Reimagining Medical Libraries as Hubs of Health Literacy and Education

Harman Iftekhar[1]; Dr. Anjali Gulati[2*]

Junior Research Fellow (JRF), Department of Library and Information Science, University of Lucknow[1]; Associate Professor, Department of Library and Information Science, University of Lucknow, Uttar Pradesh, India[2]

rs2022libsc_harman@lkouniv.ac.in[1]; gulati_anjali@lkouniv.ac.in

corresponding author

ABSTRACT

Medical libraries are emerging as pivotal institutions for advancing health literacy and education in modern healthcare. By integrating electronic information resources (EIRs) such as PubMed and Cochrane With advanced ICT tools, medical libraries address critical disparities in health information access. Despite these advancements, significant challenges persist, including limited digital literacy, inadequate ICT infrastructure, and a lack of multilingual and localised resources, particularly in underserved communities. Through a thematic review of studies spanning 2011 to 2024, this paper identifies actionable strategies such as librarian upskilling, community-focused outreach, and developing culturally relevant content to bridge these gaps. The findings emphasize that targeted interventions, including enhanced ICT infrastructure and collaborative health literacy programs, can transform medical libraries into centres of equitable healthcare access and informed decision-making. By addressing persistent barriers and leveraging technology, medical libraries hold the potential to not only support healthcare professionals but also empower communities, reducing health disparities and improving patient outcomes. This study underscores the necessity of reimagining medical libraries as proactive agents in health education, fostering a more informed and inclusive healthcare ecosystem.

.

KEYWORDS: Medical libraries; Health Library; Health Literacy; Electronic Information Resources (EIRs); Health Information Divide.

1. INTRODUCTION

A health or medical library is designed to assist physicians, health professionals, students, patients, and researchers in accessing, updating, and evaluating critical health and scientific information. Typically located in hospitals, medical schools, health associations, and private institutions, medical libraries play a vital role in improving healthcare outcomes by bridging gaps in knowledge and providing reliable resources. In the evolving landscape of modern healthcare, medical libraries are transitioning beyond their traditional roles as repositories of knowledge to become dynamic hubs for health literacy and education.

Health literacy is defined as the ability to locate, evaluate, and effectively use health information is a key determinant of informed decision-making and improved healthcare outcomes (Nutbeam, 2008). The importance of health literacy lies in its ability to empower individuals, promote preventive healthcare, and foster better engagement with healthcare systems. However, significant challenges persist, including disparities in digital literacy, gaps in ICT infrastructure, and the lack of localized, multilingual resources, particularly in resource-constrained settings. Research highlights issues such as insufficient librarian training, limited utilization of advanced digital tools, and inadequate outreach efforts to underserved populations, all of which impede equitable access to healthcare information (Rao & Shokeen, 2021; Kaur & Kaur, 2020; Krishna & Patil, 2016).

The integration of electronic information resources (EIRs), advanced ICT tools, and community engagement initiatives in medical library services offer promising solutions to address these challenges. However, barriers such as underdeveloped librarian competencies in managing digital tools (Badiger & Badiger, 2018; Vijaya & Gopakumar, 2017), insufficient multilingual content for non-English speakers (Thakur, 2019; Patil & Tadasad, 2016), and limited outreach to rural and marginalized communities (Rao & Shokeen, 2021; Ghosh, 2013) remain persistent. Furthermore, the lack of awareness about available library resources among users exacerbate the health information divide, leaving critical gaps in equitable information dissemination (Halder & Tiwari, 2024; Kathane, 2016).

This review paper systematically examines the evolving role of medical libraries in addressing these gaps, focusing on three interconnected dimensions: Enhancing health literacy levels, improving health education through resource accessibility, and promoting equitable healthcare outcomes. By identifying unaddressed gaps and proposing actionable strategies, this study underscores the transformative potential of medical libraries as dynamic centres for health literacy and education in an increasingly digitalized healthcare ecosystem.

Based on a comprehensive analysis of studies spanning over a decade (2011–2024), this review encompasses key themes, including the evolving competencies of medical librarians, the integration of electronic information resources, and the role of libraries in promoting health literacy and education. By synthesizing insights from these studies, it highlights trends, challenges, and gaps in medical librarianship, offering a detailed understanding of how libraries have adapted to meet the demands of modern healthcare and user needs over time.

2. EVOLVING COMPETENCIES OF MEDICAL LIBRARIANS

The evolving role of medical librarians necessitates advanced competencies in digital literacy, health information literacy and resource management. Prakash & Krishnamurthy (2019); Salunkhe & Pange (2013); Farahi & Gandhi (2011) emphasise that most librarians possess foundational qualifications but lack expertise in advanced digital tools and library automation. These gaps hinder their ability to support healthcare professionals effectively, underscoring the need for institutional investment in upskilling librarians.

A critical competency for medical librarians is proficiency in health information literacy (HIL), as highlighted by Dalal & Kadyan (2021); Kaur (2019); Jessy et al. (2015). These studies reveal that librarians play an essential role in teaching HIL to medical students and faculty, enabling them to navigate, evaluate, and utilize evidence-based

resources. Dalal & Kadyan (2021) also point out that well-trained librarians reduce stress among doctors by providing accurate clinical information, further emphasizing the importance of HIL training.

Naik & Padmamma (2019), Govardhan & Rao (2022), and Saravanan & Ravi (2011) agree on the importance of digital skills in managing ICT tools and e-resources. These skills are critical for interlibrary collaboration and effective resource-sharing networks, which rely on librarians' ability to navigate digital platforms. Similarly, Vijayakumar, Mahadevan, and Saravanaraj (2017), Chinnaraj & Tamilselvan (2016), and Bala et al. (2012) argue that librarians' digital competencies are crucial for ensuring that users can access and utilize digital resources optimally.

In addition, Maranna & Patil (2021), Patil & Tadasad (2016), and Bala et al. (2012) emphasize the need for consistent training and standardized skill benchmarks across institutions. They propose that tailored training programs focusing on digital literacy, cataloguing, and HIL can empower librarians to meet diverse user demands. Similarly, Vasani et al. (2024) highlight the growing importance of social media as a platform for health information dissemination, suggesting that librarians must also acquire skills to curate and manage credible digital content in this domain.

Collectively these studies reveal a consensus on the need for advanced competencies in digital literacy, HIL, and resource management to meet the demands of modern medical librarianship. Librarians must transition beyond traditional roles to actively support healthcare professionals and students through enhanced digital expertise and tailored training programs.

3. USEFULNESS OF EIRs IN MEDICAL LIBRARIES

The integration of electronic information resources (EIRs) has revolutionized the role of medical libraries, positioning them as indispensable hubs for academic, clinical, and research support. EIRs, including resources like PubMed and ScienceDirect, are essential for enabling evidence-based practices and providing healthcare professionals and students with access to the latest medical knowledge. Studies by Naik & Padmamma (2019), Badiger & Badiger (2018), and Krishna & Patil (2016) emphasize that robust ICT infrastructure and user training are critical for maximizing the utility of these resources. Without such foundational elements, the potential of EIRs to meet the growing demands of modern healthcare remains underutilized.

However, the full potential of EIRs is hindered by significant barriers. Limited ICT skills and inadequate infrastructure restrict their effective use, as noted by Baziraake et al. (2012) and Vijaya & Gopakumar (2017). For non-English-speaking users, accessibility is further complicated by the lack of regional language content and slow internet speeds (Patil & Tadasad, 2016). These challenges highlight the need for targeted investments in ICT infrastructure and the development of multilingual platforms to ensure inclusivity and accessibility for diverse user groups.

EIRs also enhance routine library services, streamlining operations and improving access. Tools such as Koha and New Gen Lib have been successfully integrated into cataloguing, resource sharing, and interlibrary loan services (Govardhan & Rao, 2022; Bala et al., 2012). During the COVID-19 pandemic, EIRs played a critical role in

ensuring uninterrupted access to information, particularly for remote users, demonstrating their adaptability and relevance in crisis situations (Saravanan & Ravi, 2011).

The importance of training programs in optimizing the usage of EIRs cannot be overstated. Structured digital literacy initiatives, as highlighted by Kumar & Manjunatha, (2013) and Jessy et al. (2015), are essential for equipping users with the skills to navigate complex databases effectively. Furthermore, continuous professional development programs are necessary to ensure that library staff remain proficient in emerging technologies and responsive to evolving user needs (Ramkumar, 2013).

These findings collectively highlight that while electronic information resources are critical for the functioning of modern medical libraries, their effectiveness is contingent on addressing barriers related to accessibility, infrastructure, and training. By investing in these areas, medical libraries can fully realise the transformative potential of EIRs in advancing academic, clinical, and research excellence.

4. OUTREACH SERVICES OF MEDICAL LIBRARIES

Outreach services are a critical component of medical libraries, enabling them to extend their impact beyond institutional walls to address the diverse information needs of underserved populations. These services focus on providing equitable access to healthcare knowledge, especially for marginalized communities with limited resources (Ghosh, 2013; Halder & Tiwari, 2024). Studies have shown that outreach efforts often rely on mobile libraries, digital platforms, and community engagement programs to overcome barriers of location and infrastructure (Rao & Shokeen, 2021; Thakur, 2019). These strategies are particularly impactful in rural and resource-constrained settings, where traditional library services remain inaccessible (Kathane, 2016; Patil & Tadasad, 2016). By fostering collaboration with healthcare providers and leveraging ICT tools, medical libraries can significantly enhance their outreach capabilities and contribute to improved health literacy among vulnerable populations (Vasani et al., 2024; Maranna & Patil, 2021).

While the foundational goal of outreach services is to bridge the health information divide, their implementation often involves tailored strategies to cater to specific user groups. The emphasis shifts from simply providing resources to actively engaging communities, delivering personalized services, and building trust through sustained interactions (Rao & Shokeen, 2021; Baziraake et al., 2012). These strategies align with global efforts to make health information more accessible, emphasizing the development of multilingual and culturally relevant resources (Halder & Tiwari, 2024; Patil & Tadasad, 2016). For example, community-driven initiatives such as workshops and mobile kiosks are essential for establishing trust and fostering user engagement in underserved areas (Maranna & Patil, 2021; Ghosh, 2013). This interconnected approach highlights the seamless integration of outreach services with the broader objectives of medical libraries, ensuring their relevance in addressing information disparities (Naik & Padmamma, 2019; Vijaya & Gopakumar, 2017).

Studies by Maranna & Patil (2021) and Patil & Tadasad (2016) offer detailed insights into how outreach services address the health information needs of rural and underserved communities. Patil & Tadasad (2016) emphasized the use of mobile health libraries and digital kiosks to deliver multilingual, community-specific content that caters to non-English speakers. These services not only enhance accessibility but also promote awareness about critical health issues, such as maternal care and disease prevention, through targeted campaigns. Similarly, Maranna & Patil (2021)

highlighted initiatives like health camps and library-driven educational workshops, which serve as practical platforms for providing accurate and actionable health information. By bridging the gap between rural populations and reliable medical resources, these outreach programs empower communities to make informed health decisions, thereby improving clinical decision-making and patient outcomes. For instance, by offering evidence-based guidelines and treatment options, library-driven health outreach programs help clinicians in rural areas adopt standardised care protocols, reducing diagnostic errors and improving patient care (Dalal & Kadyan, 2021; Kaur, 2019).

Future perspectives in outreach services should emphasize the integration of emerging technologies, such as AI-driven platforms and telehealth solutions, to further extend the reach of medical libraries. These technologies can support real-time health information dissemination, predictive analytics for community health trends, and personalized education tailored to specific populations (Halder & Tiwari, 2024; Kathane, 2016). Moreover, expanding partnerships between libraries, public health institutions, and NGOs can strengthen the delivery of localized health interventions and enable libraries to serve as proactive agents in public health education. Regular evaluations of outreach initiatives, coupled with community feedback, will be essential for ensuring adaptability and sustained impact. These advancements position medical libraries as integral to healthcare innovation and equitable information dissemination in the future.

5. HEALTH LITERACY IN INDIAN MEDICAL SCENARIO

Health literacy is a cornerstone of effective healthcare delivery, empowering individuals to access, evaluate, and apply medical information to make informed health decisions. In the Indian medical context, health literacy assumes particular significance given the vast diversity in language, culture, education, and access to healthcare resources. Despite significant advancements in healthcare infrastructure and digital technologies, disparities in health literacy levels persist across urban and rural populations, as well as among different socioeconomic groups. Medical libraries and information professionals play a critical role in addressing these disparities, acting as intermediaries between healthcare knowledge and end-users, including doctors, students, and the general public.

5.1 Levels of Health Literacy

Health literacy, the ability to access, comprehend, and effectively use health information, varies significantly across populations in India. Many studies reveal gaps in health literacy levels, particularly among rural and underserved communities. For instance, Krishna and Patil (2016) highlighted that although most doctors in Hyderabad Karnataka had internet access, only 3% utilized libraries, indicating low awareness and usage of formal health sources. Similarly, Thakur (2019) noted that in Jammu, reliance on traditional sources like newspapers and personal contacts was significantly higher than on digital or institutional sources, due to language barriers and insufficient searching skills. These studies underscore the pressing need for targeted health literacy interventions tailored to specific community contexts.

Formal health sources include libraries, government healthcare portals, and digital repositories such as PubMed, HINARI, and Cochrane Library. These platforms provide reliable, evidence-based health information critical for informed decision-making (Halder & Tiwari, 2024; Rao & Shokeen, 2021). However, studies suggest that the usage of these resources remains limited due to a lack of awareness and training. Addressing these gaps requires not only promoting formal sources but also tailoring them to meet specific community needs. For example, Patil & Tadasad

(2016) emphasized that multilingual and culturally relevant content is essential for engaging non-English-speaking users, while Maranna & Patil (2021) highlighted the role of mobile libraries in delivering region-specific health education materials.

Additionally, rural communities often require information on maternal health, oral hygiene, and preventive care, as noted by Rao & Shokeen (2021). For instance, health camps and local workshops can disseminate such targeted information effectively. By combining formal sources with localized, actionable content, medical libraries can address diverse health literacy needs and bridge the "health information divide. These efforts not only improve individual health outcomes but also contribute to broader public health goals, making libraries indispensable in the Indian medical scenario.

5. 2 Health Education and Accessibility

Health education and accessibility are deeply intertwined, with many researchers emphasizing the transformative potential of ICT tools and community outreach initiatives. Kathane (2016) demonstrated how telehealth workers in rural settings used electronic health records to enhance the continuity of care and improve health outcomes for patients with chronic illnesses. This finding aligns with Halder and Tiwari (2024), who advocated for libraries as hubs for health education, leveraging digital tools and outreach programs to reach underserved communities.

Shamrao et al. (2021) and Badiger & Badiger (2018) both emphasized the role of interdisciplinary collaboration in promoting health education. Shamrao et al. highlighted global trends in health communication research, while Badiger and Badiger focused on knowledge management practices in health science librarianship, noting gaps in librarians' proficiency with tools like institutional repositories. These findings are echoed by Patil & Tadasad (2016); and Baziraake et al. 2012), who stressed that inadequate ICT infrastructure and limited training programs continue to hinder effective health education, particularly in resource-constrained settings.

Accessibility challenges in rural areas further highlight the need for targeted interventions. Rao & Shokeen (2021) and Ghosh (2013) pointed out that library partnerships and mobile technologies could help bridge the healthcare divide by providing localized health education resources. These shared observations reinforce the importance of combining technology, outreach, and community engagement to address gaps in health education and accessibility.

5.3 Health Literacy and Accessibility

Health literacy and accessibility are intrinsically linked, as effective health literacy initiatives depend on the equitable accessibility of information. Accessibility involves ensuring that individuals can obtain and utilize reliable health information without barriers such as language, geography, or digital inequities (Halder & Tiwari, 2024; Ghosh, 2013). Health literacy, on the other hand, refers to the ability to understand and apply this information to make informed decisions. Together, they form a framework that empowers individuals and communities to actively engage with healthcare systems and improve health outcomes.

Studies demonstrate that inadequate accessibility limits health literacy across diverse populations. Thakur (2019) highlights that in rural Jammu, limited internet penetration and reliance on traditional information sources, such as newspapers and interpersonal communication, hinder access to comprehensive health information. Similarly, Rao & Shokeen (2021) reveal that rural women in Haryana heavily depend on informal sources like friends and healthcare workers due to a lack of awareness about formal health resources. These barriers highlight the critical need to

improve accessibility by expanding ICT infrastructure and promoting localized health information initiatives, such as mobile libraries and telehealth platforms, as recommended by Patil & Tadasad (2016) and Maranna & Patil (2021).

Accessibility also encompasses the need for multilingual resources tailored to the linguistic and cultural contexts of users. Patil & Tadasad (2016) emphasize that health information primarily available in English excludes a significant portion of non-English-speaking populations. Developing region-specific, multilingual content ensures that individuals can access and understand vital health information, thereby enhancing their health literacy. Furthermore, Vijaya & Gopakumar (2017) argue that digital platforms equipped with user-friendly interfaces and regional language support can bridge gaps in accessibility and improve engagement with health resources.

The interplay between health literacy and accessibility becomes particularly evident in community-focused interventions. Outreach initiatives, such as health camps and targeted awareness programs, have proven effective in disseminating localized health information to underserved populations (Kathane, 2016; Rao & Shokeen, 2021). These programs not only provide actionable health education but also build trust within communities, fostering an environment where individuals feel empowered to seek and utilize health information. Halder & Tiwari (2024) further emphasize that libraries can serve as critical intermediaries by providing reliable, culturally appropriate information and hosting workshops to improve both literacy and accessibility.

In conclusion, health literacy cannot be achieved without addressing accessibility challenges, as both are mutually reinforcing. Improving accessibility through tailored content, advanced ICT tools and outreach initiatives ensures that health literacy programs effectively reach diverse populations. By integrating these elements, medical libraries can play a transformative role in bridging the "health information divide", promoting informed decision-making, and enhancing overall healthcare outcomes.

SUGGESTIONS

The following suggestions aim to position medical libraries as integral players in the healthcare ecosystem, addressing disparities in health literacy, education, and accessibility while leveraging their potential to empower both professionals and communities.

i. Medical libraries should integrate digital resources like PubMed and Cochrane Library with community-focused initiatives, creating spaces for hands-on learning and collaboration with public health agencies to address specific health challenges.

ii. Incorporate tools like Google Translate and Koha with regional language support to overcome language barriers. Develop localised content and conduct workshops to guide users in effectively using these tools.

iii. Upgrade ICT infrastructure with high-speed internet, digital catalogues, and remote access systems to ensure seamless access to e-resources for education, research, and clinical practice.

iv. Combine mobile libraries with telehealth initiatives to extend library services to underserved populations. Use mobile apps to disseminate health information tailored to community needs, such as maternal care in rural areas.

v. Offer modular training programs tailored to user levels, such as basic database searches and advanced citation management. Incorporate virtual reality and interactive tutorials to enhance practical digital skills

CONCLUSION

Medical libraries are evolving into dynamic centers for health literacy and education, crucial for bridging the gap between healthcare information and its effective application. By integrating advanced ICT tools and databases like PubMed, Cochrane Library, and HINARI, these libraries support evidence-based practices, ensuring healthcare professionals and communities have access to credible and timely information. Despite these advancements, significant challenges remain, including gaps in digital literacy, limited multilingual resources, and inadequate ICT infrastructure, particularly in rural and underserved regions. These issues hinder the optimal utilization of key resources and perpetuate the health information divide.

Targeted interventions are essential to address these barriers. Libraries must focus on creating localized and multilingual content tailored to specific user needs, alongside implementing training programs for navigating complex databases and tools like NewGenLib and Koha. Outreach initiatives, such as mobile health libraries and telehealth support, are pivotal for extending services to marginalized populations. Additionally, fostering collaboration with healthcare institutions and leveraging emerging technologies like AI-driven search optimization and virtual reality for training can enhance resource accessibility and user engagement.

Reimagining medical libraries as proactive hubs requires a clear strategy focused on user needs, resource innovation, and community engagement. By adopting these approaches, libraries can empower informed decision-making, improve health outcomes, and establish themselves as integral players in advancing equitable healthcare.

REFERENCES

[1] Badigar, K. G., & Badiger, M. (2018). Knowledge Management in Health Science Libarianship. Journal of Advances in Libary and Information Science, 7(1), 46–50. https://www.jalis.in/pdf/7-1/K

[2] Bala, A., & Tandon, D. (2012). Managing E-Resource S in Postgraduate Institute of Medical Education & Research (PGIMER) Library, Chandigarh: a Study. SRELS Journal of Information Management, 49(4), 421–425.

[3] Chinnaraj, A., & Tamilselvan, N. (2016). Information Search Pattern of Medical Professionals in Digital Environment : a Survey of Selected Colleges in Coimbatore. 5(3), 85–90.

[4] Dalal, V., & Kadyan, S. (2021). Cognisance of Medical Librarians in Medical Education, Research And Clinical - Decision Making For Reducing Stress. Knowledge Librarian, 8(4), 1–8.

[5] Farahi, M. T., & Gandhi, R. T. D. R. (2011). Utilization of Electronic Information Resources in Medical Colleges: A case study. SRELS Journal of Information Management, 48(3), 281–288.

[6] Farahi, M. T., & Gandhi, R. T. D. R. (2011). IT skills among LIS professionals of medical libraries in India and Iran: A comparative study. Annals of Library and Information Studies, 58(2), 161–169.

[7] Ghosh, M. (2013). Health literacy for all- an investigation into consortia and partnership amongst libraries to promote health care information in India. 1–11. http://library.ifla.org/161/7/123-ghosh-en.pdf

[8] Gopalakrishnan, S., & Ram Kumar, P. (2013). Resurrecting the Library Profession: Digital Competencies for Librarians. Journal of Advances in Libary and Information Science, 2(4), 197–201.

[9] Govardhan, R., & Rao, S. S. (2022). Networking and Resource Sharing of Medical College Libraries in Telangana: A Study. Journal of Advances in Library and Information Sciences, 11(2), 211–217.

[10] Halder, S. N., Tiwari, V. R., & Ali, S. (2024). Exploring health knowledge: An extensive review of information seeking behaviors, health literacy, and the relevance of libraries and community resources. IP Indian Journal of Library Science and Information Technology, 9(1), 4–11. https://doi.org/10.18231/j.ijlsit.2024.002

[11] Jessy, A., Rao, M., & Shivananda Bhat, K. (2015). Medical Professionals' Usage and Preference of EBM Resources: A Survey. SRELS Journal of Information Management, 52(June), 153–162. https://doi.org/10.17821/srels/2015/v52i3/70329

[12] Kathane, R. (2016). Reaching out Medical College library services to patients through E-Health libraries : An ongoing work in progress. 1(1), 1–6.

[13] Kaur, N. (2019). Awareness of Health Information Literacy among Medical Students of Punjab and Chandigarh. RBU Journal of Library & Information Science, 21, 27–38.

[14] Kaur, S., & Kaur, N. (2020). Awareness about COVID-19: Health Literacy Level of LIS Students and Researchers of Universities in Punjab and Chandigarh. Journal of Information Management, 7(2), 151–164. https://doi.org/10.5958/2348-1773.2020.00018.1

[15] Krishna, S., & Patil, D. B. (2016). A Case Study of Health Information Needs of Doctors with Special Reference to Hyderabad, Karnataka. E-Library Science Research Journal, 5(2), 1–4. https://doi.org/10.4018/9781599046907.ch008

[16] Maranna, O., & Patil, S. S. (2021). Status of Homoeopathic Medical College Libraries in Karnataka: A Study. Journal of Advances in Library and Information Sciences, 10(3), 187–192.

[17] Naik, H. S., & Padmamma, S. (2019). Availability of E-Resources and ICT Infrastructure in Medical College Libraries of Deemed Universities in Karnataka. Indian Journal of Information Sources and Services, 9(1), 139–146. https://doi.org/10.51983/ijiss.2019.9.1.577

[18] Nutbeam, D. (2008). The evolving concept of health literacy. Social Science and Medicine, 67(12), 2072–2078. https://doi.org/10.1016/j.socscimed.2008.09.050

[19] Patil, S., & Tadasad, P. G. (2016). Availability of Health Care Service Information on Internet: A study of Vijayapura city. Journal of Indian Library Association, 52(4), 121–126.

[20] Prakash, & Krishnamurthy, M. (2019). Knowledge and Skill Requirements for Health Science Library Professionals in India: A Survey. Asian Journal of Information Science and Technology, 9(1), 8–13. https://doi.org/10.51983/ajist-2019.9.1.2611

[21] Prakasha, & Krishnamurthy, M. (2018). Assessment of Knowledge Management in Health Science Librarianship: A Study. Asian Journal of Information Science and Technology, 8(1), 39–43. https://doi.org/10.51983/ajist-2018.8.1.167

[22] 1Rao, A., & Shokeen, A. (2021). Health Information Literacy Among the Rural Women: a Study of Kurukshetra District of Haryana. Journal of Indian Library Association, 57(2), 181–196.

[23] Salunkhe, J., & Pange, B. M. (2013). A survey of medical college librarians in maharashtra. E-Library Science Research Journal, 2(1), 1–10.

[24] Sampath Kumar, B. T., & Manjunatha, B. (2013). Computer Literacy Among the Students and Faculty Members of Dental Sciences. Asian Journal of Information Science and Technology, 3(1), 36–40. https://doi.org/10.51983/ajist-2013.3.1.2603

[25] Saravanan, K., & Ravi, S. (2011). Utilization of ICT Resources in the Medical Colleges in Puducherry. Indian Journal of Information Sources and Services, 1(2), 43–49. https://doi.org/10.51983/ijiss.2011.1.2.332

[26] Saravanan, K., & Ravi, S. (2012). Motivation and Dependence towards the Use of ICT Resources with Reference to Students and Faculty Members of Medical Colleges in Puducherry. Asian Journal of Information Science and Technology, 1(2), 31–37. https://doi.org/10.51983/ajist-2011.1.2.25

[27] Shamrao, G. S., Sharmrao, D. G. S., & Shamrao, G. S. (2021). Content Analysis of Journal of Health Communication. International Journal of Research in Library Science, 7(3), 172.
https://doi.org/10.26761/ijrls.7.3.2021.1440

[28] Thakur, R. A. (2019). Health Information Divide: A study in Jammu division. Journal of Indian Library Association, 55(1), 48–55.

[29] Vijayakumar, K., Mahadevan, B., & Saravanaraj, S. (2017). Usage of Digital Resources by the Faculty Members of Medical College Libraries in the Central Kerala. International Journal of Research in Library Science, 3(2), 97-101. https://doi.org/10.26761/ijrls.3.2.2017.1262

_____