International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Health Information Seeking Behaviour in University Students Sri Lanka

Manjula Gunarathna

Senior Lecturer, Department of Social Statistics, University of Kelaniya

Abstract

Health Information Seeking Behaviour (HISB) refers to the action individuals take to fulfil their health-related information needs. In today's information-rich world, understanding HISB has become crucial for developing effective strategies in information-seeking and health management. For university students, efficient HISB can alleviate health-related anxiety, enhance risk management, promote self-care, and empower informed decision-making, all of which can positively impact academic performance. The findings unveiled intriguing patterns in information source preferences, with 46.2% of students turning to the Internet as their primary source, 41% relying on interpersonal networks, and 13% consulting healthcare professionals. Notably, no students reported using mass media platforms for health information. Gender, year of study, degree program, physical activity, health literacy, self-efficacy, and perceived severity of health problems exhibited significant associations with the choice of information sources. For instance, male students preferred the Internet, while female students leaned towards consulting healthcare professionals and interpersonal networks. Second-year students primarily used the internet, while final-year students sought advice from family and friends. Those who work-activity turned to healthcare professionals, whereas sports-activity favoured the internet. Furthermore, students with low work activity showed reduced odds of using the internet. Interestingly, sports activity had a significant impact only among internet information seekers. Students with moderate health literacy were more inclined to consult family and friends. This comprehensive study provides valuable insights into the factors affecting HISB among university students, offering a nuanced understanding of their information-seeking behaviour. These findings have implications for health education and interventions promoting informed and responsible health-related decision-making among young adults.

Keywords: Health Information Seeking Behaviour, University Students, Information-Seeking Strategies, Health Management

Introduction

Information-seeking behaviour (HISB) refers to the activities an individual undertakes to satisfy their personal information needs. This encompasses a spectrum of factors, including the underlying motivation propelling individuals in their pursuit of information, the methodologies employed during their exploration, the encountered challenges, and the diverse elements influencing this conduct (Broussard & Doty, 2016; Dahlen & Hanson, 2023). At the core of the Information-seeking behaviour concept lies the notion of ‘what information needs’: a question or inquiry germinating in one’s mind, compelling them to seek elucidation. It is imperative to recognize the evolving terrain of information in the contemporary era, marked by advancements in information and communication technologies. This evolution necessitates a

profound understanding of information needs and HISB to formulate effective strategies for information retrieval and management. Today, medical information has become progressively accessible, empowering individuals to adopt a more proactive stance in organizing their health. Such health-related information wields considerable influence over decisions and behaviour related to health (Cutrona et al., 2015). Courtenay-Quirk et al. (2010) observed that individuals grappling with specific medical conditions, along with caregivers and concerned parties, frequently turn to non-medical sources for health-related information.

The demand for health information has seen a global surge, with this information frequently exerting a transformative influence on individual behaviour and health-related choices (Dastani et al., 2019). Health information encompasses a broad spectrum of knowledge, spanning details on various illnesses, preventive measures, and initial treatment approaches, all of which are top priorities for many individuals (Bigdeli et al., 2010). Lambert and Loiselle (2007) posit that the quest for health information represents a widely accepted avenue through which individuals acquire insights into health, disease, health promotion, and health-related risks. Consequently, Health Information Seeking is increasingly acknowledged as a pivotal endeavour in the current information-driven era. It stands as a critical catalyst for effecting changes in health behaviour (Lustria et al., 2011), and plays a key role in health promotion initiatives and disease-related psychological adjustments (Lambert & Loiselle, 2007).

Understanding the HISB of individuals is of paramount importance, particularly in today's information-abundant environment. Lambert and Loiselle (2007) emphasize the significance of HISB among university students, noting that access to pertinent health information can mitigate anxiety when addressing health issues and related stress, enhance their ability to address risk factors, expedite recovery, empower self-care, and foster active engagement in health-related decision-making processes. This, in turn, has the potential to boost academic performance.

Health Information Sources

According to Okhovati et al. (2016) and Tennant et al. (2015), the World Wide Web and the Internet are the main resources for acquiring health information. The prevalence of health-related problems in society, the abundance of online information resources, the introduction of web-based health programs, and the rising use and accessibility of technology are some of the elements responsible for this phenomenon. Notably, individuals who seek health information online often gravitate towards popular search engines like Google and Yahoo due to their user-friendly interfaces and access to real-time information (Zarea et al., 2013). For immigrants in Iran, Riahi et al. (2016) have underlined the importance of consulting with family, friends, and relatives as a key channel for obtaining health information. In contrast, Baker (2011) demonstrated the role of mass media, including newspapers, magazines, television, and radio, in disseminating health information. Furthermore, Zarea et al. (2013) found that television and interpersonal consultations are the primary sources used by individuals to seek health information. Dart et al. (2008) explored how the socio-economic strata affect the choice of health-related information sources, revealing disparities in preferences. Individuals from lower socioeconomic backgrounds exhibit a higher tendency to engage in television consumption, whereas those with a higher level of education are more inclined to seek health and prevention information on the Internet.

In today's age of digital technology, the younger generation is exposed to a wide range of media platforms and electronic devices, including television and mobile technologies. It is of utmost importance to comprehend the way they cultivate their abilities to retrieve information and their cognitive tendencies, as these elements play a substantial role in shaping their behaviour related to seeking information. According to Harris et al. (2006), doctors and the Internet are the primary sources of health information that individuals commonly consult. Respondents commonly utilize the acquired data to make informed choices regarding various treatment options, engage in decision-making processes pertaining to their personal healthcare, or seek guidance from healthcare professionals. Surprisingly, a mere 7% of participants who had sought health-related information during the past year reported utilizing a library as a resource. The library resources mostly consisted of books, with 92% of respondents indicating their usage. Magazines and periodicals were also commonly utilized, with 75% of respondents reporting their utilization. The Internet, although less frequently accessed, nonetheless constituted a notable portion of the library resources, with 17% of respondents relying on it.

Factors Affecting Health Information Seeking Behaviour

The studies conducted by Davarpanah and Dayani (2006) and Kalankesh et al. (2019), have provided clear evidence that information-seeking behaviour is the result of complex interactions. A combination of internal and external influences such as age, gender, IQ, individual traits, personality, sentiment, and motivation influences information-seeking behaviour. In addition, elements such as experience, knowledge, information literacy, computer proficiency, information demands, and expectations are also encompassed. Moreover, user interface, search functionalities, indexing and abstracting methods, information presentation strategies, information display mechanisms, availability of guides, social groups, cultural and economic variables, regulations pertaining to information dissemination, occupational characteristics, and demographic considerations, all of which contribute to the overall dynamics and Information-related elements such as the type of document, file format, file size, structure of information, and the availability of information sources.

Kassulke et al. (2010) have emphasized the significance of age and gender in determining the sources from which individuals seek health information. there is a greater propensity among women compared to males to pursue health information actively, and this inclination is evident in their selection of venues for obtaining such information. While there was no noteworthy distinction in perceived health between genders, males indicated a greater prevalence of behavioural risk factors. Escoffery et al. (2005) observed a heightened inclination among female students to pursue health information in comparison to male students. This gender difference may be attributed to the content related to staying healthy, often featured in health magazines. Nevertheless, Mokhtar et al. (2009) presented an alternate viewpoint, suggesting that concern about health is more prevalent among young men than young women. Additionally, age and level of education are considered significant determinants of HISB (Oh et al., 2012). Pálsdóttir (2008) revealed that college graduates and people in the 18- to 29-year-old demographic are the most active users of health information. In contrast to their older and less educated counterparts, young individuals and those with higher levels of education exhibit a greater propensity to pursue health-related information actively.

Kim (2015) found a positive correlation between greater levels of education and the utilization of online HISB. According to Wang et al. (2013), engagement in physical activity has a notable impact on HISB,

indicating that persons who do not engage in regular physical activity are less inclined to seek out health information. Moreover, those possessing sufficient literacy skills demonstrate a higher propensity to actively pursue health-related knowledge compared to individuals with insufficient reading skills (Gutierrez et al., 2014). Psychological factors, including self-efficacy, perceived vulnerability, and perceived severity of health concerns, additionally impact the HISB (Tang et al., 2022). Individuals with a heightened sense of health self-efficacy exhibit a greater inclination to acquire knowledge on health matters and transition from a passive to an active approach to seeking information (Chen & Feeley, 2013). Individuals with high levels of self-efficacy are more inclined to proactively pursue health-related information, as this psychological state reduces their levels of health-related concerns and suffering. In contrast, diminished levels of self-efficacy about health and the presence of adverse emotional states have the potential to exert a detrimental impact on HISB, as indicated by Lee et al. (2008) and Tang et al. (2022). According to Ahadzadeh et al. (2015), the perception of susceptibility and severity of health issues significantly affects HISB. Specifically, the perception of health risks is positively associated with the utilization of the Internet for accessing health-related information (Abdoh, 2022).

Study Methodology

This research was conducted among university students in Sri Lanka. The study employed a multi-stage cluster sampling method to select the sample from the population, and the sample size of 1580 was determined using the Yamane method. As illustrated in the study's conceptual framework (Figure 1), the dependent variable under investigation is the types of sources university students use to seek health-related information, as determined by a review of the relevant literature. The study also encompasses other dependent variables, as depicted in Figure 1.

The study evaluated the levels of physical activity among university students by employing a questionnaire designed by Baecke et al. (1982). The questionnaire classifies an individual's physical activity into three discrete categories, namely: (i) work activity, (ii) sports activity, and (iii) leisure activity. The measurement of an individual's health literacy was conducted using a questionnaire produced by the Iranian Institute for Health Sciences Research in 2017. The questionnaire aims to evaluate health literacy in five distinct domains, namely reading, access, understanding, assessment, and decision-making. Furthermore, Gandoy-Crego et al. (2016) employed a set of 10 questions to assess self-efficacy in dealing with health-related matters. The participants were asked to rate their responses on a four-point Likert scale. The assessment of the perceived severity of health issues was conducted by the utilization of a solitary-item inquiry, which inquired about the potential impact of a health problem on an individual's existence (National Cancer Institute, 2014).

Descriptive analysis techniques, Chi-square test statistics, and Multinomial Regression analysis were employed to discern the HISB patterns among university students.

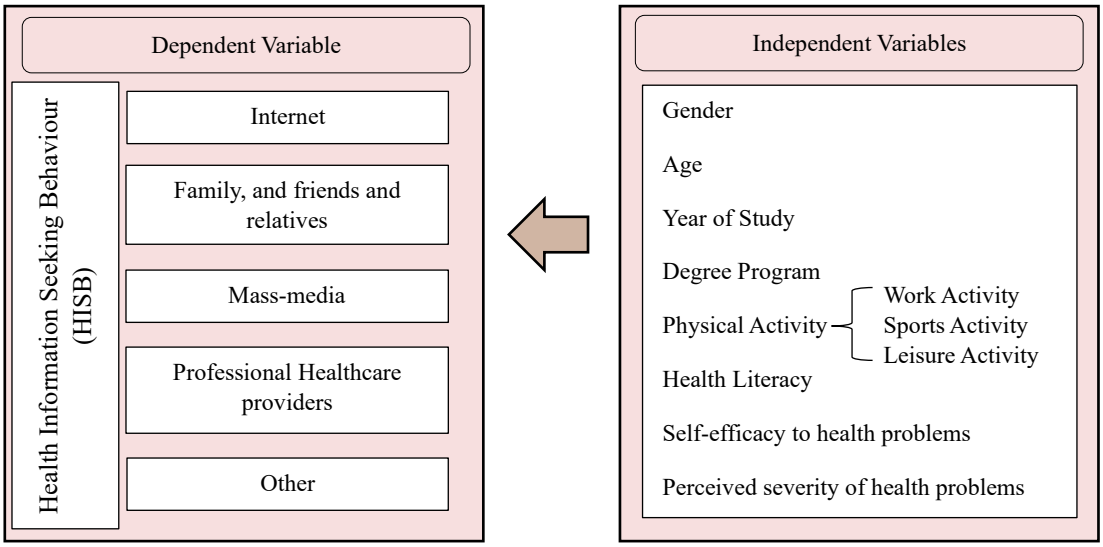

Figure 1: Conceptual Framework of the Study

Data Analysis and Discussion

The findings presented in Table 1 reveal significant patterns in the preferences of university students when seeking health information. Notably, the data shows that a predominant proportion, specifically 46.2% of the surveyed students, turn to the Internet as their primary source for obtaining health-related information. In contrast, approximately 41% of students opt for a more interpersonal approach, relying on their family members, friends, and relatives for health advice. A mere 13% of the students seek guidance from healthcare professionals, indicating a relatively lower reliance on expert opinion. More interestingly, there is the absence of students who reported using mass media platforms, such as television or radio, to obtain health information.

Table 1: Type of Health Information Sources

Information Source	Frequency	%
Internet	730	46.2
Family, friends and relatives	642	40.6
Professional Healthcare providers	208	13.2

Relationship between Health Information Sources and Independent Variables

An extensive analysis using a 2-way frequency table was undertaken to examine the relationship between independent variables, including gender, year of study, degree program, physical activity, health literacy, self-efficacy regarding health problems and perceived severity of health problems, and the choice of information sources. The outcomes of the Chi-square analysis and the distribution of information sources across different categories of these independent variables are presented in Table 2.

Table 2: Relationship between Health Information Sources and Independent Variables

Variable	Category	Information Sources			Test Statistics & p-value
		Internet	Family, friends & relatives	Professional Healthcare providers	

Gender	Male	51.4%	39.5%	9.1%	$\chi_2^2 = 21.530$ $p =< .001$
	Female	42.4%	41.5%	16.1%	
Year of Study	First Year	42.8%	47.1%	10.1%	$\chi_6^2 = 150.416$ $p =< .001$
	Second year	49.4%	33.5%	17.1%	
	Third Year	48.7%	26.7%	24.6%	
	Fourth Year	44.5%	55.3%	0.3%	
Work Activity	Low	48.8%	51.2%	0.0%	$\chi_4^2 = 223.737$ $p =< .001$
	Moderate	48.1%	38.9%	13.0%	
	High	0.0%	32.8%	67.2%	
Sports Activity	Low	44.6%	46.8%	8.6%	$\chi_4^2 = 157.026$ $p =< .001$
	Moderate	57.9%	13.7%	28.4%	
	High	44.0%	23.1%	32.8%	
Leisure Activity	Low	71.4%	28.6%	0.0%	$\chi_4^2 = 276.024$ $p =< .001$
	Moderate	58.5%	26.9%	14.6%	
	High	22.1%	61.6%	16.3%	
Health Literacy	Moderate	26.4%	73.6%	0.0%	$\chi_2^2 = 297.783$ $p =< .001$
	High	53.9%	27.8%	18.3%	
Self-efficacy to health problems	Moderate	41.4%	44.1%	14.6%	$\chi_2^2 = 132.863$ $p =< .001$
	High	89.3%	10.1%	0.6%	
Perceived severity of health problems	Very Concerned	36.3%	48.6%	15.1%	$\chi_4^2 = 122.943$ $p =< .001$
	Concerned	64.2%	25.9%	9.9%	
	No concerns at all	0.0%	100%	0.0%	

According to the findings presented in Table 2, all the independent variables, with the exception of the type of degree, exhibit statistically significant associations with the choice of information sources. Notably, the internet emerges as the most favoured source of health information among male students, whereas female students tend to lean more toward seeking advice from family, friends, and relatives. Interestingly, female students also exhibit a stronger inclination towards consulting professional healthcare sources. In terms of the year of study, second-year students predominantly utilize the internet for health information, while final-year students are more inclined to seek information from family, friends, and relatives. Third-year students, on the other hand, show a higher propensity to consult health care professionals. Additionally, university students engaged in higher work-related activities show a pronounced preference for seeking health information from healthcare professionals. Those involved in more intensive sports activities are more likely to turn to the internet for health information, while students engaged in leisure activities prefer consulting their family, friends, and relatives.

Furthermore, it is noteworthy that no students fall into low health literacy and low self-efficacy for health problems. Those with higher levels of health literacy and self-efficacy are more inclined to seek health-related information via the Internet. Furthermore, it is noteworthy that the highest percentage of students who either exhibit a high degree of concern and no concern at all regarding the perceived severity of health

problems tend to gravitate towards seeking information from family, friends, and relatives. Adding an intriguing dimension to this trend, students categorized as "concerned" in terms of the perceived severity of health problems display a stronger inclination towards acquiring health information via the Internet.

Multinomial Regression Analysis to Examine the Health Information Seeking Behaviour of University Students

According to the findings of the multinomial regression analysis, the Chi-square test statistics exhibit a model fitness value of 1955.323, with a corresponding p-value of less than 0.05. The observation above highlights a statistically significant relationship between the dependent variable and the independent variables in the fitted model. Moreover, the Pearson and Deviance statistics indicate that the model fits the data well. Additionally, the Cox & Snell R^2 (0.404) and Nagelkerke R^2 (0.509) statistics provide insights into the extent of variation explained by the model in the dependent variables. These statistics indicate that the model accounts for a substantial proportion of the variance in the dependent variables, with the explained variation ranging from 40% to 51%. Both figures represent the percentage of the dependent variable's variance that the model can elucidate.

Simultaneous Test

The simultaneous test is a statistical significance assessment aimed at determining which variables exert concurrent influence on the construction of multinomial logistic regression models. This simultaneous test employs the likelihood ratio test, which is presented in Table 3.

Table 3: Simultaneous Test

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	649.778[a]	.000	0	.
Age	762.605	.015	2	.992
Gender	679.522[b]	29.744	2	<.000
Year of Study	999.896[b]	350.119	6	<.000
Work Activity	839.419[b]	189.642	4	<.000
Sports Activity	790.183[b]	140.405	4	<.000
Leisure Activity	936.303[b]	286.525	4	<.000
Health Literacy	975.658[b]	325.880	2	<.000
Self-efficacy to health problems	651.211[b]	1.433	2	.488
Perceived severity of health problems	825.646[b]	175.868	4	<.000

The findings presented in Table 3 reveal that the statistically significant independent variables that contribute to the formulation of the multiple logistic regression models encompass gender, year of study, work activity, sports activity, leisure activity, health literacy, and perceived severity of health problems.

Partial Test

The partial test employs the Wald Test to assess the significance of each model parameter. This evaluation is conducted to ascertain the suitability of each independent variable for constructing a model aimed at predicting the HISB of university students. The partial test results are provided in Table 4. Factors such as age, year of study, leisure activity, self-efficacy to health problems, and the perceived severity of health problems fail to exhibit any statistically significant associations with the HISB of university students. Furthermore, when considering students engaged in sports activities, it is apparent that they do not manifest any substantial influence on individuals seeking health information from family, friends, and relatives, in comparison to students who seek information from healthcare professionals.

Table 4: Partial Test Results

Information Sources	Variables	B	Wald	Sig.	Exp(B)
Internet	Intercept	-3.168	24.402	.000	
	[Gender = Male]	.226	15.036	.000	1.254
	[Gender = Female]	0[b]	.	.	.
	[Work Activity = Low]	-2.384	169.457	.000	.092
	[Work Activity = Moderate]	-.808	7.763	.005	.446
	[Work Activity = High]	0[b]	.	.	.
	[Sports Activity = Low]	.000	4.352	.037	1.000
	[Sports Activity = Moderate]	1.026	11.183	.001	2.791
	[Sports Activity = High]	0[b]	.	.	.
	[Health Literacy = Moderate]	-.106	6.175	.013	.899
	[Health Literacy = High]	0[b]	.	.	.
Family, friends and relatives	Intercept	-.2.631	7.323	.007	
	[Gender = Male]	-1.220	3.282	.040	.295
	[Gender = Female]	0[b]	.	.	.
	[Work Activity = Low]	-1.568	22.835	.000	.208
	[Work Activity = Moderate]	-.312	11.616	.001	. 732
	[Work Activity = High]	0[b]	.	.	.
	[Health Literacy = Moderate]	.359	4.611	.032	1.432
	[Health Literacy = High]	0[b]	.	.	.

The reference category is Professional Health Care Providers.

Based on the data presented in Table 4, several observations can be made regarding the odds of seeking health information among different groups. Males are 1.254 times more likely than females to seek health information via the Internet rather than from professional healthcare providers. When comparing males to females, the odds of male students seeking health information through the internet rather than from family, friends, and relatives are 4.25 times higher.

Students with low work activity have 0.092 times the odds of seeking health information from the internet in comparison to students seeking information from professional healthcare providers. Furthermore, students with low work activity exhibit a 79% reduced likelihood of seeking health information through

the Internet compared to moderately active students, who typically opt for professional sources. Among moderate work-active students, the odds of seeking information from family, friends, and relatives rather than the Internet are 1.64 times higher than high work-active students.

Only among internet information seekers there is a significant influence of sports activity. Compared to students seeking information from healthcare providers, moderate sports-active and low sports-active students have odds of 2.79 and 1.00 times higher than high sports-active students, respectively.

Among individuals with moderate health literacy, the odds of seeking health information from family, friends, and relatives are 1.42 times higher than those with high health literacy, as opposed to seeking information from healthcare professionals.

Table 5: Classification Accuracy Test

	Predicted			
Observed	Internet	Family, friends and relatives	Professional Healthcare providers	Percent Correct
Internet	722	5	8	98.2%
Family, friends and relatives	138	494	10	76.9%
Professional Healthcare providers	12	5	209	92.5%
Overall Percentage	55.2%	31.9%	14.4%	90.2%

Additionally, based on Table 5, a multinomial logistic regression analysis yielded a score of 90.2% for the accuracy of the classification of university students' HISB. The percentage for predicting internet categories correctly was 98.2%, family, friends and relative categories correctly at 76.9%, and professional Health care providers categories correctly at 92.5%.

The findings of this provide insight into the HISB of university students and reveal several significant patterns and associations. These results provide valuable insights into how students access and utilize health information, which can be crucial for designing effective health education and communication strategies on college campuses.

The distinct preferences of university students when it comes to seeking health information. The most notable finding is that nearly half of the surveyed students turn to the Internet as their primary source of health information. This suggests the growing importance of digital platforms in providing health guidance, a trend that aligns with the increasing availability of online health resources. On the contrary, about 41% of students opt for a more traditional and interpersonal approach, seeking advice from their family members, friends, and relatives. This emphasizes the enduring significance of social networks in health information dissemination. Surprisingly, only 13% of students seek guidance from healthcare professionals, indicating a relatively lower reliance on expert opinions. This could be due to various factors, such as convenience, trust in online sources, or barriers to accessing healthcare providers. Another intriguing finding is the absence of students who reported using mass media platforms like television or

radio for health information. This highlights a distinct preference among the surveyed students for more personalized and digital channels when seeking healthcare guidance.

Based on extensive analysis, which is conducted to explore the relationship between independent variables, including gender, year of study, degree program, physical activity, health literacy, self-efficacy in dealing with health problems, the perceived severity of health problems, and the choice of health information sources. All independent variables, with the exception of the type of degree, exhibit statistically significant associations with the choice of information sources. These associations provide a nuanced understanding of how different factors influence HISB:

Male students tend to favour the Internet, while female students are more inclined to seek advice from family, friends, and relatives. Female students also exhibit a stronger inclination towards consulting professional healthcare sources. The choice of information source varies with the year of study. Second-year students predominantly utilize the internet, final-year students are more inclined to seek information from family, friends, and relatives, and third-year students show a higher propensity to consult healthcare professionals. University students engaged in higher levels of work-related activities show a pronounced preference for seeking health information from healthcare professionals. In contrast, those involved in more intensive sports activities are more likely to turn to health information via the Internet, while students engaged in leisure activities prefer consulting their family, friends, and relatives. It's noteworthy that no students fall into the categories of low health literacy and low self-efficacy for health problems. Those with higher levels of health literacy and self-efficacy are more inclined to seek health information via the Internet. Students with different levels of concern regarding the perceived severity of health problems display varying preferences. The highest percentage of students who either exhibit a high degree of concern or no concern at all tend to seek information from family, friends, and relatives. Intriguingly, students categorized as “concerned” in terms of the perceived severity of health problems display a stronger inclination towards acquiring health information via the Internet.

Factors such as age, year of study, leisure activity, self-efficacy regarding health problems, and the perceived severity of health problems do not exhibit statistically significant associations with the HISB of university students.

Furthermore, students engaged in sports activities do not substantially influence individuals seeking health information from family, friends, and relatives compared to those seeking information from healthcare professionals. However, it is important to note that among internet information seekers, there is a significant influence on sports activity. The odds calculated in the analysis reveal additional insights into the differences between various groups, such as males and females, and students with different levels of work and sports activity.

Conclusion and Suggestions

Findings highlight university students' health information preferences, with 46.2% favouring the Internet, 41% choosing family and friends, and only 13% consulting healthcare professionals. Mass media is rarely used, showing a strong preference for personalized digital sources. The gender and year-of-study-based disparities: males lean towards the internet, while females prefer family and professionals. Work activity

impacts internet use, and sports activity increases its likelihood. Multinominal regression analysis found that age, year of study, leisure, self-efficacy, and health problem severity are unrelated to information seeking. Sports activity minimally influences source choice. Males favour the internet, low work activity hinders it, and moderate sports activity boosts internet use. Moderate health literacy leads to family and friends as information sources.

This study provides a comprehensive understanding of how university students seek health information and the factors that influence their choices. The dominance of the internet as a source of health information underscores the importance of digital health literacy and the need for accessible and reliable online health resources. The influence of gender, year of study, physical activity, and other independent variables on HISB suggests that tailored health communication strategies are essential for effectively reaching and educating different student groups. These findings can be valuable for universities, healthcare providers, and health educators when designing interventions and educational programs to capture the specific needs and preferences of university students in seeking health information. Additionally, the study highlights the evolving landscape of health information access and the need for ongoing research to stay attuned to changing trends in health communication.

References

1. Abdoh, E. (2022). Online health information seeking and digital health literacy among information and learning resources undergraduate students. The Journal of Academic Librarianship, 48(6), 102603. https://doi.org/10.1016/j.acalib.2022.102603
2. Ahadzadeh, A. S., Sharif, S. P., Ong, F. S., & Khong, K. W. (2015). Integrating Health Belief Model and Technology Acceptance Model: An Investigation of Health-Related Internet Use. Journal of Medical Internet Research, 17(2), e45. https://doi.org/10.2196/jmir. 3564
3. Baecke, J. A., Burema, J., & Frijters, J. E. (1982). A short questionnaire for the measurement of habitual physical activity in epidemiological studies. The American Journal of Clinical Nutrition, 36(5), 936–942. https://doi.org/10.1093/ajcn/36.5.936
4. Bakeri, A. (2011). Information Seeking Behaviours of Rural Women in Malaysia. Library Philosophy and Practice, 1, 123.
5. Bigdeli, Z., Azimi, M. H., & Zare, F. (2010). Study of affecting Factors the search for health information on the web by women working in the Khuzestan Water and Power Authority. Libr Inform SciQ, 15(1), 165–184. Retrieved 18th August 2023, from https://digitalcommons. unl.edu/cgi/viewcontent.cgi?article=9047&context=libphilprc
6. Broussard, R., & Doty, P. (2016). Toward an understanding of fiction and information behavior. In Proceedings of the 79th ASIS&T Annual Meeting: Creating Knowledge, Enhancing Lives through Information & Technology. American Society for Information Science. Retrieved 10th August 2023, from https://asistdl.onlinelibrary.wiley.com/doi/full/10.1002/pra2.2016.14505 301066
7. Chen, Y., & Feeley, T. H. (2013). Numeracy, Information Seeking, and Self-Efficacy in Managing Health: An Analysis Using the 2007 Health Information National Trends Survey (HINTS). Health Communication, 29(9), 843–853. https://doi.org/10.1080/10410236.2013 .807904
8. Courtenay-Quirk, C., Horvath, K. J., Ding, H., Fisher, H., McFarlane, M., Kachur, R., O'Leary, A., Rosser, B. R. S., & Harwood, E. (2010). Perceptions of HIV-Related Websites Among Persons

Recently Diagnosed with HIV. AIDS Patient Care and STDs, 24(2), 105–115. https://doi.org/10.1089/apc.2009.0228

9. Cutrona, S. L., Mazor, K. M., Vieux, S. N., Luger, T. M., Volkman, J. E., & Finney Rutten, L. J. (2015). Health information seeking on behalf of others: Characteristics of "surrogate seekers." Journal of Cancer Education: The Official Journal of the American Association for Cancer Education, 30(1), 12–19. https://doi.org/10.1007/s13187-014-0701-3
10. Dahlen, S. P. C., & Hanson, K. (2023). In their words: Student reflections on information-seeking behaviors. The Journal of Academic Librarianship, 49(4), 102713. https://doi.org/10.1016/j.acalib.2023.102713
11. Dart, J., Gallois, C., & Yellowlees, P. (2008). Community health information sources - a survey in three disparate communities. Australian Health Review, 32(1), 186. https://doi.org/10.1071/ah080186
12. Dastani, M., Mokhtarzadeh, M., Nasirzadeh, A.R., & Delshad, A. (2019). Health information seeking behavior among students of Gonabad University of Medical Sciences (e-journal). 2956. https://digitalcommons.unl.edu/libphilprac/2956
13. Davarpanah, M., & Dayani, M. (2006), Scientific information seeking in printed and electronic resources. Tehran: Dabizesh. Chapar Publication, 72-5.
14. Escoffery, C., Miner, K. R., Adame, D. D., Butler, S., McCormick, L., & Mendell, E. (2005). Internet Use for Health Information Among College Students. Journal of American College Health, 53(4), 183–188. https://doi.org/10.3200/jach.53.4.183-188
15. Gutierrez, N., Kindratt, T. B., Pagels, P., Foster, B., & Gimpel, N. E. (2013). Health Literacy, Health Information Seeking Behaviors and Internet Use Among Patients Attending a Private and Public Clinic in the Same Geographic Area. Journal of Community Health, 39(1), 83–89. https://doi.org/10.1007/s10900-013-9742-5
16. Harris, R., Wathen, N.C., & Fear, J. (2006). Searching for health information in rural Canada. Where do residents look for health information and what do they do when they find it. Information Research, 12(1), 3.
17. Iranian Institute for Health Sciences Research (2017), Health Metrics Research Center, ACECR, Tehran, Iran, https://healthliteracy.bu.edu/helia
18. Kalankesh, L. R., Mohammadian, E., Ghalandari, M., Delpasand, A., & Aghayari, H. (2019). Health Information Seeking Behavior (HISB) among the University Students. Frontiers in Health Informatics, 8(1), 13. https://doi.org/10.30699/fhi.v8i1.189
19. Kassulke, D., Stenner-Day, K., Coory, M., & Ring, I. (2010). Information-seeking behaviour and sources of health information: associations with risk factor status in an analysis of three Queensland electorates. Australian Journal of Public Health, 17(1), 51–57. https://doi.org/10.1111/j.1753-6405.1993.tb00104.x
20. Kim, S. (2015). An exploratory study of inactive health information seekers. International Journal of Medical Informatics, 84(2), 119–133. https://doi.org/10.1016/j.ijmedinf .2014.10.003
21. Lambert, S. D., & Loiselle, C. G. (2007). Health Information—Seeking Behavior. Qualitative Health Research, 17(8), 1006–1019. https://doi.org/10.1177/1049732307305199
22. Lee, S.Y., Hwang, H., Hawkins, R., & Pingree, S. (2008). Interplay of Negative Emotion and Health Self-Efficacy on the Use of Health Information and Its Outcomes. Communication Research, 35(3), 358–381. https://doi.org/10.1177/00936502083159 62

23. Lustria, M.L.A., Smith, S.A., & Hinnant, C.C. (2011). Exploring digital divides: An examination of e-Health technology uses in health information seeking, communication and personal health information management in the USA. Health Informatics Journal, 17 (3), 224-243. doi: 10.1177/1460458211414843.
24. Mokhtar, I. A., Goh, J.-E., Li, K. J., & Tham, C. X. L. (2009). Medical and Health Information Seeking among Singapore Youths: An Exploratory Study, Singapore Journal of Library and Information Management, 38, 49-76
25. National Cancer Institute. (2014). Health Information National Trends Survey. Survey Instruments Retrieved 10th August 2023 from http://hints.cancer.gov/instrument.aspx
26. Oh, K. M., Kreps, G. L., Jun, J., Chong, E., & Ramsey, L. (2012). Examining the Health Information–Seeking Behaviors of Korean Americans. Journal of Health Communication, 17(7), 779–801. https://doi.org/10.1080/10810730.2011.650830
27. Okhovati, M., Sharifpoor, E., Zadeh, M.H., Shahsavari, M., & Soltan shahi, M. (2016). The Role of Public Libraries on Kerman Health Information Seeking Behavior. Journal of Health and Biomedical Informatics, 3(1), 48–56.
28. Pálsdóttir, A. (2008). Information behaviour, health self-efficacy beliefs and health behaviour in Icelanders' everyday life. Information Research, 13(1), 4.
29. Riahi, A., Hariri, N., & Nooshinfard, F. (2016). Study of health Information needs and barriers to access among afghan and iraqi immigrants in Iran. Journal of North Khorasan University of Medical Sciences, 7(3), 597–610. https://doi.org/10.29252/jnkums .7.3.597
30. Tang, Y., Tseng, H., & Tang, X. (2022). The impact of information-seeking self-efficacy and online learning self-efficacy on students' performance proficiency. The Journal of Academic Librarianship, 48(5), 102584. https://doi.org/10.1016/j.acalib.2022.102584
31. Tennant, B., Stellefson, M., Dodd, V., Chaney, B., Chaney, D., Paige, S., & Alber, J. (2015). eHealth Literacy and Web 2.0 Health Information Seeking Behaviors Among Baby Boomers and Older Adults. Journal of Medical Internet Research, 17(3), e70. https://doi.org/10.2196/jmir.3992
32. Wang, M. P., Viswanath, K., Lam, T. H., Wang, X., & Chan, S. S. (2013). Social Determinants of Health Information Seeking among Chinese Adults in Hong Kong. PLoS ONE, 8(8), e73049. https://doi.org/10.1371/journal.pone.0073049
33. Zarea, G.V., Qeisari, E., & Asghari Jafarabadi, M. (2013). Health Information Seeking Behavior (HISB): A Study of a Developing Country. Library Philosophy and Practice.