 – Distribution of Respondents' Frequency of Library Visits

Visits	Frequency	Percent	Valid Percent	Cumulative Percent
Daily	47	30.5	30.5	30.5
Once a week	6	3.9	3.9	34.4
Twice a week	40	26.0	26.0	60.4
Thrice a week	32	20.8	20.8	81.2
Once a month	4	2.6	2.6	83.8
Only when a need arises	25	16.2	16.2	100.00
Total	154	100.0	100.0	

Purpose of Visiting the Library

Figure 1 demonstrates the purposes of visiting the library by undergraduates.
Undergraduates were requested to indicate multiple responses to the purposes
of visiting the library of IIM. The majority of undergraduates 142, out of 154
(92.2%) visited the library to read their study notes. 89.60% of undergraduates
visited to access past papers. In addition, 131 (85.10%), 125 (81,10%) and 124
(80.50%) respondents visit the library to refer fundamental and other books,
borrow books and get photocopies respectively. According to the following
Figure 1, the least priority (28.50%) for the purpose of visiting the library was
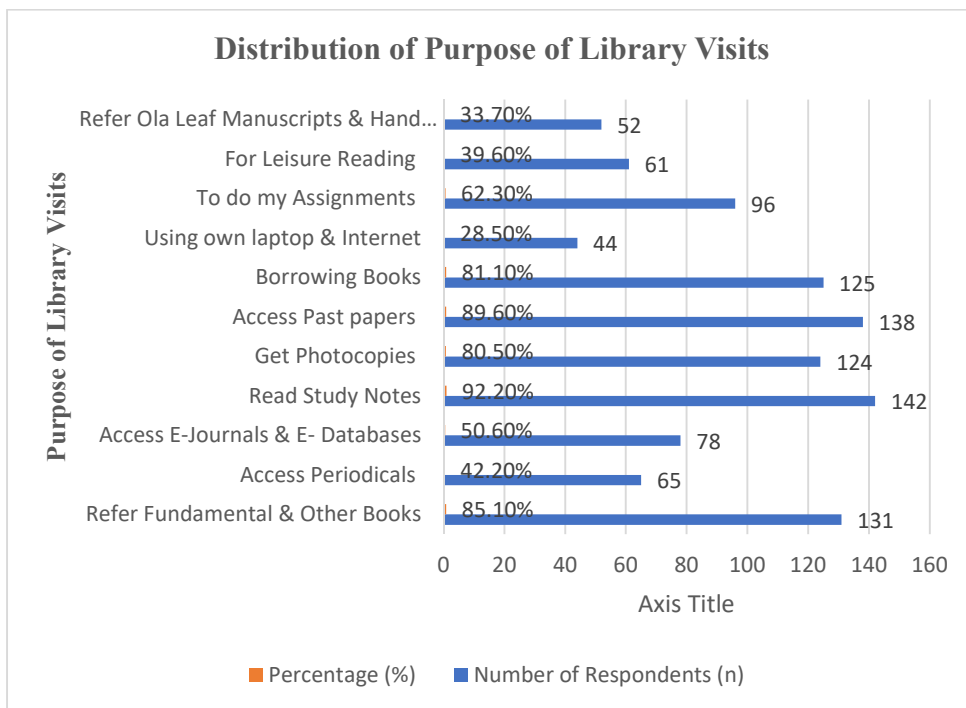to use their laptops and search the internet.

Figure 1 – Distribution of Respondents' Purpose of Library Visits

Frequently used Sources of Information

The basic question asked from undergraduates was the types of sources of information consulted by them frequently to have their needs fulfilled. Compared with other libraries, the range of sources of information in a university library is always high. It facilitates university students and staff to fulfill their learning and research needs effectively. Figure 2 shows that undergraduates use varied sources to fulfill their various information needs. It highlighted that the most widely used source of information was books and monographs by undergraduates. It is 88.96%. It was found that the second preference of undergraduates was library website (81.80%) and the third preference was e-books (77.20%). Similarly, they paid attention to internet resources for their learning and research needs. Ola leaf manuscripts and Hand-written manuscripts are special archival sources of information enriched with the indigenous medical heritage of Sri Lanka. On the comparison of both these resources, it was found that the use of Ola leaf manuscripts has been comparatively low. (7.7%) However, both these resources received less

attention from undergraduates. The least preference of undergraduates was for bound journals.
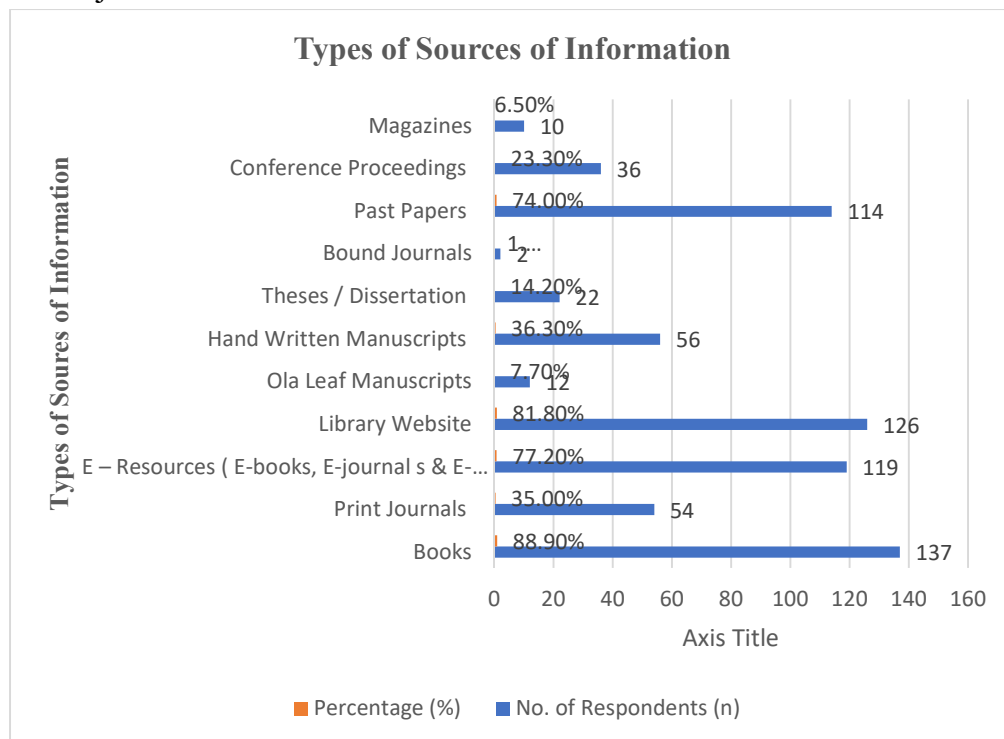

Figure 2 - Frequently used Sources of Information

Utilization of Library Services and Facilities

As illustrated in figure 3, the majority of respondents used reference services and online library services heavily. It could be seen that 88.3% of respondents utilized reference services. E-books, e-journals, E-Databases and e-resource retrieval facilities are offered by the library in the category of online resources. The third and fourth preferred services of undergraduates were the use of photocopy service and lending service. Comparatively a lower percentage has responded concerning the utilization of document delivery service (20.8%), Internet and e-resources (16.9%) and plagiarism checking (1.9%). At the same time, the least popularity goes to the ILL service. Almost 80% of respondents have replied that they have not used the Inter-Library Loan service.
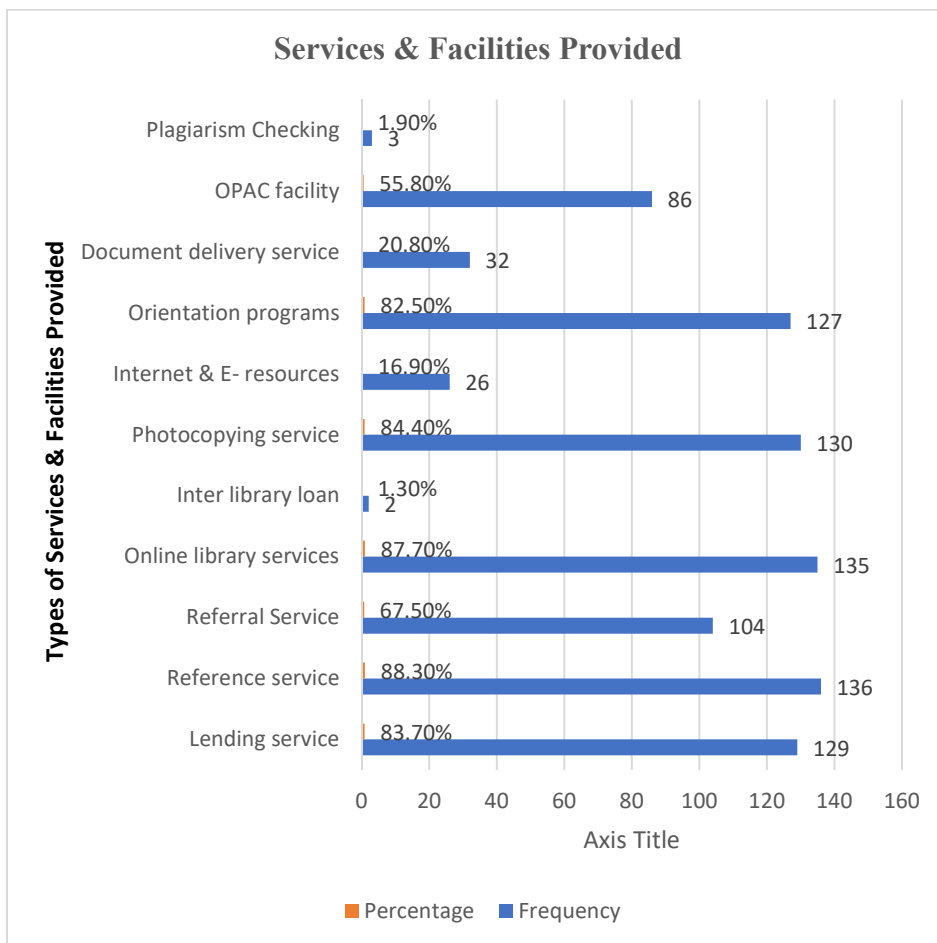
Figure 3 – Utilization of Services and Facilities offered by the Library

Level of Satisfaction on Major Library Services

Table 3 illustrates, the level of satisfaction of undergraduates toward major library services provided by the IIM library.

Table 3 – Undergraduates' Level of Satisfaction towards Major Library Services

Services Offered	Excellent	Very Good	Good	Comprehensive enough	Needs Improvement	Total
Circulation	10 (6.5%)	14 (9.1%)	98 (63.6%)	12 (7.8%)	20 (12.9%)	154
Reference Service	04 (2.6%)	32 (20.8%)	35 (22.7%)	39 (25.3%)	44 (28.6%)	154
Photocopying Service	00	14 (9.1%)	80 (51.9%)	16 (10.4%)	44 (28.6%)	154
Online Library Resources	00	08 (5.2%)	20 (12.9%)	34 (22.1%)	92 (59.7%)	154
Awareness/ Orientation Programs	11 (7.1%)	15 (9.7%)	40 (25.9%)	58 (37.7%)	30 (19.5%)	154

As illustrated in the above Table 3, it could be seen that 11 (7.1%) of the respondents considered the awareness programs excellent whereas 10 (6.5%) respondents considered the circulation service excellent service. 58 (37.7%) respondents stated that the above-mentioned facility was sufficient. As a whole, these figures imply that although the library staff conducted user awareness and orientation programs at the inception of each degree program, it needs to be conducted throughout each academic year. Only a very few respondents i.e. 04 (2.6%) considered as reference service was excellent. 32 (20.8%) and 35 (22.7%) respondents expressed their views regarding the reference service as very good and good respectively. 80 (51.9%) respondents expressed good at the photocopying service provided by the library. Further, the dissatisfaction levels with library services expressed by respondents were depicted in the column on needs improvement. It is observed that 92 respondents out of 154 were dissatisfied with the online library services. 44 (28.6%) with the reference service, 44 (28.6%) with the photocopying service, 30 (19.5%) with the awareness programs and 20 (12.9%) with the circulation. These findings highlight that the library management should pay more attention and take necessary action to uplift the above services to the expected standard level.

Table 4 – Undergraduates Perceptions towards Facilities Offered by the Library

		SD 1	D 2	U 3	A 4	SA 5	P-Value
1.	Library has a well-balanced book collection	1.9%	16.9%	32.5%	42.2%	6.5%	<.001
2.	Reference collection is adequate	2.6%	22.7%	46.1%	27.3%	1.3%	.777
3.	Library has an efficient circulation system	1.3%	6.5%	40.9%	46.8%	4.5%	<.001
4.	Library has a good reading environment. (space, ventilation, silence & lighting)	22.7%	44.2%	10.4%	12.3%	10.4%	<.001
5.	Library online catalogue (OPAC) is very easy & helpful to find a book.	2.6%	7.8%	46.1%	37.0%	6.5%	<.001
6.	Opening Days & hours of the library are sufficient.	1.3%	12.3%	11.0%	64.9%	10.4%	<.001
7.	The library staff is friendly and helpful.	3.9%	15.6%	21.4%	53.2%	5.8%	<.001
8.	Library offers sufficient IT facilities. (Computers, Scanning facilities)	20.8%	28.6%	31.8%	14.9%	3.9%	<.001
9.	Content and time allocation for library user awareness programs are adequate.	2.6%	10.4%	58.4%	25.3%	3.2%	.010
10.	The website of the library displays all e-resources & it facilitates access to remote users.	1.3%	18.2%	33.8%	38.3%	8.4%	<.001

One-sample Wilcoxon signed-rank test was used to analyze the Likert scale responses, by taking the 3 (i.e. undecided) as the hypothesized median. Except the statement 2, i.e. Reference collection is adequate, responses for other statements are significantly different from the hypothesized median (i.e. undecided) ($p<0.05$). Statement 1, The library has a well-balanced book collection, Statement 3, Library has an efficient circulation system, Statement 5, OPAC is very easy and helpful to find a book, Statement 6, Opening days and hours of the library are sufficient, Statement 7, The library staff is friendly and helpful, Statement 9, Content and time allocation for user awareness programs are adequate and Statement 10 The website of the library displays

all e-resources & it facilitates access to remote users are more inclined towards agreeing to level, while Statements 4, Library has a good reading environment. (with enough space, ventilation, silence & lighting) and Statements 8, Library offers sufficient IT facilities are more inclined toward disagreeing level. The overall results regarding Statements 3, 5, 6, 7, 9 and 10 showed that respondents were satisfied with the existing facilities of the library. The reading environment of the library and provided IT facilities (Statements 4 & 8) indicated negative opinions of the respondents suggested that it is the paramount importance of a good reading environment and also equipped the library with adequate online resources with high broadband.

Overall Satisfaction Vs User Needs and Expectations

Measuring user satisfaction is one of the most effective and popular ways of evaluating the effectiveness of library resources and services. Undergraduates were asked to mention the overall satisfaction levels of library resources, services and facilities concerning the fulfillment of their learning and research needs. Figure 4 illustrates the overall satisfaction levels of undergraduates of the IIM library.
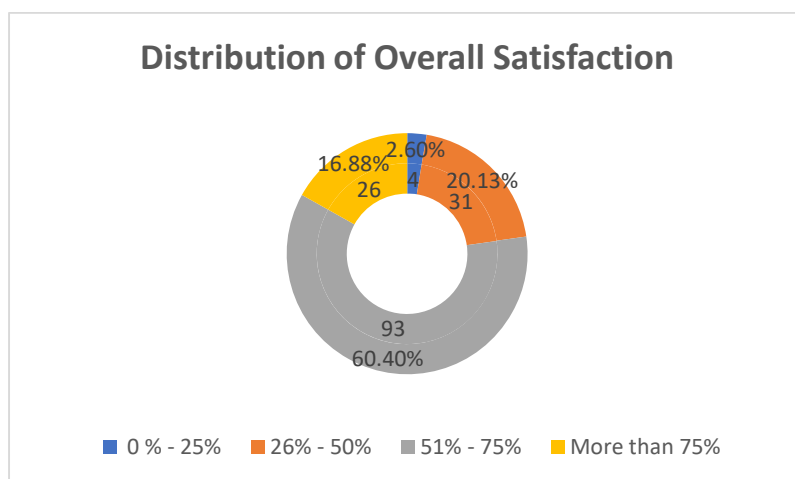

Figure 4 - Distribution of Overall Satisfaction of Respondents

The majority of undergraduates, 93 (60.40%) were included in the 51% -75% satisfaction level and 26 (16.88%) were in the more than 75% satisfaction level implies that as a whole, 119 undergraduates out of 154 (77.3%) of the Institute

of the Indigenous Medicine were satisfied with the resources and services provided by the library and they have positive perception towards the library.

Special Suggestions Made by Respondents to Meet Their Unmet Needs

Special suggestions were made by undergraduates to meet their unmet learning and research needs. Achievement of these targets will promote and upgrade the status of the library.

- Undergraduates advocated providing enough copies of Ayurveda Samhitha books, Authentic Unani books and other related medical books.
- Need to increase the number of copies of Sinhala translations of Ayurveda Samhitha.
- A grater demand for good clinical books that the existing resources for clinical practices were not enough.
- Further improvement of the periodical collection is needed by subscribing to more Ayurveda and Unani e-journals, to meet undergraduates learning and research needs.

Conclusion

The study focused on the level of undergraduates' satisfaction with the library resources and services provided by the library of the Institute of Indigenous Medicine, University of Colombo. Based on the findings, revealed that the majority of respondents 72.1% were female and 27.9 % of the remaining respondents were male. Results showed that the majority of undergraduates visited the library twice a week or daily, to read their study notes, access past papers, and refer to fundamental and other books. Findings showed that the majority of undergraduates, 119 out of 154 (77.3%) of the Institute of the Indigenous Medicine were satisfied with the resources and services provided by the library and they have a positive perception of the library. The study especially revealed that existing electronic resources in the library were inadequate. Hence, steps should be taken to further the development of e-resources that meet the undergraduates' needs effectively. The study further revealed the requirement for further improvement of some library services because either undergraduates were not clear idea about library resources and

services or do not consider them as important for their studies. High priority should be given to improving the physical facilities and reading environment of the IIM library as 96.1% of respondents expressed their views against the existing library environment. Conduct more user awareness programs apart from the orientation programs and implement marketing strategies on library resources and services needs to be raised.

Recommendations

Based on the findings of the study following recommendations can be made to overcome the identified shortcomings and improve the effectiveness, quality and status of the IIM library

- **Need for further development of Library collection –** Although the undergraduates were overall satisfied with the existing collection, they emphasized further development of the book collection by considering the latest editions of books.
- **Development of E-book collection**
  Utmost importance to purchase necessary Ayurveda and Unani e-books and upload the library website**.**
- **Giving more provision to use of E- Materials**
  The highest priority should be given to the provision of more e-materials to give a better service to the readers.
- **Strengthening awareness programs**
  The survey revealed that the students do not have sufficient knowledge to use the library facilities effectively. Conducting more user awareness programs at regular intervals throughout the year apart from the orientation program which is normally conducted for first years is needed.
- **Further strengthening the library staff**
  The service of a trained, efficient and experienced staff is an asset to any library to provide better service for its users. They need further training to discharge their duties properly**.**
- **The need for a separate library building** or **separate areas for group work and discussions**
  The reading environment and physical facilities play a major role in providing quality and satisfactory service to users. The majority of respondents (96.1%) highlighted the requirement of having a separate

library building or separate areas for group work and leisure reading inside the library. That means more than three-fourths of respondents made it very clear that IIM needed an isolated sufficient area or separate library building.

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