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AWARENESS AND USE OF HEALTH INFORMATION RESOURCES BY FEMALE STAFF IN UNIVERSITIES OF PUNJAB AND CHANDIGARH

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1. INTRODUCTION

The health of the population constitutes the foremost asset of any state. Essential needs such as healthcare, adequate nutrition and education are as vital as fundamental rights in a democratic country like India. However, despite decades of independence, India's healthcare system has progressed at a relatively slow pace. This sluggish development can be attributed to several factors, including insufficient investment in the health sector, widespread illiteracy, weak economic conditions, and limited public awareness regarding the significance of good health as well as existing government health schemes and services. Rapid population growth, lack of safe drinking water, environmental pollution, poor sanitation, and unbalanced dietary practices further contribute to the country's health challenges. Another major reason for poor health outcomes is the underdeveloped public health infrastructure. Although both central and state governments have launched numerous health programs and schemes over time, many have failed due to inadequate implementation, weak planning, low public awareness, and the absence of effective grievance redressal mechanisms. Additionally, insufficient access to reliable health information and limited awareness of appropriate health information resources remain critical issues.

Effective health-related decision-making largely depends on the timely availability of accurate and relevant information. Past health crises such as the Gorakhpur tragedy in Uttar Pradesh, where oxygen shortages led to the deaths of several children in 2017 (Jain, 2017), Similarly, the Chamki Bukhar outbreak in Bihar in 2019 highlighted systemic gaps in public health preparedness (Sunderam & Kumar, 2019), Moreover, the ongoing narcotics crisis in Punjab, and the COVID-19 pandemic underscore the importance of public health preparedness. Reliable health information plays a crucial role in preventing such crises, as lack of awareness and poor utilization of health information resources often result in inappropriate health decisions, increased hospitalization expenses, and a heavier financial burden on individuals, ultimately hampering social and economic development. The advancement of the health sector therefore depends on factors such as public awareness of health information resources, knowledge of government schemes and services, access to affordable or free healthcare, and the presence of efficient grievance redressal systems.

The health of women is central to the creation of a healthy society, as the well-being of families, communities, and society at large is closely linked to women's health. A healthy family begins with a healthy woman, and since women form the foundation of family life, their health is crucial for societal progress. In the present context, women face numerous health issues, including anemia, malnutrition, cancer, and osteoporosis. Access to accurate and timely health information from credible sources can assist women in making informed decisions and in preventing many health conditions. Consequently, enhancing women's awareness and use of appropriate health information resources has become an urgent necessity in India.

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1.2 Women's Health in India and the Role of Health Information

Women's health refers to the specialized area of medicine concerned with the identification, prevention, and treatment of diseases and conditions that influence the physical, mental, and emotional well-being of women (Women's Health: MedlinePlus Medical Encyclopedia, 2016).

India presents a paradoxical picture with regard to women's status and health. Although a significant proportion of the population venerates female deities and women enjoyed equal status with men during the Vedic period, their social position declined over time due to changes in political rule and the development of rigid social structures such as the caste system ("Women in India," n.d.). Cultural practices reflect this contradiction: on one hand, traditions such as Naari Pooja are observed, while on the other, harmful practices like sati and johar were prevalent in the past before being outlawed. Despite the celebration of occasions such as Women's Day and Mother's Day, many women in India continue to face denial of basic rights related to education, healthcare, nutrition, and employment, along with discrimination, harassment, and early marriage. These challenges are largely rooted in gender inequality and weaknesses within the healthcare system ("Women Health in India – Current Scenario and Challenges," 2018).

Empirical evidence highlights the extent of gender bias in healthcare access. A collaborative study conducted by AIIMS, the Prime Minister's Economic Advisory Council, the Indian Statistical Institute, and Harvard University indicates that Indian women encounter discrimination and stereotyping when seeking healthcare and voicing their health concerns (Welle, n.d.). Women's health outcomes in India are closely associated with their societal status. Research suggests that women's contributions within families are often undervalued, and they are frequently perceived as economic liabilities. A strong preference for male children—driven by expectations of old-age support and compounded by the dowry system—has resulted in neglect and mistreatment of daughters (Velkoff & Adlakha, 1998). Limited autonomy, with women commonly remaining under the authority of male family members, further adversely affects their overall health. Consequently, Indian women experience a wide range of health issues, including malnutrition, mental health disorders, maternal health complications, suicides, communicable and non-communicable diseases such as HIV/AIDS, cancer, osteoporosis, hypertension, and heart disease, as well as domestic and sexual violence.

Maternal healthcare utilization in India is also inadequate. Data from the National Family Health Survey–4 reveal that only 58.6% of women received antenatal care during the first trimester, and just over half had a minimum of four antenatal visits. Merely 30.3% consumed iron–folic acid supplements during pregnancy, and only 21% obtained comprehensive antenatal care. Although several government schemes have been introduced to promote maternal health, only 36.4% of mothers benefited from the Janani Suraksha Yojana (JSY) (Ministry of Health and Family Welfare, 2025).

Mental health issues disproportionately affect women in India. According to the World Health Organization, nearly half of the disability burden among women is attributed to neuropsychiatric disorders. Women face a two- to threefold higher risk of common mental disorders such as depression and anxiety. The prevalence of thyroid disorders, asthma, and self-reported heart disease is also higher among women compared to men (Sharma, Vishwakarma, & Puri, 2019**).**

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Violence against women remains a serious public health and social issue. United Nations reports indicate that approximately two-thirds of married women in India experience domestic violence, and a substantial proportion of women aged 15–49 are subjected to rape, coerced sex, or physical abuse. Substance use among women has also been linked to higher exposure to social and physical violence. Factors such as sex-selective practices, dowry-related abuse, trafficking, infertility, and societal pressure for male offspring contribute significantly to these outcomes, with wife battering and female suicides often associated with reproductive expectations (Malhotra & Shah, 2017).

In response, the Government of India has implemented numerous policies, schemes, and legal measures aimed at improving women's health and social standing. However, gaps in awareness, effective implementation, and utilization have limited their overall impact. In this context, awareness of reliable health information resources assumes critical importance, as it empowers women to understand health-related issues, access reliable information, and make informed decisions regarding their well-being.

1.3 Health Information Resources

The World Health Organization (WHO) describes health as a condition of complete physical, mental, and social well-being rather than merely the absence of illness or disability. In 1986, WHO further emphasized that health should be viewed as a resource for daily living rather than the ultimate aim of life, highlighting it as a positive concept that stresses social and personal resources along with physical abilities. Thus, health represents the overall well-being of an individual in everyday life (World Health Organization, 2025).

The Merriam-Webster Dictionary defines information as the process of communicating or receiving knowledge or intelligence (Merriam-Webster, 2019). In essence, information involves the exchange and acquisition of facts that contribute to the development of knowledge and understanding. Within the healthcare system, health information holds a central position. The timely provision of accurate and relevant health information supports informed decision-making, enhances user satisfaction, and leads to improved health outcomes (Timmers et al., 2020).

Hanson and Grogan classify information resources based on their characteristics into primary, secondary, and tertiary sources.

Primary documents represent the original and first-hand records of research findings. These include journals, research and technical reports, conference proceedings, official publications, standards, patents, theses and dissertations, laboratory records, internal research documents, correspondence, and personal files.

Secondary documents do not contain original research but serve as tools to guide users toward primary sources. Examples include textbooks, bibliographies, indexing and abstracting services, review articles, state-of-the-art reports, monographs, reference works, encyclopedias, and handbooks.

Tertiary documents facilitate access to secondary sources by listing or organizing them. These include yearbooks, directories, bibliographies of bibliographies, lists of ongoing research, and guides to information sources and organizations.

In addition to documentary sources, non-documentary resources play a vital role in the dissemination of information. These mainly include human resources, such as colleagues, peers, advisors, consultants, collaborators, and experts, as well as institutional resources like government ministries, industrial organizations, statistical bureaus, academic institutions, universities, libraries, and research organizations.

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1.3.1 Types of Health Information Resources

Health information resources encompass all sources that provide information related to health and healthcare. In the contemporary information environment, a wide range of health information resources is available, including books, journals, magazines, websites, databases, and newsletters. Numerous national and international health websites offer reliable and authoritative health information, such as portals maintained by government health departments, research institutions, and global health organizations.
Health-related databases also serve as crucial resources by providing access to peer-reviewed literature, clinical guidelines, and evidence-based information. These databases support healthcare professionals, researchers, and the general public in accessing validated and up-to-date health knowledge.

Health newsletters further contribute to information dissemination by offering regular updates on health research, public health initiatives, policy developments, and disease prevention strategies. Issued by reputable organizations and institutions, these newsletters help readers stay informed about current health issues and advancements.

Apart from digital and print resources, human and institutional sources: such as doctors, nurses, physicians, pharmacists, hospitals, government health agencies, and libraries remain among the most trusted and dependable providers of health information. These resources play a significant role in guiding individuals toward accurate understanding and informed health-related decisions.

2. REVIEW OF RELATED LITERATURE

Adeyoyin and Fadekemi Omobola Oyewusi (2015) investigated the health information needs of young adults in Nigeria, their use of different health information sources, and the obstacles they encounter when seeking such information. The study employed a co-relational research design using a descriptive survey method, with data collected from students aged 16–24 years through quota sampling. Findings revealed that the most prominent health information needs concerned nutrition (92.3%), water treatment and sanitation (91.3%), and medical diagnosis (88.6%). Additionally, respondents sought information to prevent unwanted pregnancies (62.3%), unsafe abortions (59%), and HIV/AIDS infection (62.3%). Commonly used information sources included newspapers and magazines (76.2%) and textbooks (73.1%). Major barriers to accessing health information were religious beliefs, cultural practices, traditional values, low educational levels, and the unapproachable attitudes of health professionals. Other challenges included inadequate training of health workers, limited time, and insufficient funding. Almoajel and Almarqabi (2016) examined online health information-seeking behavior among pregnant women in Riyadh, Saudi Arabia, using a descriptive cross-sectional survey design. Data were gathered through a structured questionnaire. The results indicated that physicians were the most frequently consulted source of health information (23%), followed by the internet (21.3%), friends and relatives (14.7%), and personal experience (9.3%). Only a small proportion relied on nurses (7.3%) or traditional media such as television, radio, and print materials (8%). Google was the most commonly used online platform (50.7%), followed by websites recommended by family or friends (22.07%) and healthcare professionals (15.3%). Nearly half of the respondents reported strong internet skills, while very few had poor skills. The information most often sought related to fetal development, stages of pregnancy, nutrition, newborn care, delivery, breastfeeding, and pregnancy-related discomforts. Anyaoku and Nwosu (2017) assessed access to health information among Nigerian patients with chronic illnesses, including HIV, hypertension, diabetes, cancer, and kidney disease. Using questionnaire data analyzed with

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SPSS version 17, the study found that the majority of respondents considered health information essential for disease management. Most sought information on specific diseases, symptoms, aggravating factors, and medication usage. Healthcare professionals—particularly doctors, pharmacists, and nurses—were the primary sources of information, followed by family members, other patients, and religious institutions. Mass media sources such as television and print materials also played an important role, while libraries were the least utilized sources for health information. Finney Rutten, Blake, Greenberg-Worisek, Allen, Moser, and Hesse (2019) examined patterns of online health information seeking among U.S. adults and evaluated progress toward the Healthy People 2020 objective of improving access to health information through digital platforms. Using pooled data from four cycles of the Health Information National Trends Survey (HINTS) collected between 2008 and 2017, the authors analysed responses from 18,103 adults. Their findings revealed that the proportion of individuals who reported being able to access online health information without frustration remained largely unchanged over time, indicating limited progress toward the national objective. They further identified significant socio demographic disparities in online health information access. Age, race/ethnicity, income, and education level were strongly associated with users' experiences, with individuals from lower socioeconomic backgrounds reporting greater difficulty in accessing online health information resources. Despite increased Internet penetration, the study highlights that structural and usability barriers persist, limiting equitable access to health information. The authors argue that merely expanding digital health resources is insufficient; instead, targeted interventions focusing on usability, digital literacy, and equity are essential. This study contributes important empirical evidence to health communication research by demonstrating that improvements in online health information availability have not necessarily translated into improved user experiences, particularly among vulnerable populations. Yoon, Jang, Vaughan, and Garcia (2018) investigated how race/ethnicity and socioeconomic status (SES) affect older adults' use of the Internet to seek health information, addressing both independent and interactive effects of these social determinants on digital health information behaviour. Analysing data from 17,704 participants in the California Health Interview Survey, the authors used logistic regression to assess the likelihood that individuals of different racial/ethnic groups (Whites, African Americans, Latinos, and Asians) and various SES levels would use the Internet for health information (Yoon et al., 2019). The study found that only about 40% of older adults reported using the Internet for health information. Both race/ethnicity and SES exerted significant independent effects: participants from racial/ethnic minority groups and those with lower SES had significantly lower odds of engaging in online health information seeking. Importantly, the interaction between race/ethnicity and SES revealed that minority status compounded with low SES markedly decreased the likelihood of Internet use for health information The authors identified this as a key dimension of the digital divide, emphasizing that digital access disparities are not solely about technology availability but are also shaped by intersecting socio-demographic factors. The findings underscore the need for targeted technology training and support programmes to enhance equitable access to online health information among diverse older adult populations. Sedrak, Soto-Perez-De-Celis, Nelson, Liu, Waring, Lane, Paskett, and Chlebowski (2020) examined online health information seeking behaviour among older women with chronic illnesses, using data from the Women's Health Initiative (WHI), a large U.S. cohort study of postmenopausal women aged 65 years and older (N = 72,806). The authors aimed to characterise the prevalence of internet use for health information and compare socio demographic and clinical characteristics between women who did and did not seek health information online. Results showed that approximately 59% of participants reported using the internet to obtain health information, indicating substantial engagement with online resources even in an older population (Sedrak

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et al., 2020). Those who sought health information online were more likely to be younger within the cohort, non-Hispanic white, have higher educational attainment and income, and cohabit with a partner. Chronic illness profiles influenced online seeking: women with Alzheimer's disease and several other chronic conditions were less likely to use the internet for health information, whereas recent cancer diagnosis was associated with increased online seeking (Sedrak et al., 2020). The study highlights persistent digital divides by socio-demographic status and health condition among older women, suggesting that tailored interventions are needed to support equitable access to online health information in aging populations. Findings contribute to understanding how health status and social factors shape digital health engagement among older adults.

Dluhos-Sebesto, Jethwa, Bertasi, Bertasi, Maruoka Nishi, Pantin, Argenio, Shahsamand, Omololu, and Pujalte (2021) conducted the Women's Health Information Survey to identify common health concerns and trusted sources of health information among female patients across two distinct clinical settings within the same geographic region. The authors deployed a novel 36-question survey to women aged 16 years and older who attended appointments at the Mayo Clinic Department of Family Medicine and a community health clinic serving a medically underserved population. Results indicated that, despite expansion of online health resources, primary care providers Secondary sources varied by clinic; for instance, alternative health specialists and the Mayo Clinic Web Portal were more frequently used in their respective settings. Across groups, the most frequently reported health concerns included cardiac health, breast and other cancers, and obesity**,** while mental health concerns were significantly more prominent in the underserved clinic sample. The study's findings underscore that socio demographic factors such as education and socioeconomic status shape patients' health concerns and trust in information sources**,** and highlight the enduring role of clinicians as essential conduits of accurate health information. These insights inform efforts to tailor health communication and education strategies for diverse female patient populations.

Vogels-Broeke, Daemers, Budé, de Vries, and Nieuwenhuijze (2022) investigated how pregnant women use various information sources during pregnancy and how they perceive the quality of that information in terms of usefulness and trustworthiness. Using a quantitative cross-sectional study design, the authors surveyed 1,922 pregnant women in the Netherlands about their engagement with professional, conventional (e.g., family and peers), and digital sources such as websites and Smartphone applications. Results demonstrated that midwives were the most frequently used and most trusted source of pregnancy-related information, with over 90% of respondents consulting them, followed by family or friends, and digital sources such as websites and apps. Although digital platforms were widely used—websites by nearly 78% and apps by approximately 62% of participants—these sources were perceived as less trustworthy and useful compared with professional sources. Regression analyses indicated that personal socio demographic characteristics accounted for only a small proportion of variation in perceived information quality. They conclude that, despite the ubiquity of digital information, maternity care professionals play a central role in meeting women's information needs. They recommend collaboration between healthcare providers and digital developers to improve the quality and credibility of online pregnancy information.

Moulaei, Moulaei, and Bahaadinbeigy (2023) conducted a scoping review to identify barriers and facilitators influencing women's use of health information technologies (HIT) globally. The authors systematically screened databases including PubMed, Web of Science, and Scopus, ultimately including 35 studies that addressed women's engagement with digital health tools such as mobile apps, telehealth platforms, and web-based information sources

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(Moulaei et al., 2023). Their analysis extracted 375 individual barriers and facilitators, which were consolidated into 121 distinct items and organized into five thematic categories: management, technological, legal and regulatory, personal, and data and information management. Key barriers identified included privacy, confidentiality, and security concerns, limitations in infrastructure and technology design, sociocultural challenges including gender discrimination, and poor economic status that restricts access and sustained use (Moulaei et al., 2023). Conversely, prominent facilitators involved increasing digital literacy and continuous education, provision of training services, simple and user-friendly technology design, and financial incentives to support women's adoption of HIT. The authors conclude that addressing these multifaceted barriers requires integrated strategies involving policymakers, healthcare institutions, and technology designers to ensure equitable access and effective utilisation of health information technologies by women. Their review contributes to understanding the digital divide from a gender perspective and highlights actionable domains for intervention.

Conrad (2024) conducted a narrative literature review to synthesise empirical research on health information-seeking behaviours via the Internet among pregnant women, addressing gaps in the literature that span multiple disciplines including health communication, psychology, and social sciences. The review collates findings from studies examining who seeks online pregnancy-related information, where they look, what types of information are sought, why women search, and how they evaluate and use this content. Across studies, pregnant women were consistently reported to rely heavily on Internet sources, including pregnancy-specific websites, forums, and Smartphone applications, for information about fetal development, pregnancy complications, nutrition, and labour. However, Conrad (2022) highlights persistent concerns about the accuracy and trustworthiness of online health information, noting that quality varies widely across platforms. The review underscores that while digital sources can empower women with timely information, they may also expose them to misinformation and emotional distress if content is unregulated. Importantly, Conrad (2022) emphasises that healthcare providers remain critical in guiding pregnant women to high-quality and credible online resources and in enhancing patients' health literacy. The author calls for interdisciplinary research that addresses current gaps, particularly in understanding how pregnant women assess information credibility and incorporate online findings into healthcare decisions. Zhou, Huang, Yang, Li, Wang, Wang, Zhang, and Liu (2025) examined patterns of online health information-seeking (OHIS) behaviours among young Chinese women diagnosed with breast cancer, with an aim to identify latent classes of information-seeking and associated demographic and clinical factors. Using a cross-sectional design, the authors surveyed women aged 18–39 years receiving treatment in oncology centres in China, and applied latent class analysis to classify distinct OHIS patterns based on frequency, variety of sources, and topical focus. Results revealed three primary OHIS classes: low engagement, moderate engagement with selective topics, and high engagement across multiple online platforms. Women in the high engagement class were more likely to be younger within the sample, better educated, and to report higher levels of health literacy compared with those in the low engagement class. The study also found that clinical factors, such as stage of cancer and treatment phase, significantly influenced OHIS behaviours, with those in active treatment seeking information more frequently than those in remission (Zhou et al., 2025). The authors conclude that tailoring digital information resources to the specific needs and engagement patterns of subgroups may improve access to relevant, patient-centred health information and ultimately support informed decision-making. This research adds to evidence that socio-demographic and clinical factors jointly shape online health information seeking among young patients with serious illness.

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The reviewed literature collectively demonstrates that health information resources—whether interpersonal, institutional, or digital—remain central to individuals' capacity to understand, manage, and make decisions about health across diverse populations and life stages. Across contexts, healthcare professionals, particularly physicians, midwife, and primary care providers, consistently emerge as the most trusted and authoritative sources of health information, underscoring the enduring importance of traditional, face-to-face channels even in an increasingly digital environment. At the same time, digital resources such as the Internet, search engines, websites, and mobile applications have become prominent supplementary sources, valued for their accessibility, immediacy, and breadth of content, especially among younger, more educated, and higher socioeconomic groups. Socio-demographic factors—including age, education, income, gender, race/ethnicity, and health status—strongly influence both the choice of information sources and the quality of users' experiences. Structural barriers such as limited digital literacy, poor usability of online platforms, cultural and religious constraints, and inadequate infrastructure continue to restrict equitable access, particularly for vulnerable and underserved populations. Notably, libraries and formal information institutions are often underutilized, suggesting missed opportunities for professionally mediated, evidence-based health information provision. Overall, the evidence indicates that expanding the availability of digital health information alone is insufficient. Effective health information ecosystems require a balanced integration of trusted professional sources and well-designed, credible digital resources, supported by targeted interventions that enhance health and digital literacy. Strengthening traditional health information channels while modernising and regulating digital platforms, and fostering collaboration between healthcare providers, information professionals, and technology developers, is essential to ensure that health information resources genuinely support informed decision-making and reduce, rather than reinforce, existing information inequalities.

3. OBJECTIVES OF THE STUDY

1. To assess the level of awareness regarding different health information resources, including print, electronic, human, institutional, mass media, and social media sources.
2. To examine the patterns of use of various health information resources among users.
3. To analyze the preferences for different health information resources, including print, electronic, human, institutional, mass media, and social media sources.
4. To find out the health information seeking behaviour of teaching and non-teaching female staff.

4. SCOPE OF THE STUDY

The present investigation seeks to examine the preferences, patterns of use, and awareness levels related to health information resources among female staff members in selected universities located in Punjab and Chandigarh. The study is limited to three universities, namely Panjab University, Chandigarh; Punjabi University, Patiala; and Guru Nanak Dev University, Amritsar. Both teaching and non-teaching female staff from these institutions has been included within the scope of the research.

5. RESEARCH METHODOLOGY

5.1 Literature Review:

To identify and examine literature relevant to the objectives of the present study, an extensive review was carried out using a variety of sources, including scholarly journals, databases,

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electronic journals, books, conference proceedings and relevant websites. In addition, regular visits were made to the Bhai Kahn Singh Nabha Library, Punjabi University, Patiala, for consultation of printed books and academic journals pertinent to the study.

5.2 Population of the Study:

The population of the study consists of all female teaching and non-teaching staff employed in universities across Punjab and Chandigarh. This population represents women engaged in academic and administrative activities that are likely to access and utilize health information resources through institutional frameworks.

5.3 Sample of the Study:

The sample has been selected from three representative universities, namely Panjab University (Chandigarh), Punjabi University (Patiala), and Guru Nanak Dev University (Amritsar). The sample includes female teaching and non-teaching staff from these universities. A stratified random sampling technique has been adopted to ensure proportionate representation of different staff categories.

5.4 Method of Study:

A survey method has been employed for the present research, as it is considered most appropriate for achieving the study objectives. Primary data have been collected from female staff members of selected universities in Punjab and Chandigarh.

5.5 Survey Instrument:

One structured questionnaire for female staff members was designed and administered for data collection. The questionnaire was developed on the basis of an extensive literature review related to the research problem, along with consultations and discussions with subject experts.

5.6 Pilot Testing:

Prior to the main survey, a pilot study was conducted to test the effectiveness and clarity of the questionnaires. The questionnaire for female staff was initially administered to 40 teaching and non-teaching staff members of Punjabi University to obtain feedback on its content and structure. Based on the feedback received, necessary modifications were made.

5.7 Data Collection:

Primary data were collected through personal visits to selected universities in Punjab and Chandigarh. The structured questionnaires were administered both personally and through online mode. Informed consent was obtained from all participants prior to data collection, confidentiality of responses was assured, participation was voluntary, and respondents were provided adequate time to complete the questionnaires.

5.8 Data Analysis:

The collected data were analyzed using appropriate statistical techniques with the assistance of the Statistical Package for the Social Sciences (SPSS Version 26). Descriptive statistics, including frequencies and percentages, were used to identify patterns related to awareness, accessibility, and use of health information resources.

5.9 Citation Style:

The APA 7th style has been used.

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6. DATA ANALYSIS AND DISCUSSION:

In the contemporary digital era, marked by rapid advancements in both technology and healthcare, access to reliable and accurate health information has assumed critical importance in fostering informed choices and healthier ways of living. People increasingly depend on a range of online and traditional information sources to comprehend health conditions, assess treatment alternatives, and engage in preventive health behaviours. Among different population groups, women show a notably high level of involvement with health information, owing to their significant responsibilities in family healthcare management, caregiving roles, and maintenance of their own health. Female professionals, particularly those employed in academic institutions, tend to display greater awareness and interest in health-related issues, positioning them as an important group for examining current patterns of health information-seeking behaviour. Against this backdrop, the present study investigates the level of awareness, patterns of use, and perceived importance of various health information sources among female staff working in universities across Punjab and Chandigarh. The empirical findings of the study are presented below:

6.1 Descriptive Statistics

This section presents the descriptive analysis undertaken to assess the awareness levels and usage patterns of different health information sources among 348 female staff members working in universities across Punjab and Chandigarh. Frequency and percentage distributions were employed to summarise responses to major items in the questionnaire, thereby offering a clear picture of respondents' preferences, levels of familiarity, and extent of engagement with various information sources. The analysis provides an overview of how participants accessed and prioritised sources such as print materials, digital platforms, e-health newsletters, databases, and government-supported applications. This descriptive assessment forms the basis for identifying prevailing trends and variations in health information-seeking behaviour within the study population.

Table 1: Distribution of Respondents Across Universities

University	No. of Respondents	Percent
Guru Nanak Dev University, Amritsar	101	29.0
Punjab University, Chandigarh	128	36.8
Punjabi University, Patiala	119	34.2
Total	348	100.0

Note: Author's own compilation

Table 1 indicates that the respondents are fairly evenly distributed across the three selected universities, ensuring adequate institutional representation. Punjab University, Chandigarh accounts for the highest proportion of respondents at 36.8% (n = 128), reflecting strong participation and yielding substantial insight into the health information practices of its female staff. Punjabi University, Patiala follows closely with 34.2% (n = 119), contributing nearly an equal share and enhancing the diversity of responses. Guru Nanak Dev University, Amritsar represents 29.0% (n = 101) of the sample, which, although marginally lower, still constitutes a significant segment. Overall, the distribution demonstrates that no single institution disproportionately dominates the sample, thereby supporting balanced and meaningful comparisons across universities.

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Table 2: Frequency and Percentage Distribution of Preferred Health Information Sources

Health Information Source	Descriptives	Preference order (1= Most Preferred and 7 Least Preferred)							
		1	2	3	4	5	6	7	Total
Print Resources	Frequency	22	26	69	33	24	28	146	348
	Percentage	6.3	7.5	19.8	9.5	6.9	8	42	100
E-Resources	Frequency	26	84	41	40	26	119	12	348
	Percentage	7.5	24.1	11.8	11.5	7.5	34.2	3.4	100
Human Resources [Doctors, Nurses, Friends, Relatives)	Frequency	182	51	43	23	40	8	1	348
	Percentage	52.3	14.7	12.4	6.6	11.5	2.3	0.3	100
Institutional Resources [Libraries, Hospitals, WHO]	Frequency	23	52	31	136	63	28	15	348
	Percentage	6.6	14.9	8.9	39.1	18.1	8	4.3	100
Mass Media [Radio,Television etc.]	Frequency	9	15	68	64	115	48	29	348
	Percentage	2.6	4.3	19.5	18.4	33	13.8	8.3	100
Social media [Facebook, Instagram, YouTube etc.]	Frequency	34	70	53	37	34	95	25	348
	Percentage	9.8	20.1	15.2	10.6	9.8	27.3	7.2	100
Online Resources [Health Websites, Health Apps etc.]	Frequency	52	54	41	14	43	24	120	348
	Percentage	14.9	15.5	11.8	4	12.4	6.9	34.5	100

Note: Author's own compilation

Table 2 presents the preference ranking of various health information sources among female university staff in Punjab and Chandigarh. Respondents were asked to rank seven categories of information sources—print resources, e-resources, human resources, institutional resources, mass media, social media, and online resources—on a scale ranging from 1 (most preferred) to 7 (least preferred). The results reveal considerable variation in preferences, shaped by factors such as accessibility, perceived reliability, and familiarity with each source.

Human resources, including doctors, nurses, friends, and relatives, emerged as the most preferred source of health information. A majority of respondents (52.3%) ranked this category as their first choice, underscoring the importance of trust, personal interaction, and direct communication in health-related decision-making. The minimal proportion of respondents (0.3%) ranking this source last further reinforces its perceived credibility and value.

E-resources, such as electronic journals and databases, occupied the position of the second most preferred source, with 24.1% of respondents ranking them second. This reflects an increasing inclination towards digital academic resources. However, the fact that 34.2% placed them at the sixth rank highlights uneven usage, possibly due to differences in digital competence, accessibility, or perceived difficulty in navigating such platforms.

Responses regarding online resources, including health websites and mobile applications, reveal a divided perception. While 14.9% of respondents ranked these as their most preferred source, a larger proportion (34.5%) considered them the least preferred. This polarization

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suggests that although some users value the convenience and immediacy of online health information, others remain cautious about its reliability and accuracy, likely due to concerns over misinformation.

Social media platforms such as Facebook, Instagram, and YouTube showed moderate levels of preference. Approximately 20.1% of respondents ranked social media as their second choice, reflecting its widespread use and ease of access. Nevertheless, 27.3% placed it in the sixth position, indicating reluctance to rely on social media for authoritative or professional health information.

Institutional resources, including libraries, hospitals, and international organisations such as the World Health Organization, were generally ranked in the middle range, with 39.1% of respondents assigning them the fourth position. Although these sources are recognised for their credibility, limited accessibility or lack of user-friendly engagement may reduce their practical use.

The preference pattern for print resources indicates a noticeable decline. While 19.8% ranked print materials as their third choice, a substantial proportion (42%) placed them last. This trend reflects the diminishing relevance of traditional print media in comparison to faster and more convenient digital alternatives. Mass media, including television and radio, also received moderate rankings, functioning primarily as tools for general awareness rather than detailed or personalised health information.

Overall, the findings indicate that female university staff continue to place greatest trust in interpersonal and professional sources, followed by selected digital resources. Traditional print and broadcast media appear to be gradually losing prominence. The results point to a transitional phase in health information-seeking behaviour, where established trust-based practices coexist with emerging digital channels, emphasising the need for enhanced digital literacy and improved access to reliable institutional and online health resources.

Table 3: Awareness and Usage of Various E-Health Newsletters among Female University Staff of Punjab and Chandigarh

E-Health Newsletters	Aware and use this resource		Aware but do not use this resource		Not aware and do not use this resource		Not aware but wish to use this resource		Neither aware nor wish to use this resource	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Medline Plus newsletter	122	35.06	92	26.44	78	22.41	36	10.34	20	5.75
WHO's newsletters	136	39.08	107	30.75	60	17.24	33	9.48	12	3.45
Harvard Health Publishing's newsletters	61	17.53	119	34.20	105	30.17	45	12.93	18	5.17
ICMR-NIN monthly newsletter	53	15.23	110	31.61	116	33.33	46	13.22	23	6.61
Kaiser Health News	35	10.06	113	32.47	121	34.77	56	16.09	23	6.61
Health and safety newsletter of American Heart Association	37	10.63	107	30.75	127	36.49	50	14.37	27	7.76
News in Health newsletter of National Institute of Health	45	12.93	101	29.02	134	38.51	47	13.51	21	6.03
Your Health by John Hopkins Medicine	47	13.51	92	26.44	137	39.37	48	13.79	24	6.90
International Health News Brief by Common wealth fund	44	12.64	97	27.87	129	37.07	55	15.80	23	6.61

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Transforming Care: Reporting on Health System Improvement by Common wealth fund	39	11.21	90	25.86	138	39.66	58	16.67	23	6.61
AHRQ News Now by the Agency for Healthcare Research and Quality	41	11.78	87	25.00	139	39.94	59	16.95	22	6.32
Healthworld.com by economic times	51	14.66	87	25.00	131	37.64	58	16.67	21	6.03
National centre for disease control (NCDC) newsletter	67	19.25	87	25.00	117	33.62	55	15.80	22	6.32
MERA-India Newsletter by Indian Council of Medical Research	57	16.38	94	27.01	113	32.47	56	16.09	28	8.05

Note: Author's own compilation

Table 3 depicts the levels of awareness and utilisation of different e-health newsletters among female university staff in Punjab and Chandigarh. The data reveal varying degrees of familiarity and engagement with both international and national health newsletters.

Newsletters published by internationally recognised organisations demonstrate higher awareness and usage. The World Health Organization (WHO) newsletters are the most widely recognised and used, with 39.08% of respondents reporting active use, followed by the Medline Plus newsletter at 35.06%. This suggests a strong level of trust in globally reputed health information providers. In contrast, newsletters such as Kaiser Health News, the American Heart Association's Health and Safety Newsletter, and Transforming Care by the Commonwealth Fund show relatively lower usage levels. However, a sizeable proportion of respondents indicated awareness without active use, pointing to a gap between recognition and regular engagement.

With respect to Indian sources, moderate awareness and usage were observed for the National Centre for Disease Control (NCDC) Newsletter (19.25%) and the MERA-India Newsletter by the Indian Council of Medical Research (16.38%). Despite this, a considerable number of respondents reported being unaware of and not using these national newsletters, indicating the need for stronger dissemination and promotional efforts by Indian health agencies.

Across all newsletters, a noteworthy segment of respondents expressed interest in using these resources despite lacking prior awareness, with percentages ranging from approximately 9% to 17%. This reflects an underlying demand for credible and authoritative digital health information. In summary, the findings indicate that international e-health newsletters enjoy greater visibility and utilisation than their Indian counterparts among female university staff in Punjab and Chandigarh, highlighting opportunities for improved outreach and engagement by national health information providers.

Table 4: Analysis of Awareness and Use of E-Health Databases among Female University Staff in Punjab and Chandigarh

E-Health Database	Aware and use this resource		Aware but do not use this resource		Not aware and do not use this resource		Not aware but wish to use this resource		Neither aware nor wish to use this resource	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
PubMed	149	42.82	78	22.41	79	22.70	29	8.33	13	3.74
Familydoctor	129	37.07	82	23.56	82	23.56	33	9.48	22	6.32

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Medline Plus	107	30.75	109	31.32	84	24.14	32	9.20	16	4.60
Mayo Clinic	108	31.03	97	27.87	94	27.01	37	10.63	12	3.45
WebMD	89	25.57	97	27.87	105	30.17	46	13.22	11	3.16
Health finder	41	11.78	132	37.93	106	30.46	52	14.94	17	4.89
Medscape	57	16.38	118	33.91	111	31.90	41	11.78	21	6.03
UpToDate	38	10.92	122	35.06	115	33.05	53	15.23	20	5.75
Trip database	36	10.34	120	34.48	126	36.21	46	13.22	20	5.75
OpenMD.com	41	11.78	121	34.77	123	35.34	44	12.64	19	5.46
Scopus	74	21.26	113	32.47	105	30.17	39	11.21	17	4.89
EbscoHost	44	12.64	122	35.06	118	33.91	43	12.36	21	6.03
Wiley Online Library	55	15.80	119	34.20	115	33.05	41	11.78	18	5.17
Clinical Key	36	10.34	122	35.06	123	35.34	44	12.64	23	6.61
HINARI	29	8.33	120	34.48	132	37.93	46	13.22	21	6.03
Ovid	24	6.90	118	33.91	136	39.08	45	12.93	25	7.18
Thieme	27	7.76	112	32.18	145	41.67	44	12.64	20	5.75
CDC	31	8.91	107	30.75	146	41.95	45	12.93	19	5.46
EMBASE	26	7.47	111	31.90	140	40.23	50	14.37	21	6.03
CINAHL PLUS	29	8.33	100	28.74	143	41.09	54	15.52	22	6.32
Cochrane Library	37	10.63	98	28.16	140	40.23	49	14.08	24	6.90
PubMed Central	53	15.23	99	28.45	129	37.07	46	13.22	21	6.03
BioMed Central	75	21.55	98	28.16	109	31.32	47	13.51	19	5.46
MEDLINE Plus	86	24.71	96	27.59	111	31.90	38	10.92	17	4.89
PsycINFO	59	16.95	106	30.46	121	34.77	43	12.36	19	5.46

Note: Author's own compilation

The data presented in Table 4 illustrates the extent of awareness and utilization of various e-health databases among female university staff members in Punjab and Chandigarh. The analysis reveals considerable differences in recognition and usage across the listed databases, highlighting both widely accepted platforms and those with limited exposure. These variations reflect differing levels of accessibility, familiarity, and perceived usefulness of the resources.

Among all databases, PubMed stands out as the most commonly known and used resource, with 42.82 percent of respondents reporting active use. This indicates its strong reputation as a reliable and authoritative source of biomedical and health information within the academic community. Other databases demonstrating moderate levels of use include Familydoctor, Medline Plus, and Mayo Clinic, suggesting that these platforms are comparatively accessible and trusted by the respondents.

Conversely, databases such as UpToDate, Trip Database, Clinical Key, HINARI, Ovid, and Thieme exhibit notably low levels of both awareness and usage. Despite their international standing and scholarly importance, these resources appear to have limited reach among the surveyed population. A substantial proportion of respondents across most databases fell into the categories of "aware but do not use" and "not aware but wish to use." This pattern suggests an underlying interest in e-health resources that is not being fully realized, possibly

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due to restricted institutional access, insufficient training, or lack of guidance regarding effective use.

Several databases, including Healthfinder, EbscoHost, Clinical Key, and UpToDate, recorded high percentages of respondents who were aware of the platforms but had not utilized them. This may point to structural or practical barriers rather than a lack of interest. In contrast, resources such as CINAHL Plus, Thieme, CDC, and EMBASE showed a significant proportion of respondents who were neither aware of nor using these databases, indicating a substantial gap in exposure to internationally recognized health information systems.

Overall, the findings suggest that while a few prominent databases such as PubMed, Medline Plus, and Mayo Clinic are relatively well established among female university staff, awareness and usage of many specialized e-health databases remain limited. The results highlight a mixed pattern of engagement, underscoring the need for increased awareness initiatives, training programs, and improved access to enhance effective utilization of e-health information resources.

Table 5: Frequency and Percentage Distribution of Social Media Platform Preferences for Seeking Health Information

Health Information Source	Descriptives	Preference order (1= Most Preferred and 8 Least Preferred)								
		1	2	3	4	5	6	7	8	Total
Facebook	Frequency	119	43	49	84	16	5	15	17	348
	Percentage	34.2	12.4	14.1	24.1	4.6	1.4	4.3	4.9	100
Instagram	Frequency	20	98	104	74	18	14	9	11	348
	Percentage	5.7	28.2	29.9	21.3	5.2	4.0	2.6	3.2	100
WhatsApp	Frequency	34	89	108	56	39	12	–	10	348
	Percentage	9.8	25.6	31.0	16.1	11.2	3.4	–	2.9	100
YouTube	Frequency	126	66	42	94	7	2	2	9	348
	Percentage	36.2	19.0	12.1	27.0	2.0	0.6	0.6	2.6	100
Quora	Frequency	21	20	19	18	217	37	1	15	348
	Percentage	6.0	5.7	5.5	5.2	62.4	10.6	0.3	4.3	100
Twitter	Frequency	4	17	14	5	30	258	11	9	348
	Percentage	1.1	4.9	4.0	1.4	8.6	74.1	3.2	2.6	100
Tumblr	Frequency	11	6	1	5	1	8	300	16	348
	Percentage	3.2	1.7	0.3	1.4	0.3	2.3	86.2	4.6	100
Telegram	Frequency	4	–	1	2	11	3	3	324	348
	Percentage	1.1	–	0.3	0.6	3.2	0.9	0.9	93.1	100

Note: Author's own compilation

Table 5 depicts the preference ranking of various social media platforms used by female university staff in Punjab and Chandigarh for seeking health-related information. Respondents evaluated eight platforms on a scale ranging from most preferred to least preferred, offering insights into platform popularity, usability, and perceived credibility in the context of health information seeking.

The findings clearly indicate that YouTube and Facebook are the most favored platforms among the respondents. A substantial proportion of participants identified YouTube as their top preference, closely followed by Facebook. The strong preference for YouTube reflects the appeal of audiovisual content, which facilitates better understanding through demonstrations, expert discussions, and instructional videos. Facebook's popularity can be attributed to its

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combination of informational posts, health-focused groups, and awareness campaigns, which together create an interactive and community-oriented environment.

Instagram and WhatsApp also emerged as important platforms for health information. Instagram received high rankings in the second and third preference categories, indicating the effectiveness of visually appealing content such as infographics, short videos, and influencer-driven messaging. Similarly, WhatsApp was frequently ranked among the higher preferences, reflecting its widespread use for sharing health information through personal networks, group discussions, and informal communication channels.

In contrast, Quora and Twitter were less favored by the respondents. Most participants ranked Quora in the mid-preference range and Twitter in the lower categories, suggesting that these platforms are not commonly relied upon for health-related information. The emphasis on text-based discussions in Quora and the brief, fast-paced nature of Twitter content may not align with users' preferences for clear, engaging, and easily interpretable health information.

The least preferred platforms were Tumblr and Telegram. A large majority of respondents placed Tumblr near the bottom of the preference scale, while Telegram was predominantly ranked as the least preferred option. This indicates limited usage and lower perceived relevance of these platforms for health information purposes, possibly due to their niche user base and lower visibility in health communication contexts.

In summary, the results demonstrate a strong inclination toward widely used, visually rich, and interactive platforms—particularly YouTube, Facebook, Instagram, and WhatsApp—for accessing health information. Platforms that are less interactive or less commonly associated with health communication receive minimal preference. These findings emphasize the importance of utilizing popular and user-friendly social media channels when designing and disseminating digital health awareness initiatives.

Table 6: Awareness and Use of National and International Health Websites Among Female University Staff in Punjab and Chandigarh

Health Websites	Aware and use this resource		Aware but do not use this resource		Not aware and do not use this resource		Not aware but wish to use this resource		Neither aware nor wish to use this resource	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
The Ministry of Health and Family Welfare – (mohfw.nic.in)	15	4.31	20	5.75	69	19.83	91	26.15	153	43.97
National Health Portal of India (nhp.gov.in)	12	3.45	21	6.03	79	22.7	110	31.61	126	36.21
eSanjeevaniOPD (https://esanjeevaniopd.in/)	17	4.89	39	11.21	97	27.87	116	33.33	79	22.7
Department of Health Research (https://dhr.gov.in/)	19	5.46	42	12.07	105	30.17	118	33.91	64	18.39
National Institute of Nutrition (https://www.nin.res.in/)	25	7.18	40	11.49	114	32.76	113	32.47	56	16.09
Department of Health and Family Welfare, Government of Punjab (http://health.punj	24	6.9	32	9.2	101	29.02	128	36.78	63	18.1

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ab.gov.in/)										
Medindia (https://www.medindia.net/)	24	6.9	47	13.51	121	34.77	106	30.46	50	14.37
Healthy India (Healthy-india.org)	21	6.03	48	13.79	127	36.49	111	31.9	41	11.78
National Cancer Institute (Cancer.gov)	24	6.9	44	12.64	119	34.2	117	33.62	44	12.64
Centres for disease control and prevention (www.cdc.gov)	18	5.17	53	15.23	129	37.07	114	32.76	34	9.77
Familydoctor.org (https://familydoctor.org/)	13	3.74	52	14.94	127	36.49	111	31.9	45	12.93
Healthfinder (https://health.gov/myhealthfinder)	27	7.76	48	13.79	119	34.2	121	34.77	33	9.48
HIV InSite (http://hivinsite.ucsf.edu/)	21	6.03	52	14.94	137	39.37	108	31.03	30	8.62
Kidshealth (https://kidshealth.org/)	20	5.75	59	16.95	142	40.8	106	30.46	21	6.03
Mayo Clinic (https://www.mayoclinic.org/)	23	6.61	45	12.93	120	34.48	112	32.18	48	13.79
Healthy women (https://www.healthywomen.org/)	23	6.61	43	12.36	135	38.79	101	29.02	46	13.22
Harvard Health Publishing (https://www.health.harvard.edu/)	15	4.31	52	14.94	138	39.66	105	30.17	38	10.92
MedlinePlus (https://medlineplus.gov/)	22	6.32	42	12.07	127	36.49	97	27.87	60	17.24
National Institute of Health (https://www.nih.gov/)	22	6.32	44	12.64	123	35.34	107	30.75	52	14.94
U.S. Department of Health and Human Services (https://www.womenshealth.gov/)	29	8.33	45	12.93	132	37.93	111	31.9	31	8.91
National Institute on Aging: Health Information (https://www.nia.nih.gov/)	22	6.32	50	14.37	138	39.66	110	31.61	28	8.05
Johns Hopkins Medicine (https://www.hopkinsmedicine.org/)	25	7.18	52	14.94	126	36.21	109	31.32	36	10.34
World Health Organization (https://www.who.int/)	17	4.89	39	11.21	105	30.17	96	27.59	91	26.15

Note: Author's own compilation

Table 6 presents the levels of awareness and utilization of selected national and international health-related websites among 348 female university staff members from Punjab and Chandigarh. The findings demonstrate notable variation in familiarity and usage across

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different platforms, largely influenced by factors such as official endorsement, visibility, institutional outreach, and perceived relevance.

With respect to Indian government health websites, official portals such as the Ministry of Health and Family Welfare and the National Health Portal of India emerge as relatively prominent sources of health information among the respondents. Their comparatively higher recognition reflects their status as authoritative platforms disseminating verified and up-to-date public health information. The eSanjeevani OPD portal, which facilitates telemedicine services, shows moderate awareness, indicating increasing acceptance of digital health initiatives, particularly in the context of expanding online healthcare delivery. Similarly, the Department of Health and Family Welfare, Government of Punjab, and the Department of Health Research display reasonable levels of recognition, suggesting some degree of awareness of both national and state-level health resources. In contrast, more specialized platforms such as the National Institute of Nutrition and Medindia report lower engagement, possibly due to their technical focus or limited promotion among non-medical academic staff.

Regarding international health websites, globally recognized organizations such as the World Health Organization, Centers for Disease Control and Prevention, MedlinePlus, and the National Institutes of Health show moderate levels of awareness and use. This trend reflects respondents' reliance on internationally reputable institutions for credible and evidence-based health information. In addition, academically affiliated platforms including Harvard Health Publishing, Johns Hopkins Medicine, and the Mayo Clinic exhibit increasing recognition, likely attributable to their association with prestigious institutions and their emphasis on scientifically grounded content.

Conversely, websites catering to specific health conditions or demographic groups—such as HIV InSite, HealthyWomen, and KidsHealth—demonstrate comparatively lower levels of awareness and utilization. This limited engagement may be linked to their specialized scope, reduced visibility, or perceived lack of immediate applicability among the study population.

Overall, the results indicate that female university staff members possess a reasonable level of awareness of digital health resources and tend to favor well-established, authoritative, and evidence-based platforms, particularly those supported by government agencies and internationally recognized health organizations. However, the uneven distribution of awareness and use across websites underscores the need for enhanced institutional efforts, including awareness programs, training initiatives, and targeted promotion, to encourage wider and more effective utilization of specialized health information websites.

7. IMPORTANT FINDINGS:

- The findings reveal that human resources including doctors, nurses, friends, and relatives—are the most preferred channels for obtaining health information, with over half of the respondents assigning them the highest rank. This preference underscores a strong dependence on personal trust and professional expertise. In comparison, print materials and mass media received the lowest preference rankings from a substantial proportion of respondents, indicating a diminishing reliance on conventional information sources. Although online resources and social media were identified as primary sources by a smaller segment of participants, many respondents expressed reservations regarding their reliability. Institutional sources, such as libraries and hospitals, occupied a middle position in the preference hierarchy, suggesting that while they remain relevant, they primarily play a supportive role. Overall, the pattern highlights the dominance of human-mediated sources in health information seeking, with digital and institutional channels functioning as complementary resources.

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- The results further indicate that female university staff demonstrates greater awareness and usage of international e-health newsletters, particularly those issued by the World Health Organization and MedlinePlus, reflecting higher levels of visibility and confidence in globally recognized health authorities. A considerable proportion of respondents were familiar with these newsletters but did not regularly access them, suggesting awareness without sustained engagement. In contrast, the utilization of national e-health newsletters was comparatively limited, with fewer respondents reporting active use of platforms such as NCDC, MERA-India (ICMR), and ICMR–NIN. Additionally, a sizeable segment of the sample remained unaware of these Indian newsletters, pointing to gaps in dissemination and institutional promotion. Collectively, the findings suggest a stronger orientation toward international health information sources, while national newsletters require enhanced outreach and visibility.

- Significant differences were observed in the awareness and use of e-health databases among the respondents. Widely known platforms such as PubMed, Familydoctor, Mayo Clinic, and MedlinePlus recorded the highest levels of recognition and usage, indicating a preference for accessible and well-established resources. Conversely, advanced and specialized databases—including UpToDate, HINARI, Ovid, and Thieme showed minimal usage, reflecting limited exposure to academically intensive resources. Notably, many respondents reported being aware of certain databases without using them, while others expressed interest despite a lack of prior awareness. This pattern suggests considerable untapped potential and emphasizes the need for improved access, training, and awareness initiatives to enhance effective utilization of e-health databases.

- The analysis also demonstrates clear preferences in the use of social media platforms for health information seeking. YouTube and Facebook emerged as the most favored platforms, reflecting a strong inclination toward visually engaging and interactive media that facilitate easy comprehension of health-related content. Instagram and WhatsApp were also ranked highly, highlighting the growing role of image-based platforms and instant messaging services in informal health communication. In contrast, platforms such as Quora, Twitter, Tumblr, and Telegram were consistently ranked among the least preferred sources. This limited preference suggests that text-dominant or discussion-oriented platforms are less appealing for health information purposes among the respondents. Overall, the findings emphasize a shift toward user-friendly, visually oriented digital platforms in health information seeking behavior.

- The findings reveal noticeable differences in the levels of awareness and utilization of health-related websites among female university staff in Punjab and Chandigarh across both national and international platforms. Greater engagement is observed with officially endorsed and prominently promoted government websites, such as the Ministry of Health and Family Welfare and the National Health Portal of India, although the proportion of respondents actively using these portals remains limited. At the same time, a sizeable segment of respondents reported being unaware of these sites but expressed an interest in using them, suggesting confidence in government-backed information sources despite low current usage.

- Internationally recognized platforms, including MedlinePlus, the World Health Organization (WHO), and the U.S. Department of Health and Human Services, also exhibit moderate levels of awareness and use, reflecting respondents' inclination toward globally credible and authoritative health information providers. Nevertheless, a

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substantial proportion of participants indicated that they were neither aware of nor using many of these websites, pointing to existing gaps in exposure and familiarity.

- In contrast, websites focusing on specific health conditions or population groups—such as HIV InSite, HealthyWomen, and KidsHealth recorded comparatively lower levels of active engagement, with a large share of respondents reporting no awareness or usage of these platforms. Overall, the results suggest that while broadly oriented and authoritative health websites enjoy relatively higher recognition, the reach and utilization of specialized and educational health portals remain limited. This underscores the need for targeted awareness efforts and user-focused dissemination strategies to promote more effective use of diverse health information websites.

8. SUGGESTIONS:

- Universities should formulate a systematic digital health literacy framework to ensure that female staff members receive regular training in evaluating the credibility of health information, effectively navigating digital platforms, and appropriately using government-endorsed e-health services.
- Health awareness programmes, including seminars and practical workshops, should be formally incorporated into the academic schedule to provide continuous and structured exposure to reliable health information sources.
- University libraries should strengthen their digital health collections and offer multilingual access to accommodate diverse language needs. In addition, university health centres should integrate digital health guidance services to assist staff in understanding and using online health platforms, thereby addressing challenges related to awareness, accessibility, and trust.
- Institutions should encourage the development of mentorship or peer-support mechanisms, wherein staff members with higher levels of technological proficiency assist colleagues who may experience difficulties in accessing or using digital health resources.
- Universities should establish dedicated health communication units responsible for the regular dissemination of evidence-based health information through official channels such as newsletters, institutional emails, and digital platforms.

CONCLUSION:

The findings, taken together, emphasize the increasing importance of health information within academic settings, particularly for women who must manage professional commitments alongside personal and family health responsibilities. These circumstances have a substantial influence on patterns of information use across print materials, scholarly publications, digital platforms, and other information sources, demonstrating that health information–seeking behaviour is shaped by individual needs and situational contexts rather than occurring in a uniform or arbitrary manner. Overall, the study affirms that health information constitutes an integral component of daily life for female university staff, affecting their well-being, work-related involvement, and personal health decision-making. The results further underscore the need to strengthen information infrastructure, improve digital health literacy, and ensure the availability of accessible, multilingual, and reliable health information resources within academic institutions

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