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Exploring psychological variables in users' health information-seeking behavior: A systematic review

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Abstract:

One of the important factors that play a fundamental role in people's information behavior is psychological factors. The aim of the current research is to identify the psychological factors that impact users' health information-seeking behavior through a systematic review. Innovation in this work emphasizes the use of a systematic approach to identify psychological factors that influence individuals' information behavior. By employing a systematic method, this research can have high scientific value and provides greater confidence in identifying and describing psychological factors related to information behavior. The research method of this study was carried out using a systematic review method. After searching in WoS, PubMed, and Scopus databases, 4162 articles were reviewed, after removing repetition and applying article selection criteria, 31 articles were selected for analysis. In this article, a systematic review of the Prisma flowchart tool has been utilized. The Prisma flowchart is a valuable instrument for ensuring methodological transparency and facilitating the reporting of systematic reviews and meta-analyses. It provides a structured framework for outlining the various stages of the review process, including study identification, screening, eligibility assessment, data extraction, and synthesis. By employing the Prisma flowchart, researchers can enhance the rigor and reproducibility of their systematic reviews, thereby promoting evidence-based decision making in various fields of study. The findings reveal that out of 31 articles, 28 were surveys, and 3 were descriptive studies. Furthermore, one article employed an intervention methodology, targeting community members, pregnant women, or patients as the statistical population. The research findings highlight anxiety, uncertainty, and avoidance of information as the most commonly identified psychological variables influencing Health information-seeking behavior. Psychological factors play an important role in the health information behavior of information users in different societies; however, in the published articles in the field of health information behavior, more attention has been paid to information carriers and less attention has been paid to the psychological characteristics of people, which originate from the human psyche and mind. The importance of dealing with non-communicable diseases has been emphasized in the "Research and Technology Policies and Priorities" documents. These documents highlight disease management, self-care, and the role of education and information in disease control and reducing the burden of non-communicable diseases. Therefore, it is essential that planners and policymakers can take important steps by focusing on these factors in order to improve the quality of information acquisition. Also, this work provides the possibility for researchers to study the information in future research with more knowledge by knowing the existing gaps in the field of psychologically effective factors on information behavior

Keywords:

Anxiety, health information-seeking behavior, information avoidance, psychological variables, uncertainly

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Background

Information behavior, and more recently information practices, together are an important area of information science. Significant scholarly work occurs on these topics around the world, which is presented at the major scholarly conferences, including the Annual Meeting of the Association for Information Science and Technology, and the biennial ISIC conference, which focuses on research in these areas.^[1] Peoples always seeks to discover the phenomena around them. Humans perform various activities in life, which cannot be done without knowledge and understanding of the surrounding phenomena. therefore, information is needed to achieve this knowledge.^[2] In today's era, information is one of the most essential needs of organizations, and without it, their survival is impossible. Paying attention to the information needed by an organization requires knowing the information behavior of people under that organization. This behavior that a person shows to achieve the questions is called information behavior.^[3]

In other words, after self-doubt, a person performs activities to satisfy his information needs. This behavior requires gathering, receiving, and transmitting information; however, information-seeking as an aspect of information behavior has been the focus of many researchers and many studies have been conducted on this issue and countless articles on it as well as other aspects such as Information needs and use of published information.

One of the problems of information users is choosing appropriate information sources, which is called information behaviors. Regarding information behaviors, Wilson refers to four types of behaviors, including information behavior, information searching behavior, information-seeking behavior, and information-using behavior, and he has distinguished between them. He defines information-seeking behavior as the purposeful search for information that is done to meet information needs.^[3] Because searching for information is a completely subjective process,^[4] One of the most important effective factors in information behavior is the user and his special characteristics, which influence search strategies and general information behavior. These characteristics include demographic and psychological characteristics.^[5] Ingwersen believes that the information-seeking process is related to cognitive factors, such as thinking, perception, memory, recognition, learning, and problem-solving.^[6] Also, Wilson believes that understanding and recognizing personality traits and interpreting and explaining their differences can be important in information-seeking behavior. On the other hand, information behavior does not simply originate from a type of superficial thinking

in people, and higher stages of thinking play a role in it, to the point where informational behavior is considered a problem-oriented behavior.^[7] Therefore, one of the important factors that play an essential role in people's information behavior is psychological factors.

Considering the importance and advantage of using systematic review to review background studies, this article tried to use this method to identify psychological variables in information behavior. Also, the inclusion criteria for this study included English articles. Therefore, the articles published in the three databases including Web of Science (WoS), PubMed, and Scopus were used, and the main goal of this research is to identify psychological variables in information behavior in the previous studies. Some studies have focused on this field^[8] and discussed the common behavior of online health information-seeking (OHIS) and its association with certain aspects of psychopathology such as health anxiety, intolerance of uncertainty, and depressive symptoms. The study aims to determine the relationships between these psychopathological variables and somatic symptoms on the one hand and OHIS on the other. The study also seeks to determine whether OHIS is predicted by levels of health anxiety and/or intolerance of uncertainty, once other variables are controlled for the 992 participants in the study, 751 (75.7%) reported engaging in OHIS in the preceding 3 months. People who engaged in OHIS had significantly higher levels of all the symptoms assessed in the study compared to those who did not engage in OHIS. Logistic regression analyses were conducted to identify independent predictors of OHIS. Some studies have investigated the relationship between these variables.^[9] A systematic review and meta-analysis examined the relationship between health anxiety, OHIS, and cyberchondria. This study showed a positive relationship between health anxiety and OHIS and cyberchondria. This paper also identified age as a potential moderating variable that may influence the relationship between health anxiety and cyberbullying. However, this study is limited by methodological limitations of earlier studies, such as overreliance on a single measure of cyberchondria, the Cyberchondria Severity Scale.

This review can help to predict the behavior of users in using information. By knowing the related psychological variables, it is possible to understand the general patterns and behaviors of users and use this knowledge to improve services and optimize user experience. By introducing this review, the problem of lack of access to information related to the role of psychological variables in the information behavior of users is solved and we can understand the behavior of users in the face of information more comprehensively and accurately.

Materials and Methods

Study design and setting

This study was designed in response to two questions. The first question is what research approach and data collection tools have the researchers used, and the second question is what psychological variables have been investigated in information behavior?

To identify the keywords related to information behavior according to the research objectives, information search strategies from three databases WoS, PubMed, and Scopus were used. To develop search strategies in the mentioned databases, keywords are based on previous texts such as Wilson (2000), the opinion of subject experts (two faculty members of the Department of Knowledge and Information Science), and a librarian with experience in the reference department of the Ahvaz Jundishapur University of Medical Sciences was used.

Study participants and sampling

This article was written according to the PRISMA guidelines. PRISMA assists researchers in reporting a relevant collection of evidence-based published cases. After gathering, the articles were analyzed in four phases using the PRISMA diagram:

In the first phase, known as identification, all studies related to health information behavior were collected from Scopus, PubMed, and ISI databases following the design of the search strategy. Subsequently, in the second phase, only original research articles in English were utilized for the current research. Other document types such as review articles, reports, book chapters, and conference papers were excluded from this study. If the full text of an article was inaccessible, it was excluded from the analysis process.

The third phase involved analyzing the titles and abstracts of the articles based on the relationship between health information behavior, psychological variables, and eligibility criteria. Finally, through a comprehensive review of the complete text of each article and final approval, the articles deserving inclusion in the systematic review were evaluated in the last phase.

Data collection tool and technique

The keywords in the title, topic, and subject of the search were limited to articles in English and Original articles type. This search was done on April 29, 2023. The search strategy is as follows:

TITLE-ABS-KEY ("information behav*") OR
TITLE-ABS-KEY ("information seek*" OR
TITLE-ABS-KEY) "information seeking behav*" OR
TITLE-ABS-KEY("information browsing") OR

TITLE-ABS-KEY ("information retrieval behav*") OR
TITLE-ABS-KEY ("information retrieval behav*") OR
TITLE-ABS-KEY ("information discover*") OR
TITLE-ABS-KEY ("information Acquisition") OR
TITLE-ABS-KEY("information encounter*") OR
TITLE-ABS-KEY ("information exposure") OR
TITLE-ABS-KEY ("information search*") OR
TITLE-ABS-KEY ("information searching behav*") OR
TITLE-ABS-KEY ("using information") OR
TITLE-ABS-KEY (Information use behav*) OR
TITLE-ABS-KEY("Health information seek*") OR
TITLE-ABS-KEY ("Online health information seek*") OR
TITLE-ABS-KEY ("Online health information-seek*") OR
TITLE-ABS-KEY ("Information seeking activities") OR
TITLE-ABS-KEY ("Human information behav*") AND
TITLE-ABS-KEY (patient).

Ethical consideration

Researchers managed and reported data accurately, transparently, and responsibly. This includes maintaining data integrity, avoiding misrepresentation, or manipulation of findings.

Results

After searching, 4162 articles were retrieved, which were selected after removing duplicate articles and applying article selection criteria in the collection of 31 articles. This process is shown in Figure 1.

As seen in Figure 1, the total number of articles related to information behavior in three databases was 4162. Of

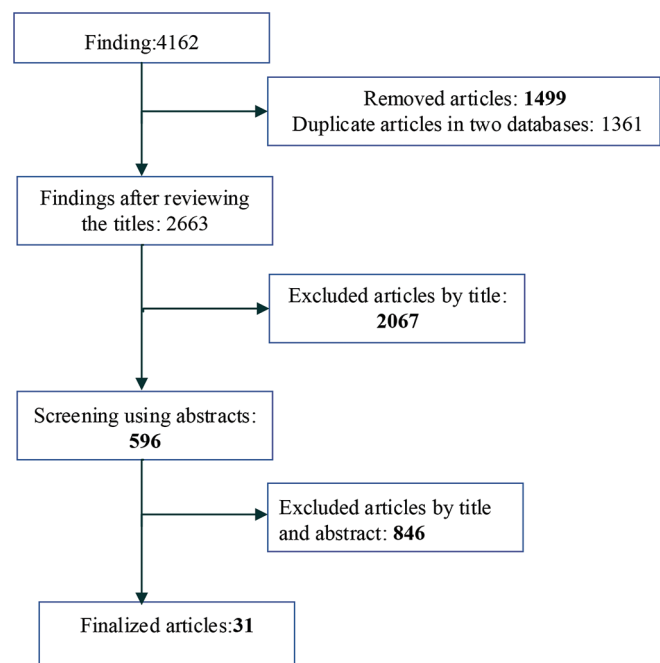


Figure 1: The process of selecting articles related to health information-seeking behavior

these, 1499 articles included 138 conference articles and 1361 repeated articles from all three screening databases. Therefore, 2663 articles were obtained. After reviewing the titles of these 2067 articles, they were not aligned with the purpose of the study and were excluded from the review of this study. In the next step, using the abstract, 846 articles were discarded, and finally, using the main text of the article, 31 articles were considered as the population of this research, and the characteristics of these 31 articles are shown in Table 1.

As can be seen in Table 2, out of a total of 31 articles, the study method of 27 articles is survey type; There were three descriptive articles and one interventional article. Statistical population survey and data collection tools are shown in Table 2. According to Table 2, in terms of the statistical population of the research, patients and their families are members of society. Also, in terms of data collection tools, two methods have been used, one is the questionnaire method (including researcher-made and standard questionnaires, surveys, and checklists) and the second is the use of interviews.

In response to the second question of the research, which psychological variables have been investigated in information behavior, in relation to this question, the findings showed that the three main psychological factors with the variable are effective on informational behavior. these factors and variables are shown in Figure 2. In response to the first research question, what research approach and data collection tool did the researchers use? From a total of 31 articles, the study

method of 27 articles is survey type; there were three descriptive articles and one interventional article. Also, in terms of data collection tools, two methods have been used, one is the questionnaire method (including researcher-made and standard questionnaires, surveys, and checklists) and the second is the use of interviews.

Discussion

The interplay between affective and cognitive factors in information-seeking and use is explored in the models developed by Kuhlthau and Nahl. Kuhlthau's Information Search Process model considers thoughts, feelings, and mood as integral components of the information search process.^[40] Thoughts determine the valence of feelings, while mood influences the range of possibilities in a search. Nahl's Social-Biological Information Technology model views affective and cognitive factors as part of a biologically determined process for adapting to information ecology.^[41] Both models recognize the importance of affective experiences in information behavior, with Kuhlthau specifically addressing the complex interplay between affective and cognitive experiences in the information search process.^[42] These models provide a conceptual understanding of the affective factors involved in information-seeking, but further research is needed to explore the comparative aspects of these models and their implications for information behavior.^[43] In the context of health care, the availability of credible and relevant information plays a pivotal role in influencing patients' enthusiasm and motivation to actively seek and engage in appropriate treatment options.^[44,45] This study examines the role of psychological factors in individuals' health information-seeking behavior. The results indicate that psychological variables play a significant role in shaping the behavior of seeking health-related information. Among these variables, anxiety, uncertainty, and information avoidance are the most notable influencers. The investigations conducted in this field have focused on the role of psychological factors in health-related information-seeking behavior. Anxiety, as one of these factors, plays a crucial role in individuals' health information-seeking behavior. People may feel the need to search for information related to their health conditions due to anxiety and seek information about diseases, symptoms, and treatments to address their concerns.^[14-16] Besides anxiety related to health conditions, uncertainty can also be a driving force behind health information-seeking. Individuals facing health issues and uncertain about the appropriate actions or decisions may actively seek information related to their problem to make informed choices.^[25,32,37] Furthermore, information avoidance can be another factor influencing health information-seeking behavior. Some individuals may avoid seeking health-related information due to fear of receiving bad news or unwelcome information.

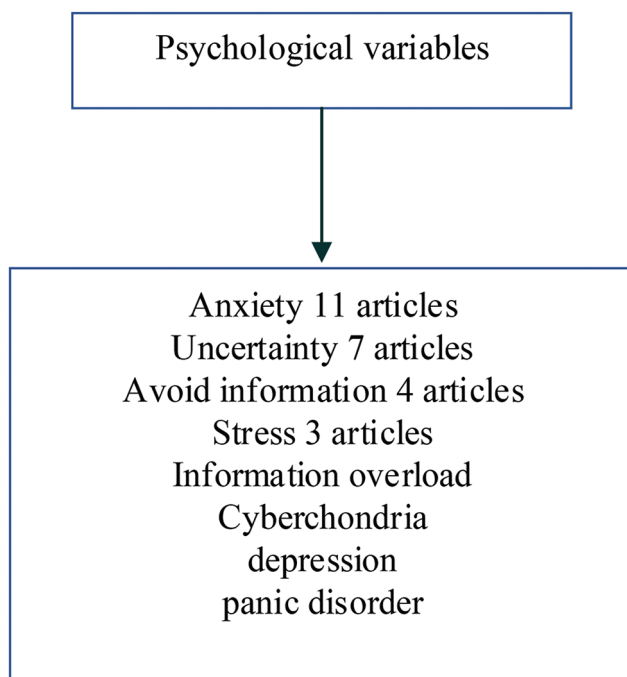


Figure 2: Factors extracted from psychological factors

Table 1: Studies reviewed in the database based on the year of publication

Title	Author	Year	Variables examined (investigated parameters)	Research findings
Faith, hope, and charity: An in-depth interview study of cancer patients' information needs and information-seeking behavior	Leydon <i>et al.</i>	2000	information avoidance	There was no need for additional information because of faith in doctors' medical knowledge. Hope is regarded as being necessary for coping and can be preserved by ignoring information that can be unfavorable. ^[10]
Information-seeking behaviors of women with breast cancer	Rees and Bath	2001	information avoidance	While some women actively sought information, others steered clear of it. Women too occasionally alternated between seeking and avoiding knowledge. Women looked for knowledge to assist them in dealing with their breast cancer, regaining control, boosting their self-esteem, and aiding in decision making. To avoid despair, anxiety, and other undesirable emotions and feelings, women avoided information. ^[11]
The use of a computer website prior to scheduled surgery (a pilot study): impact on patient information, acquisition, anxiety level, and overall satisfaction with anesthesia care	Hering <i>et al.</i>	2005	Anxiety level	The post-test results for the mSALT significantly improved for the experimental group. Post-test state anxiety or trait anxiety did not differ significantly between the experimental group and the control group. Regarding teacher satisfaction, there was a substantial difference between the experimental group and the control group. ^[12]
When do older adults turn to the internet for health information? Findings from the Wisconsin Longitudinal Study	Flynn <i>et al.</i>	2006	Psychological characteristics	Attitudes and personality traits connected to or unconnected to accessing internet medical information prior to a visit. Based on psychological and physical features, older Internet users show significant variations in the length of time they spend searching for health information online. ^[13]
Patient information in radiooncology Information-seeking behavior and patient characteristics	Pour-Haring <i>et al.</i>	2009	anxiety	While the need for information declined, the level of information self-assessment rose. Male patients did not feel as good as female ones did. Those who were older had less self-assessment data than those who were younger. The suppressive group asked for the least information out of the four groups that employed various coping mechanisms. ^[14]
Toward a greater understanding of breast cancer patients' decisions to discuss cancer-related internet information with their doctors: An exploratory study	D'Agostino <i>et al.</i>	2012	anxiety	There were no notable differences between those who wanted to discuss cancer-related information and those who did not in terms of patient, disease, visit, or physician reliance. Patients who planned to talk about the problem assessed their anxiety levels before consultations as being noticeably higher. In terms of pleasure, anxiety reduction, or physician trust, there were no appreciable differences between patients who talked and those who did not. ^[15]
Factors influencing treatment decision making and information preferences of prostate cancer patients on active surveillance	Davison and Breckon	2012	anxiety	Compared to patients with lower degrees of anxiety, those with greater levels requested access to more information. ^[16]
Associations of self-rated health and socioeconomic status with information-seeking and avoiding behavior among post-treatment cancer patients	Jung	2014	Avoid information	For non-Hispanic white, educated women participants and those with high self-efficacy in using health information alone, values of sociodemographic, socioeconomic, cancer-related, and SRH variables were considerably higher. Additionally, in the information avoidance group, there was a bad correlation between their attitude/ability and SRH in addition to no significant link between socioeconomic level (SES) and SRH. ^[17]
Association of cancer worry and perceived risk with doctor avoidance: an analysis of information avoidance in a nationally representative US sample	Persoskie <i>et al.</i>	2014	Avoid information	Information avoidance is driven when the information is expected to confirm one's anxieties, whereas information-seeking may be motivated when people expect the knowledge to allay a concern. Findings point to the necessity for communication tactics that can influence worry and perceive risk differently. ^[18]
How do patients with uveal melanoma experience and manage uncertainty? A qualitative study	Hope-Stone <i>et al.</i>	2015	uncertainty	Even those who received accurate prophecies frequently struggled to fully believe them. Patients' initial uncertainty persisted even after receiving negative or moderate test results. Patients were able to deal with their uncertainty

Contd...

Table 1: Contd...

Title	Author	Year	Variables examined (investigated parameters)	Research findings
Information Management in New Motherhood: Does the Internet Help or Hinder?	Barkin and Jani	2016	anxiety	by repressing thoughts about them and having faith in the medical community and healthcare system. Uveal melanoma uncertainty is a complex and varied experience that is difficult to settle through prediction. ^[19]
The effect of different information sources on the anxiety level of pregnant women who underwent invasive prenatal testing	Çakar <i>et al.</i>	2016	anxiety	Women described having a compulsive, innate urge to look for family health information as well as a significant level of anxiety when doing so online. ^[20]
The discordance of information needs between cancer patients and their families in China	Yi <i>et al.</i> ,	2016	anxiety disorder	Age, education, and a poor midwifery background have no discernible impact on the degree of anxiety. According to descriptive statistics, the dread of receiving negative news causes over 60% of patients to experience anxiety, which is followed by fears of miscarriage, discomfort, and injuring the unborn child. According to cluster analysis, patients who received information from doctors or nurses had noticeably lower levels of anxiety than those who did not. Those who received no information had the second-lowest levels of worry. Patients with the highest degrees of anxiety are those who obtain information from intimate sources (such as friends and family). ^[21]
Information overload, psychological ill-being, and behavioral intention to continue online healthcare information search	Swar <i>et al.</i> ,	2017	Information overload	Most patients and their families required information for additional disease-related information subscales, with the exception of patient life expectancy. Most patients want their loved ones to know more. But caregivers tended to stay away from it. ^[22]
Racial Differences in Information Needs During and After Cancer Treatment: a Nationwide, Longitudinal Survey by the University of Rochester Cancer Center National Cancer Institute Community Oncology Research Program	Asare <i>et al.</i>	2018	Information needs stress management	The findings demonstrate that perceived information overload has a beneficial impact on information seekers' intention to discontinue using online resources for health information. ^[23]
Uncertainty and Motivation to Seek Information from Pharmacy Automated Communications	Bones and Nunlee	2018	uncertainty	In terms of posttreatment informational needs for follow-up exams, stress management, and addressing stigma following cancer treatment, they also had noticeably higher levels than whites.
The role of posttraumatic stress and posttraumatic growth on online information use in breast cancer survivors	Casellas-Grau <i>et al.</i>	2018	PTSD	Racial differences were seen in pretreatment worries and posttreatment informational demands, with black patients expressing higher levels of informational needs and worries. ^[24]
Internet Use by Gynecologic Oncology Patients and Its Relationship with Anxiety	Corrales <i>et al.</i>	2018	anxiety	Following an analysis of how customers engage with pharmacy employees after hearing automated messages, it was discovered that participants will seek out information if they are unhappy with the automated phone call's information. ^[25]
What are the Implications of Excessive Internet Searches for Medical Information by	Blackburn <i>et al.</i>	2019	Cyberchondria	The amount of time spent looking up cancer-related material, including medical and psychosocial content, was positively linked with the presence of PTSD symptoms. PTG, on the other hand, revealed no association with time but rather a predominance of searching for psychological information about cancer. Participant levels of PTG and/or PTSS were linked to the psychological effects of online content. PTSS was linked to a weaker perception of vigilance or insufficient information about the condition, which increased emotions of anguish, whereas PTG was linked to a drop in hope in women. ^[26]
				STAI and trait anxiety levels were comparable among patients who utilized the Internet for research and those who did not. Internet users had higher HADS anxiety subscale scores than non-users, which suggests that their level of anxiety has increased. ^[27]
				Cyberchondria was a partial mediator of the effect of uncertainty intolerance on health anxiety because some of the effects of uncertainty intolerance on health anxiety

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Table 1: Contd...

Title	Author	Year	Variables examined (investigated parameters)	Research findings
Orthopedic Patients?				were linked to increased cyberchondria. It is critical for surgeons to educate both themselves and their patients about the connections between these structures and pain, incapacity, and the danger of unneeded medical treatments. Patients who are highly tolerant of ambiguity may also gain from being referred for skill development so they can learn to accept uncertainty regarding their symptoms or course of treatment. ^[28]
Searching the Internet for infertility information: A survey of patient needs and preferences	Brochu <i>et al.</i>	2019	anxiety	This study shows how crucial the Internet is for getting infertility information and assistance, as well as how web-based services may be tailored to patients' requirements. Although concerned patients searched frequently, their demands weren't always addressed, indicating that they might gain from other information sources as well as support or direction from healthcare professionals when searching the Internet. ^[29]
Information needs of patients about immunosuppressive medication in a German kidney transplant sample: Prevalence and correlates	Klewitz <i>et al.</i>	2019	Anxiety level	Older age, better adherence, more perceived social support, and lower anxiety levels were all linked to greater satisfaction with ISM information. ^[30]
Relationships between online health information-seeking and psychopathology	Berle <i>et al.</i> ,	2020	Health anxiety, uncertainty, depression	More participants in OHIS had higher or more tertiary education. Only physical symptoms could independently predict OHIS when each of these psychopathological categories was controlled, despite the fact that OHIS was linked to health anxiety, uncertainty, and other psychopathological variables. Our result that the severity of physical symptoms predicts OHIS is not surprising, considering that people who have such symptoms turn to the Internet, which is the most accessible medium, to find explanations and possibly reassurance. ^[8]
Navigating Uncertain Times: Information Management about Pregnancy and Breastfeeding during the COVID-19 Pandemic	Goldbort <i>et al.</i>	2021	Uncertainty and anxiety	Uncertainty in pregnancy affected information-seeking through anxiety, but the impact varied based on how well participants perceived their ability to cope, the significance of the knowledge, and the success of their goals. ^[31]
PGx in psychiatry: Patients' knowledge, interest, and uncertainty management preferences in the context of pharmacogenomic testing	Kastrinos <i>et al.</i>	2021	uncertainty	Regardless of their preferences for uncertainty management, psychiatric patients were interested in pharmacogenomic PGx testing. ^[32]
Ask Dr Google: What STI do I have?	Lee <i>et al.</i>	2021	anxiety	The elevated levels of anxiety and poor accuracy of self-diagnoses associated with health information activity are of concern to adults who engage in it for sexual health information. ^[33]
Information needs of people-seeking fertility services in Canada: a mixed methods analysis	Klewitz <i>et al.</i>	2019	panic disorder	Media coverage of celebrities with panic disorder and other factors are positively correlated. Additionally, there was a favorable correlation between the quantity and frequency of searches on the Q and A website and the number of persons who had seen a psychiatrist. According to a regression analysis, the most significant predictor of a rise in the number of people-seeking treatment for panic disorder is the frequency of searches. ^[34]
The Information Needs of Chinese Family Members of Cancer Patients in the Online Health Community: What and Why?	Ma <i>et al.</i> ,	2021	Stress	Family members of cancer patients may find that obtaining information can help them deal with difficult situations that arise during the cancer journey. ^[35]
Health Information-Seeking from an Intelligent Web-Based Symptom Checker: Cross-sectional Questionnaire Study	Bagarić and Jokić-Begić	2020	uncertainty	When considering circumstances where individual differences in uncertainty preferences may affect health outcomes through seeking or avoiding health information, this theoretical expansion of uncertainty research is made possible by the concept of uncertainty preferences. ^[36]

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Table 1: Contd...

Title	Author	Year	Variables examined (investigated parameters)	Research findings
Understanding the importance of trust in patients' coping with uncertainty via health information-seeking behaviors	Link <i>et al.</i>	2022	uncertainty	The results highlight a recurrent pattern in multi-channel online health information behavior driven by the perception of uncertainty and focusing on the function of trust. ^[37]
How online searches fuel health anxiety: Investigating the link between health-related searches, health anxiety, and future intention	Peng	2022	Health anxiety	The association between perceived disease likelihood and intentions to use healthcare is favorably moderated by response efficacy. While self-efficacy favorably modifies the connection between continued seeking and perceived disease likelihood. ^[38]
Using crowdsourced medicine to manage uncertainty on Reddit: The case of COVID-19 long-haulers	Thompson <i>et al.</i>	2022	uncertainty	The association between perceived disease likelihood and intentions to use healthcare is favorably moderated by response efficacy. While self-efficacy favorably modifies the connection between continued seeking and perceived disease likelihood. ^[39]

Table 2: Studies reviewed in the database based on the year of publication, community, and data collection tool

Data collection tools	Statistical society	Type of study	Author/year
questionnaire	cancer patients	Survey research	Asare <i>et al.</i> , 2018
Implementation of focus group discussions	Adult women after childbirth	Survey research	Barkin and Jani, 2016
questionnaire	adults	Survey research	Berle <i>et al.</i> , 2020
questionnaire	Orthopedic patients	Survey research	Blackburn <i>et al.</i> , 2019
Online questionnaire	Community members referring to pharmacies	Survey research	Bones and Nunlee, 2018
Poll	Infertile people	Survey research	Brochu <i>et al.</i> , 2019
questionnaire	pregnant women	Descriptive	Çakar <i>et al.</i> , 2016
questionnaire	Men and women over 50 years old	Survey research	Arellano Carmona <i>et al.</i> , 2022
questionnaire	Breast cancer survivors	Survey research	Casellas-Grau <i>et al.</i> , 2018
Poll	Patients referred to women's oncology clinic	Survey research	Corrales <i>et al.</i> , 2018
questionnaire	cancer patients	Survey research	D'Agostino <i>et al.</i> , 2012
Poll	Patients with prostate cancer	Survey research	Davison and Breckon, 2012
Telephone and Internet survey	Ordinary people of society	Survey research	Flynn <i>et al.</i> , 2006
questionnaire	pregnant women	Survey research	Goldbort <i>et al.</i> , 2021
questionnaire	Patients before undergoing anesthesia for surgery	Survey research	Hering <i>et al.</i> , 2005
Semi-structured interviews	healthy survivors of uveal melanoma 6–60 months after treatment (approximately 8–62 months after receiving prognostic information)	Survey research	Hope-Stone <i>et al.</i> , 2015
Questionnaire (written, telephone, and online)	Patients with low SES and ethnic minority groups	Survey research	Jung, 2014
Online questionnaire	Psychiatric patients	Survey research	Kastrinos <i>et al.</i> , 2021
questionnaire	Kidney recipient patients (kidney transplant)	Survey research	Klewitz <i>et al.</i> , 2019
questionnaire	Patients with any symptoms	Survey research	Lee <i>et al.</i> , 2021
checklist	Celebrities	Descriptive	Klewitz <i>et al.</i> , 2019
In-depth interviews	cancer patients	Survey research	Leydon <i>et al.</i> , 2000
Semi-structured qualitative interview	Patients with arthritis	Survey research	Link <i>et al.</i> , 2022
Checklist	Family members of cancer patients	Descriptive	Ma <i>et al.</i> , 2021
questionnaire	People aged 20 to 72	Survey research	Peng, 2022
Poll	Adult population over 18 years old	Survey research	Persoskie <i>et al.</i> , 2014
Questionnaire (pre-test and post-test 14 days after counseling)	cancer patients	intervention	Pour-Haring <i>et al.</i> , 2009
mailed survey	Women with cancer	Survey research	Rees and Bath, 2001
questionnaire	Adults and students	Survey research	Swar <i>et al.</i> , 2017
checklist	Long-term sufferers of COVID-19	Survey research	Thompson <i>et al.</i> , 2022
questionnaire	Cancer patients and their families	Survey research	Yi <i>et al.</i> , 2016

While this avoidance may provide temporary relief, it could result in missing out on crucial information and exacerbating health issues in the long run.^[11,14,16] Research in this domain has shed light on the relationship between psychological factors, health information-seeking behavior, and mental well-being. For instance, a study incorporating psychological methodologies investigated the link between anxiety, OHIS, and psychiatric symptoms such as health anxiety, intolerance of uncertainty, and depressive symptoms. The findings revealed that individuals engaging in OHIS exhibited higher levels of the mentioned symptoms compared to those who did not engage in such behavior. These results indicate that the presence of anxiety and other psychiatric symptoms can motivate individuals to seek health information actively. Considering the importance of health information and its significant role in health-related decision making, paying attention to psychological factors in information-seeking behavior is essential. Planners and policymakers can design interventions and initiatives focusing on these factors to improve the quality of information acquisition for individuals. Additionally, this study highlights the need for further research in the area of psychological influences on information behavior to bridge existing gaps in understanding. Moreover, the article implies that there are still gaps in our understanding of the psychological factors influencing information behavior. This presents an opportunity for future research to delve deeper into these areas and expand our knowledge base. Researchers can build upon the identified gaps and explore additional psychological variables that may impact information-seeking behavior.

Limitation and recommendation

Researches related to psychological variables in the information behavior of users may have faced a time limit. The article may not be able to respond to newer and more up-to-date research in this field. Examining new and up-to-date studies in this field can help provide more up-to-date and accurate results and findings about psychological variables in users' information behavior. Therefore, periodic review and updating of the article is recommended. Researches related to psychological variables in the information behavior of users may have faced a time limit. The article may not be able to respond to newer and more up-to-date research in this field. Examining new and up-to-date studies in this field can help provide more up-to-date and accurate results and findings about psychological variables in users' information behavior. Therefore, periodic review and updating of the article is recommended.

Conclusion

Psychological factors are recognized as significant contributors to the information behavior exhibited

by individuals in various societies. However, existing literature in the field of information behavior has placed more emphasis on information carriers while neglecting the psychological characteristics originating from the human psyche and mind. Consequently, this research aims to address this gap by examining the psychological factors that influence users' information-seeking behavior. The findings reveal that psychological variables have been examined in various studies on information behavior. This research highlights the importance of studying the psychological aspects related to information behavior and encourages future researchers to bridge the current gaps in understanding the role of psychological factors within the field of knowledge and information science. Interdisciplinary research is crucial in today's academic landscape. As such, it is recommended that journals specializing in knowledge and information science prioritize studies that delve into mental processes. Additionally, scientific associations, educational groups, and specialized journals should organize workshops focused on systematic reviews and other types of article review methods within the field of knowledge and information science. These workshops can help streamline scientific research in this domain. Furthermore, it is advisable to compare the results of future research conducted in English with those of local studies on psychological aspects. It is also suggested that other factors, such as problem-solving skills, mindfulness, reflective thinking, and deep thinking, which possess psychological dimensions, be considered when investigating information behaviors. This article underscores the significance of psychological factors in shaping individuals' information behavior. It emphasizes the need for a comprehensive examination of these factors alongside information carriers. By acknowledging and addressing the psychological aspects, planners and policymakers can enhance information acquisition experiences and outcomes. Furthermore, this study provides guidance for future research to explore the existing gaps and expand our understanding of the psychological factors influencing information behavior.

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Conflicts of interest

There are no conflicts of interest.

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