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Constructs of the Theory of Planned Behavior in Health Information-Seeking Behavior of Pregnant Women in Iran: A Qualitative Study

Mohammad Zarei[1], Vahideh Zarea Gavgani[2], Atefeh Zarei[3], Firoozeh Zare-Farashbandi[1*]

Abstract

Objectives: The aim of this study was to explore the constructs of the theory of planned behavior (attitude, subjective norms, perceived behavioral control) in health information seeking behavior among Iranian pregnant women.

Methods: This is a qualitative study with an interpretive phenomenological approach involving 23 in-depth semi-structured interviews with pregnant women at 12-36 weeks of gestation. The data were analyzed using inductive qualitative content analysis by MAXQDA software. For validation, the coding process was performed by two independent researchers, and a Cohen's kappa agreement coefficient of 0.85 was calculated. The extracted codes were reviewed and finalized in group discussion sessions with the research team. In addition, some of the findings were confirmed by the participants, and the researchers' triangulation method was used to increase reliability.

Results: A total of 115 concepts were identified across three main constructs and 10 components. Attitude toward behavior (30 concepts) included positive/negative beliefs and outcome assessments; subjective norms (32 concepts) included injunctive/descriptive norms and motivation to comply; and perceived behavioral control (53 concepts) included internal/external control, barriers and facilitators. Attitude toward behavior emerged as the most salient construct in participants' accounts of health information seeking.

Conclusions: Health information seeking behavior of pregnant women is affected by complex interactions of three theoretical constructs. Cultural, social, and economic factors play moderating roles in this regard. The results provide a foundation for designing targeted interventions to improve this behavior and enhance maternal and fetal health.

Keywords: Theory of planned behavior, Health information seeking, Pregnant women, Qualitative study, Attitude, Subjective norms, Perceived behavioral control

Introduction

Pregnancy, a critical stage in a woman's life cycle, is associated with a significant increase in the need for access to reliable and accurate health information. This prerequisite is highlighted not only from the perspective of protecting the health of the mother and fetus, but also is meant to reduce the potential risks related with incorrect decisions. Pregnant women actively seek information related to pregnancy, childbirth, nutrition, and prenatal care in order to make informed decisions regarding the health of themselves and their fetuses (1). With the development of information technology, health information-seeking behavior has evolved and the Internet has emerged as a main source of access to health information. Studies show that more than 80% of people use the Internet to search for health information, and this figure is even higher among pregnant women because of their greater need for specialized information (2,3). Online health information-seeking behavior among pregnant women is a complex phenomenon influenced by multiple factors. This behavior can affect health decisions, satisfaction with care received, and pregnancy outcomes; however, if reliable information is not available or in case the information is misinterpreted, it can lead to anxiety, unnecessary worry, or incorrect decisions (4). Elaborated by Icek Ajzen in 1985, the theory of planned behavior (TPB) is widely used for predicting and explaining human behavior in the health field (5). This theory is based on the assumption that human behavior is the result of conscious and planned decision-making. According to TPB, behavioral intention, which is the most important direct predictor of behavior, is influenced by three main constructs: attitude, subjective norms, and perceived behavioral control.

The TPB has been widely applied to explain and predict a variety of health-related behaviors by examining how individuals' attitudes toward a behavior, perceived social expectations (subjective norms), and perceived behavioral control shape behavioral intentions and subsequent actions. In the context of health information seeking, these

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[1]Health Information Technology Research Center, Isfahan University of Medical Sciences, Isfahan, Iran.
[2]Tabriz Health Services Management Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.
[3]Department of Knowledge and Information Science, Islamic Azad University, Hamedan Branch, Hamedan, Iran.
***Corresponding Author:** Firoozeh Zare-Farashbandi, Email: f_zare@mng.mui.ac.ir

constructs provide a useful framework for understanding why individuals decide to search for health information and how they navigate available sources. Studies across different populations have shown that positive attitudes toward information use, encouragement or expectations from important social referents, and individuals' confidence in their ability to access and evaluate information can significantly influence engagement in health information seeking behaviors. Research focusing on digital environments has similarly demonstrated that individuals with higher perceived behavioral control and stronger motivation to manage their health are more likely to actively search for online health information (6). Within maternal health contexts, these dynamics may be particularly important because pregnancy often increases the need for timely and reliable information. Therefore, applying the TPB framework offers a structured approach for exploring how pregnant women form intentions to seek health information and how cognitive, social, and contextual factors interact to shape this behavior.

Despite extensive studies, there is a significant gap in research literature regarding the application of TPB to the health information seeking behavior of pregnant women, especially in the Iranian cultural context (7). Few domestic studies have specifically addressed pregnant women, and scarce foreign studies have focused on the comprehensive application of the TPB constructs in this population. Therefore, it is necessary to understand the factors affecting the health information seeking behavior of pregnant women and identify the psychological mechanisms guiding this behavior. The novelty of the present study can be identified in several aspects. First, this is the first comprehensive study in Iran that specifically examines the constructs of TPB in health information seeking behavior of pregnant women. Second, adoption of a qualitative approach allows for a deeper exploration of the psychological and social mechanisms affecting this behavior. Third, focusing on the Iranian cultural context enables the identification of indigenous factors influencing the health information seeking behavior of Iranian pregnant women. Despite the high importance of health information seeking behavior during pregnancy and extensive application of the TPB, there is no comprehensive and in-depth understanding of how the constructs of this theory affect the health information seeking behavior of pregnant women in the cultural context of Iran, a knowledge gap preventing the design of effective interventions to improve the quality of health information seeking and promote the health of pregnant mothers. Therefore, this study aimed to investigate the constructs of the TPB in the health information seeking behavior of pregnant mothers in Iran through a qualitative approach.

Methods

The present study is a qualitative research with an interpretive phenomenological approach that aimed to deeply investigate the constructs of TPB in health information-seeking behavior of pregnant mothers from Iran. This approach allows for the discovery and in-depth understanding of the lived experiences, attitudes, beliefs, and motivations of pregnant women in the field of health information seeking, which enables the researcher to understand the psychological and social mechanisms affecting this behavior from the perspective of the participants themselves. A qualitative approach for this study was chosen due to the exploratory nature of the research and the need for a comprehensive understanding of the complexities of health information-seeking behavior in the cultural context of Iran. The population of this study included pregnant women referring to urban health centers in Iran who had experience in seeking health information related to pregnancy. Inclusion criteria were as follows: gestational age 12-36 weeks, the ability of effective verbal communication in Persian, experience in seeking health information from various sources during the current or previous pregnancy, and willingness to participate in the interview. Exclusion criteria were the presence of severe psychological problems limiting the possibility of effective participation in the interview, unwillingness to continue participation at any stage of the research, and lack of clarity or inadequacy of information provided during the interview.

Sampling was conducted in a purposive and accessible manner based on the inclusion criteria, in such a way that first urban health centers in different cities of Iran were identified and eligible pregnant women subsequently invited to participate after introduction by obstetric experts in compliance with ethical principles. The sampling process continued until reaching theoretical saturation, which was achieved after conducting 23 in-depth interviews. Theoretical saturation was confirmed when new interviews did not add significant new information to the existing data and clear patterns could be identified in the participants' responses. Table 1 shows the demographic characteristics of the study participants. The participants represented a diverse range of educational levels, occupational backgrounds, and gestational stages. Gestational age ranged from 12 to 36 weeks, with an average of approximately 24 weeks. Most participants had at least secondary or university education, and a mixture of first-time and multiparous pregnancies was represented. This diversity allowed the study to capture a wide range of experiences related to health information seeking during pregnancy.

The data collection tool was an in-depth semi-structured interview that was designed based on literature review and the constructs of TPB. The interview guide included core questions related to pregnant women's attitudes toward seeking health information, social norms affecting this behavior, perceived behavioral control in accessing and using information sources, and behavioral intention to

Table 1. Demographic characteristics of study participants

Participant code	Age	Number of pregnancies	Occupation	Province
P1	37	Second	Clerk	Kurdistan
P2	36	Third	Clerk	Kurdistan
P3	28	First	Housekeeper	Kurdistan
P4	27	First	Housekeeper	Kurdistan
P5	28	First	Employee	Kurdistan
P6	43	Second	Housekeeper	Hamedan
P7	29	First	Laboratory expert	Hamedan
P8	34	First	Clerk	Hamedan
P9	37	Third	Clerk	Hamedan
P10	39	First	Housekeeper	Hamedan
P11	35	Second	Housekeeper	Golestan
P12	35	First	Housekeeper	Golestan
P13	40	Fourth	Housekeeper	Golestan
P14	34	Third	Servant	Tehran
P15	45	Fifth	Housekeeper	Tehran
P16	35	First	Clerk	Tehran
P17	40	Second	Housekeeper	Khuzestan
P18	28	Second	Clerk	Khuzestan
P19	25	First	Language teacher	Khuzestan
P20	25	Second	Housekeeper	Khuzestan
P21	24	First	Housekeeper	Khorasan
P22	30	First	Clerk	Khorasan
P23	29	First	Clerk	Khorasan

seek health information. Exploratory and supplementary questions were also inquired to give depth to the interviews. The content validity of the interview guide was reviewed and approved by five experts in psychology, obstetrics and gynecology, and medical library and information science.

The data collection method involved face-to-face interviews. Each interview began with written informed consent from the participants, which was recorded with their permission. The duration of each interview was 45-90 minutes that was determined depending on the depth of participants' responses. The interviews started with general and open-ended questions about the experience of seeking health information during pregnancy, and the interview process continued based on guiding questions. During the interviews, the researcher used exploration, reflection, and confirmation techniques to deepen the data. Data analysis was performed using qualitative content analysis with an inductive approach. This analysis was performed simultaneously with the start of the interviews, so that it began immediately after the completion of the first interview and initial coding. The recorded interviews were transcribed verbatim in Microsoft Word software, and the resulting texts were read several times so that the researcher became familiar with the data. Afterward, the coding process was carried out in three stages: open, axial, and selective coding. In the open coding stage, semantic units were identified and initial codes extracted. In the axial coding stage, similar codes were grouped into categories and subcategories. Finally, in the selective coding stage, main themes and the relationships between them were identified. All analysis steps were conducted using MAXQDA software (2020 version), and two researchers independently performed the coding process to increase the reliability of the results.

The relative prominence of each TPB construct was interpreted qualitatively based on the breadth of concepts identified within each construct, the recurrence of related content across interviews, and the depth with which participants elaborated their experiences. Therefore, terms such as "most salient" or "most prominent" refer to qualitative emphasis rather than statistical prediction.

To ensure the quality and robustness of the research findings, trustworthiness criteria of Lincoln and Guba (8) were used, including credibility, transferability, and dependability. Trustworthiness was ensured through the researcher's long-term involvement with the data, repeated review of findings by participants, and involvement of multiple researchers in the analysis process. The transcripts of some interviews were returned to participants after initial coding to ensure the accuracy of the concepts and content and to certify that the research team had correctly received the participants' concepts and viewpoints. The extracted codes and concepts were also reviewed among the research team members to ensure the correct categorization process and to achieve the validity of the data. Transferability was assured by providing a rich and comprehensive description of the research context, participants, and findings. Credibility was ensured by accurately recording the research process, maintaining complete raw data, and providing a clear audit trail. Dependability was also achieved by reviewing the findings by some of the participants, confirming that the results were consistent with their experiences. Compliance with ethical principles was a top priority of this research. The ethics code was obtained from the university ethics committee, and all stages of the research were conducted in compliance with ethical principles in research. Participants were aware of the aims, methods, and applications of the research before the interview and provided written informed consent. Participants were assured that their participation was completely voluntary and that they could withdraw from participation at any stage of the research without giving a reason. The confidentiality of the participants' personal information was fully maintained, and the code number was used instead of the real name in reporting the results. The research data was kept in a secure place and was only available to the research team.

Results

The descriptive summary of participants' characteristics showed that all 23 participants were pregnant women with a gestational age range of 12 to 36 weeks and a mean gestational age of 24 weeks, recruited from different provinces of Iran. Three main constructs, 10 components, and 115 concepts were extracted from the interview

transcripts based on the TPB framework. Table 2 presents these concepts separately, and the description of each component based on the interview transcripts is provided below.

The findings indicate that pregnant women's attitudes towards seeking health information are shaped by a complex interaction between positive and negative behavioral beliefs and assessment of expected outcomes. In positive beliefs, pregnant women mainly believed that seeking health information could help improve maternal

Table 2. Findings of Pregnant Women's Health Information Seeking Behavior Based on TPB Constructs

Theoretical construct	Components	Concepts
Attitude toward behavior	Positive behavioral beliefs	• The usefulness of information seeking for maternal health • The usefulness of information seeking for fetal health • Reducing worry and anxiety • Increasing awareness about pregnancy • Helping to make informed decisions • Better management of pregnancy conditions • Better preparation for childbirth • Acquiring specialized knowledge • Reassurance • Better understanding of body changes • Learning how to care for the baby • Better nutrition control • Knowing danger signs • Reducing medical costs • Quick access to information
	Negative behavioral beliefs	• Creating anxiety and stress • Confusion from contradictory information • Distrust of online sources • Risk of incorrect self-diagnosis • Risk of incorrect self-treatment • Waste of time • Increased unnecessary worries • Misleading by incorrect information • Reducing trust in the doctor • Overload of information • Complexity of scientific information • Unreliability of sources
	Assessment of outcomes	• Positive assessment of health improvement • Positive assessment of stress reduction • Negative assessment of psychological consequences • Negative assessment of waste of resources
Subjective norms	Prescribed norms	• Advice from a specialist doctor • Midwife's instructions • Mother's opinions • Spousal expectations • Sisters' advice • Close friends' opinions • Pressure from extended family • Religious beliefs • Cultural traditions • Social expectations • Gender attitudes • Pressure for independence • Encouragement to seek information • Awareness of online sources
	Descriptive norms	• Observing the behavior of other pregnant mothers • Modeling successful experiences • Common use of the Internet • Common use of social networks • Common visit to the library • Use of pregnancy applications • Consulting with family • Searching on Google • Watching TV programs • Reading specialized books
	Motivation to comply	• Importance of doctor's opinion • Respect for family opinions • Fear of social judgment • Need for social approval • Tendency to conform • Avoidance of conflict

Table 2. Continued

Theoretical construct	Components	Concepts
Perceived behavioral control	Internal control	• Computer skills • Internet search skills • Ability to assess the credibility of sources • Familiarity with English • High level of education • Previous pregnancy experience • Confidence in searching • Information analysis skills • Ability to identify credible sources • Skills in reading scientific texts • Understanding medical information • Information management skills • Ability to interpret tests • Familiarity with medical terminology
	External control	• Access to high-speed internet • Access to a computer or mobile phone • Affordable economic status • Access to medical centers • Family financial support • Proximity to the library • Access to specialists • Family emotional support • Sufficient free time • Quiet environment for studying • Access to printed resources • Possibility of telephone consultation
	Perceived barriers	• Financial constraints • Lack of time • Physical constraints • Geographical distance • Low quality of the internet • Lack of familiarity with English • Complexity of scientific information • Large volume of information • Lack of access to a specialist • Shame of asking questions and being judged • Lack of staff in medical centers • Single shift in centers • Medical costs • Fear of being judged
	Perceived facilitators	• Easy access to the Internet • Freeness of some services • Existence of specialized applications • Possibility of online counseling • Library services • Family support • Friendliness of medical staff • Existence of Persian resources • Simplicity of some resources • Quick access to a doctor

and fetal health, reduce worry and anxiety, increase awareness, and make informed decisions. As participant P3 stated: "*When I find the right information, I feel like I am taking better care of myself and my baby. For example, I read about nutrition and I understand what I should eat so that my baby is born healthy*" (P3). Participant P7 also emphasized: "*I often worry and don't know what to do. When I go online and read that what I am experiencing is normal, it makes me feel relieved*" (P7). In contrast, many participants held negative beliefs and were concerned that information seeking might lead to anxiety and stress, confusion from conflicting information, bear the risk of self-diagnosis and self-medication as well as decreasing the trust in health professionals. Participant P3 expressed this concern as follows: "*Sometimes when I go online, I read things that are very scary. Once I read about bleeding and I was really worried. I consulted the doctor and he said it was nothing, but I was stressed for a few days*" (P3). Participant P12 had a similar experience: "*They write so many different things on the Internet. Someone says to do this, the other says to do that. You get confused and don't know which one to believe*" (P12).

The findings related to the construct of subjective norms indicate that pregnant women's health information seeking behavior is largely influenced by social pressures, expectations of others, and behavioral patterns observed in the society. In the dimension of prescribed norms, the opinions of health professionals were identified as the

most important source of social pressure, such that many pregnant women adjusted their information decisions based on the guidance received from these people. Participant P3 explained this as follows: "*My doctor always says not to get too much information from the Internet and to ask him if I have a question. But I can't ask him everything, I go and find the answer myself*" (P3). On the other hand, family, especially mother, wife, and sisters also played a decisive role in the formation of social expectations and sometimes offered conflicting opinions, which confused pregnant women. Participant P3 said: "*My mother always says that there was no internet back then and that everyone was born healthy, why am I so worried? But my husband says it's good to get information so I know what to do*" (P3). Descriptive norms also showed that pregnant women are significantly influenced by observing the behavior of other pregnant mothers and modelling their successful experiences. Participant P15 stated: "*In pregnancy classes, I see that other mothers have pregnancy apps on their phones like me and that they check them all the time. This makes me use them more frequently*" (P15).

The construct of perceived behavioral control was identified as a key determinant of pregnant women's health information seeking behavior, which involved a combination of internal and external factors, barriers, and facilitators. In the internal control dimension, IT skills including computer skills, Internet searching, and evaluating the credibility of sources played a crucial role, such that pregnant women with higher skills felt to be more in control of the search process and were able to conduct more complex and targeted searches. Participant P21 explained: "*I am comfortable with computers and I know how to search the Internet. I know which sites are reliable and which are not. This helps me a lot to find the right information*" (P3). In contrast, participant P18, who was less skilled, stated: "*I am not very comfortable with the Internet. I just know how to type something into Google, but I don't know which results are correct. I usually ask my sister to search for me*" (P18).

Among the three TPB constructs, attitude toward behavior appeared to be the most salient in participants' narratives, as women most frequently and extensively described both the perceived benefits and concerns related to health information seeking.

Perceived barriers were financial constraints, lack of time, geographical distance, complexity of scientific information, and embarrassment about asking questions, which reduced women's control over the search process. Participant P3 stated: "*Sometimes I'm home and I can't search properly. Or when I'm working, I don't have time to sit down and find information*" (P3). In contrast, perceived facilitators such as easy access to resources, free services, availability of specialized apps, and social support enhanced the sense of control and encouraged women to seek information more actively. Participant P8 stated: "*Now that I have a smartphone, I can find information wherever I am. I installed the pregnancy app, which is very convenient and has everything*" (P8).

These findings suggest that the three main constructs of the TPB interact in a complex way to shape pregnant women's health information seeking behavior. The conflict between positive and negative beliefs, conflicting social pressures, and differences in perceived level of control cause each pregnant woman to have a unique pattern of information-seeking behavior.

Discussion

The results of this qualitative study indicate that the health information seeking behavior of pregnant women in Iran is influenced by the complex and multifaceted constructs of the TPB. Findings from the analysis of 23 in-depth interviews with pregnant women, including 115 concepts categorized into three main constructs, provide a comprehensive depiction of the mechanisms influencing this behavior. These results suggest that attitude toward behavior emerged as the most prominent construct in participants' narratives about health information seeking, while subjective norms and perceived behavioral control also played important and distinct roles in shaping this behavior. Attitude to behavior construct analysis showed that pregnant women had ambivalent attitudes toward health information seeking. This finding is consistent with Zimmerman's results, which showed that people have conflicting attitudes toward information sources in their investigation of health information seeking behavior during the COVID-19 pandemic (9,10). The positive behavioral beliefs identified in the present study (15 concepts) are consistent with the findings of Zhao et al who identified positive attitudes as a key factor in their systematic review of online health information seeking behavior in the elderly (11). In contrast, the negative behavioral beliefs identified in this study (14 concepts) are in line with the results of Neely et al who showed that information anxiety and confusion are the main challenges of information seeking on social media (12). The study of Di Novi et al also confirmed that online health information seeking behavior could lead to negative psychological outcomes, which is consistent with our findings of anxiety and stress (13).

With 32 identified concepts, the construct of subjective norms had a significant role in shaping the behavior. This finding is consistent with the study of Jia et al who highlighted the role of social norms in a systematic review of online health information seeking behavior (14). The identified prescriptive norms (14 concepts), especially the role of physicians and family, are comparable to the findings of Jia et al who revealed that certain groups are strongly affected by social norms in health information seeking (14). The descriptive norms (10 concepts) identified in the present study are consistent with the results of Ma et al who showed that the elderly are influenced by observing their peers' behavior in health information seeking (15).

Moreover, Zhang et al in a study of Chinese students' information seeking behavior stated that peer modeling plays an important role in shaping behavior (16).

The perceived behavioral control construct with 53 concepts showed the greatest diversity. This finding is consistent with the study of Mirzaei et al who identified behavioral control as a key factor in a systematic review of predictors of health information seeking behavior (17). Internal control (14 concepts), especially digital skills, is consistent with the findings of Lee et al who emphasized the role of digital health literacy in information seeking behavior (18). The perceived barriers (14 concepts) identified in this study are consistent with the results of Adepoju et al who showed that access to technology and the Internet is a major barrier in low-income populations (19). A study by Ferraris et al who examined the barriers and facilitators of online information seeking behavior in cancer patients also showed that social support and expert advice play a key role in this regard (20). This is consistent with our findings, which showed that the advice of a specialist and midwife were the most important prescribing norms. The study of Rao et al also confirmed that the prevalence of health information seeking behavior is affected by health literacy and access to resources (21). In a study by Thi et al, it was shown that mental health stigma could prevent pregnant women from disclosing their condition and seeking necessary information and treatment, which is in line with the findings of this study regarding the shame of asking questions and fear of being judged (22). The perceived facilitators (10 concepts) are comparable to the findings of Marzo et al who showed that adapted digital literacy and access to free resources were facilitating factors in low-income groups in Malaysia (23). Also, Zakar et al showed in a study of Pakistani students that access to the Internet and digital skills play a key role in information seeking behavior (24). Titilayo et al stated that health care providers could influence the way information is transmitted and received, which directly affects the perception and satisfaction of pregnant women. This finding is consistent with ours regarding perceived facilitators, including access to and friendly relationships with physicians and medical staff (25).

The results of the present study showed that there is a complex interaction between the mentioned three constructs, which is consistent with Zimmerman's study. Using the information horizons methodology, Zimmerman showed that information seeking trajectories are influenced by multiple and interacting factors (10). The cultural factors identified in the present study are consistent with the results of Jia et al who showed that cultural and social characteristics affect the information seeking behavior of specific groups (3). Religious beliefs and family traditions, which were prominent in our study, were also identified as factors shaping information seeking behavior on social networks in the study of Neely et al (12).

The behavioral patterns identified in Iranian pregnant women have similarities and differences with international studies. In their review of information-seeking behavior of the elderly, Zhao et al showed that a combination of online and offline sources were used (11), which is consistent with our findings. However, unlike our study and that of Ma indicating that Chinese elderly people trust more official sources, Iranian pregnant women showed a more complex mix of trust and distrust in different sources. Ferraris et al in their study of cancer patients, identified similar barriers such as information complexity and concerns about misinformation (20). This is consistent with our findings, which indicated that the complexity of scientific information and confusion from contradictory information were the main barriers.

Our findings regarding the importance of digital skills are consistent with the study of Zhang et al who showed that online information search skills of Chinese students were related with success in finding reliable information (26). The positive and negative consequences identified in the present study are consistent with the findings of Di Novi et al who showed that online information search could both improve access to health care and lead to anxiety (13). Jia et al in their systematic review stated that online health information search behavior has dual consequences (3).

Limitations of the Study

This study has several limitations that should be considered when interpreting the findings. First, the sample consisted of 23 pregnant women recruited through purposive sampling, which may limit the transferability of the findings to all pregnant women in Iran or in other cultural contexts. Although efforts were made to include participants from different provinces and educational backgrounds, qualitative samples are not intended to provide statistical representativeness. Instead, they aim to generate an in-depth understanding of participants' experiences and perceptions.

Second, the data were based on self-reported experiences collected through semi-structured interviews. As with most qualitative research, participants' responses may have been influenced by recall bias, personal interpretation of events, or the desire to provide socially acceptable answers. Despite attempts to create a comfortable interview environment and encourage open discussion, some perspectives may have remained unexpressed.

Third, the study was conducted within the conceptual framework of the TPB. While this framework provides a useful structure for understanding health information seeking behavior, it may also limit the exploration of factors that fall outside the TPB constructs. Other theoretical perspectives may reveal additional social, psychological, or structural influences on information seeking among pregnant women.

Finally, the qualitative nature of the study means that

causal relationships cannot be established. The findings instead provide interpretive insights into how pregnant women perceive and navigate health information during pregnancy. Future studies using quantitative or mixed-methods designs could further examine the relative influence of TPB constructs on health information seeking behavior.

Conclusions

This study showed that the health information seeking behavior of pregnant women in Iran is influenced by the three main constructs of the TPB, with attitude toward behavior emerging as the most salient construct in participants' narratives. The complex interaction between the 115 concepts identified in these constructs and their moderation by cultural and social factors indicates the necessity of designing multidimensional interventions customized to the Iranian cultural context. The results of this research provide a solid basis for designing effective educational programs, behavioral interventions, and policies to improve the health information seeking behavior of pregnant women and promote maternal and fetal health. The successful application of TPB in this context also demonstrates the possibility of using this theoretical framework in designing similar interventions in other population groups and health domains.

Effective interventions should be multidimensional and must simultaneously focus on improving attitudes, strengthening social support, and increasing perceived behavioral control. Based on the findings of this study, several key policy options are suggested to promote health literacy and information-seeking behavior among pregnant women:

- Including training in health information search and evaluation skills in antenatal and prenatal care packages, so that pregnant women in health centers or information centers become familiar with methods of finding reliable sources, distinguishing scientific from non-scientific information, and avoiding misleading sources.
- Creating safe spaces for discussion and information exchange through support groups or training classes in health centers and information centers where women can ask questions and share their experiences without fear of judgment.
- Strengthening positive societal attitudes toward women's autonomy in health decision-making through media and cultural campaigns that emphasize women's right to informed access to health information.
- Designing educational programs for families in pregnancy classes so that effective social supporters such as spouses and family members can help pregnant women access accurate information and avoid incorrect and traditional pressures.
- Supporting the development of evidence-based local applications whose content is approved by experts and is in line with the cultural context of the community
- Reinforcing the role of healthcare professionals as facilitators of information seeking by training doctors and midwives in order to create a non-judgmental environment and encourage women to ask questions and use reliable sources.

Authors' Contribution

Conceptualization: All authors.
Data curation: Mohammad Zarei, Firoozeh Zare-Farashbandi.
Formal analysis: Mohammad Zarei, Firoozeh Zare-Farashbandi.
Funding acquisition: Firoozeh Zare-Farashbandi.
Investigation: Mohammad Zarei, Firoozeh Zare-Farashbandi.
Methodology: Mohammad Zarei, Firoozeh Zare-Farashbandi.
Project administration: Mohammad Zarei, Firoozeh Zare-Farashbandi.
Resources: Mohammad Zarei, Firoozeh Zare-Farashbandi.
Software: Mohammad Zarei.
Supervision: Firoozeh Zare-Farashbandi.
Validation: All authors.
Visualization: Mohammad Zarei, Firoozeh Zare-Farashbandi.
Writing–original draft: Mohammad Zarei.
Writing–review & editing: All authors.

Conflict of Interests

Authors declare that they have no conflict of interests.

Ethical Issues

This study was approved by Isfahan University of Medical Sciences under ethics code of IR.MUI.NUREMA.REC.1401.147.

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