A Thematic Analysis Of Kuwaiti Women's Attitude, Behaviors, Beliefs, And Awareness About Pregnancy And Optimal Oral Hygiene Care

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Abstract

Background:
During pregnancy, the hormonal and physiological processes are complicated and might predispose inflammation of the gums and caries. In spite of these dangers, there are still lots of pregnant women who do not know the value of professional oral care and preventive dental treatment. The study of oral-health beliefs and practices of women in pregnancy has received little research in Kuwait.
Purpose:
This paper examined the attitudes, beliefs, behaviors, and awareness of Kuwaiti pregnant women to oral hygiene in pregnancy through application of Health Action Model to determine the behavioral and motivational determinants of the behavior.
Methods:
The qualitative exploratory design was adopted. The focus group composed of ten Kuwaiti pregnant women pursuing antenatal care in private clinics and semi-structured interview was used. Thematic analysis was run through NVivo 12 software and Braun and Clarke six-phase framework to transcribe and analyze the data. Reflexive journaling, member checking, and peer debriefing were used to ensure credibility and trustworthiness.
Findings:
There were three key themes: (1) a lack of understanding of the oral systemic health connection, (2) perceived obstacles to professional dental care fear and competing medical advice, and (3) the powerful impact of social norms and self-care beliefs that cultural expectations have. These results imply that the motivational, social, and environmental factors interact with each other to influence oral-health behavior during pregnancy according to the Health Action Model.
Conclusion:
Kuwaiti expectant women were partially aware, and their oral-health behaviors were inconsistent and dependent on fear, misinformation, and cultural rules. The inclusion of oral-health education in antenatal services, as well as the enhancement of partnership between dental and obstetric services, could help to increase preventive steps and maternal health.

INTRODUCTION

The period of pregnancy is a critical factor in the health of both the mother and fetus and the effects of oral health in this case are critical but not given enough attention. Pregnancy itself may predispose women to gingivitis, periodontal disease, and caries, which, in turn, may cause poor pregnancy outcomes, including preterm birth and low birth weight (Boggess & Edelstein, 2006). Nevertheless, even being aware of these risks, a significant number of pregnant women do not use the services of a dentist and tend to use self-treatment or other traditional methods (Amin and ElSalhy, 2014; Dinas et al., 2007).

Recent findings in the Gulf area, such as Saudi Arabia and the United Arab Emirates provide insight into the pervasive lack of oral-health awareness in pregnant women. It has been reported that irregularity of brushing, the myth that dental procedures are unsafe during pregnancy, and poor attendance in the dental clinic were observed (Albasry et al., 2019; Hashim, 2012). In Kuwait, the few available studies demonstrate the same tendencies limited knowledge of oral-health, low levels of preventive care attendance, and irregular hygiene practices (Honkala and Al-Ansari, 2005; Al Khamis et al., 2016). Nonetheless, the majority of these studies are quantitative in nature and do not reflect the underlying psychological, social and cultural variables affecting the oral-health choices of women.

In an attempt to get more insight into these underlying factors, this study uses the Health Action Model (HAM) orchestrated by Tones (1987) and subsequently extended by Tones and Tilford (1994). The model incorporates the cognitive, social, and motivational health behavior elements. It points out that the behavior of a person is not only a consequence of knowledge and his awareness but also by social factors, perceived danger, and motivation preparedness. Applied to pregnancy and oral-hygiene, the model can be used to investigate the ways in which women beliefs, perceived barriers, and cultural expectations can influence the behavior of oral-health.

Based on this, the proposed study will discuss the attitudes, beliefs, behaviors, and awareness of Kuwaiti pregnant women on oral-hygiene practices using a qualitative approach. The research aims at producing context-specific findings, which can make its contribution to the future state of antibiotic and dental practice by exploring those experiences through the prism of the Health Action Model and using them to inform the subsequent public-health campaigns in Kuwait.

MATERIALS AND METHODS

Study Design

The design employed was a qualitative exploratory research design to facilitate the personal experiences, beliefs, and attitudes of the Kuwaiti women who were pregnant regarding oral hygiene. This method was selected to gain detailed and enriching information on the way women perceive and cope with their oral health in the state of pregnancy. To achieve the methodological rigor and transparency, the study adhered to Consolidated Criteria of Reporting Qualitative Research (COREQ) (Pope and Mays, 2006; Anderson, 2010).

Setting and Participants

Ten Kuwaiti pregnant women aged 22–38 years and undergoing antenatal care in the private clinics within the Kuwait City were the participants. The purposive sampling strategy was adopted to create diversities in level of education and trimester of pregnancy (Walker, 2012).
The inclusion criteria were that the participants had to be Kuwaiti, pregnant, and in a position to communicate in Arabic or English. Women who were in hospitals due to complications that were related to pregnancy were excluded.

Sampling and Recruitment

Women interested in the study were contacted by clinicians, who informed their willing participants about the study and referred them to the researcher, in the participating clinics. The process of recruitment was done until data saturation was attained — that is, when we could not find new themes or codes during the analysis process (Walker, 2012). The saturation was reached when ten interviews were conducted because certain ideas and patterns started repeating.

Pilot Study

Pilot interview was done to evaluate the understanding and order of the questions (Anderson, 2010). There were some minor changes aimed at making the wording simple and the discussion more flowing. Pilot interview data were never taken into consideration in the final analysis.

Data Collection

Semi-structured interviews were held between January and March 2021 and included data collection, which was performed either in person or via Zoom, according to the choice of the participants. The length of interviews was about 30–45 minutes. Interviews were recorded and transcribed word-to-word with the permission of the participants. In case of need, the Arabic to English translations were done through back-translation processes to maintain linguistic accuracy of the transcripts (Van Ne set al., 2010).

Interview questions were aimed at discussing the knowledge of the participants about the changes of oral health in pregnancy, their attitude toward dental visits, the safety perception, and self-care practices.

Ethical Considerations

The Institutional Review Board of [Institution Name, Approval No.], gave ethical approval. The involvement was voluntary, and the informed consent forms were signed by all the participants. All audio records and transcripts were stored safely, and coded identifiers were employed so that the names of the subjects could not be revealed.

Data Analysis

Thematic analysis was conducted using NVivo 12 software, following Braun and Clarke's (2006) six-step process:

1. Familiarization with the data
2. Generation of initial codes
3. Search for themes
4. Review of themes
5. Definition and naming of themes
6. Reporting results

Peer review of coded data and use of reflexive field notes enhanced consistency and transparency. Analytical decisions were documented in a reflexive journal, ensuring an audit trail for conformability

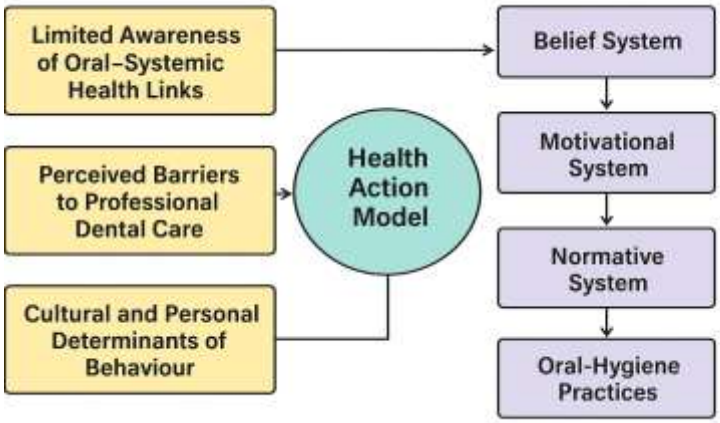

Figure 1 Thematic Analysis Process (NVivo Workflow)

Trustworthiness

In order to create credibility, dependability, conformability, and transferability, the study adhered to the qualitative trustworthiness framework by Lincoln and Guba (Queirós et al., 2017). The interpretations were validated by member checking and peer debriefing and contextual clarity and possible generalizability to similar environments was ensured with the help of thick description.

RESULTS

The number of Kuwaiti pregnant women who were recruited into the study was 10. They were all visiting individual antenatal clinics and belonged to different educational and socioeconomic backgrounds. Oral health awareness, attitudes, and behavior of the women in pregnancy led to the generation of three overarching themes and six subthemes in data analysis.

Participant Characteristics

Table 1: Summarizes the demographic data of the participants. The sample was 22 to 38 years old; one- 7 was in second trimester; three- 3 were in third trimester. The level of education was between secondary and postgraduate. Majority of the participants had visited a dental facility at least once before pregnancy, but only four of them attended dental care during pregnancy**.**

Table 1 Participant Demographics

Participant ID	Age (years)	Trimester	Education Level	Frequency of Dental Visits During Pregnancy
P1	24	2nd	Bachelor's	None
P2	29	2nd	Master's	Once
P3	27	3rd	High School	None
P4	35	2nd	Bachelor's	Twice
P5	38	3rd	Diploma	None
P6	26	2nd	Bachelor's	Once
P7	30	2nd	Postgraduate	Twice
P8	33	2nd	Bachelor's	Once
P9	22	3rd	High School	None
P10	28	2nd	Bachelor's	Once

Theme 1: Limited Awareness of Oral–Systemic Health Links

A majority of the participants were aware that pregnancy may influence the health of the mouth but did not know the biological relationship between gum disease and the product of pregnancy. Although a few of them linked bleeding gums or sensitivity to hormonal fluctuations, not many of them were aware of their risks.

"I know gums can bleed when you are pregnant, but I didn't think it could harm the baby." (P3)

Subtheme 1.1: Misconceptions About Dental Care During Pregnancy

Misinformation and fear related to dental treatment safety were prevalent. Most women did not want to go to a dentist because they were afraid of anesthesia or radiation or the harm to a fetus.

"The doctor said X-rays are not safe; I prefer to wait until after delivery." (P5)

Subtheme 1.2: Reliance on Informal Information Sources

The respondents said that they sought oral-health advice through family members, friends, or social media instead of dental professionals.

"My sister told me to brush gently and use herbal mouthwash; I never asked the dentist." (P8)

These misperceptions and use of informal sources were indicators of low perceived susceptibility, which is one of the determinants of the Health Action Model and actually restrains preventive behavior.

Theme 2: Perceived Barriers to Professional Dental Care

Even though respondents showed their intention to keep good oral health, they had numerous reasons as to why they could not develop professional care.

Subtheme 2.1: Fear of Harming the Fetus

Fears were more often mentioned as the greatest barrier, especially the fear that a dental procedure could be harmful to the baby.

"I'm scared the injection might affect my baby; my mother warned me not to go." (P1)

Subtheme 2.2: Conflicting Medical Advice

Several participants received inconsistent recommendations from different healthcare providers. Some obstetricians advised delaying dental visits, while dentists encouraged immediate care.

"My gynecologist said wait until after delivery, but my dentist said it's okay—so I was confused." (P6)

This ambiguity decreased the belief in medical advice and care-seeking, which undermined the enabling and motivating variables of the Health Action Model.

Theme 3: Cultural and Personal Determinants of Oral-Hygiene Behavior

Women health behaviors were strongly determined by cultural norms and family expectations. Dental care was usually considered as not necessary until the symptoms are severe.

"My family thinks it's not necessary to see a dentist unless there is pain." (P9)

Subtheme 3.1: Influence of Social Norms and Family Beliefs

The family guidance and cultural values strengthen the avoidance of appointments, which is a social perception of baby safety, instead of the adult preventive health.

Subtheme 3.2: Self-Efficacy and Motivation

Despite these barriers, a few participants demonstrated proactive health behaviors, linking self-care to personal and fetal wellbeing.

"I brush twice a day now because I want my baby to be healthy." (P2)

These responses showed that motivation and self-efficacy varied across participants and were closely tied to education level and social support—key motivational components within the Health Action Model.

Summary of Themes

Table 2 presents the major themes and subthemes with representative participant quotes.

Major Theme	Subtheme	Illustrative Quote
1. Limited Awareness of Oral–Systemic Health Links	Misconceptions about dental care	"I thought dental work can harm the baby." (P5)
	Reliance on informal sources	"I ask family or online, not my dentist." (P8)
2. Perceived Barriers to Professional Dental Care	Fear of harming the fetus	"I'm afraid anesthetic can hurt the baby." (P1)
	Conflicting advice from providers	"Doctor said no, dentist said yes." (P6)
3. Cultural and Personal Determinants of Behavior	Social norms and family beliefs	"My family says dentist visits aren't needed." (P9)
	Self-efficacy and motivation	"I brush more to stay healthy for my baby." (P2)

Table 2 Themes and Subthemes Identified Through Thematic Analysis

Conceptual Integration: Health Action Model

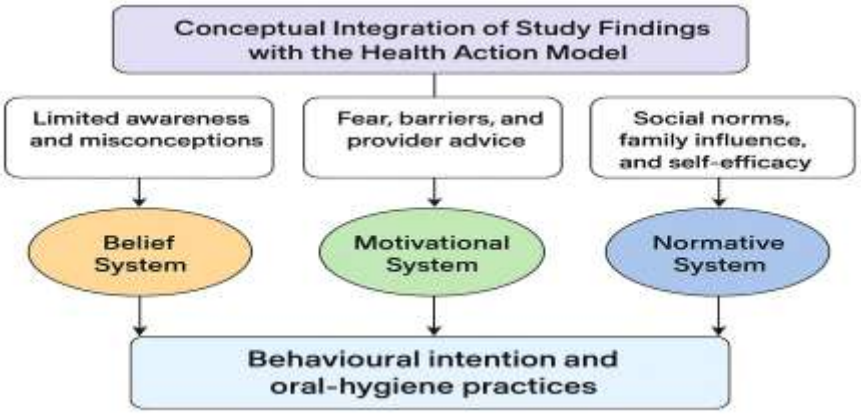

Figure 2 illustrates the integration of findings with the Health Action Model (HAM).

- Knowledge and beliefs (Theme 1): The knowledge and beliefs affect the belief system aspect of HAM.
- Perceived barriers (Theme 2): The second theme is associated with the environmental restriction that undermines the motivational system.
- 5. Cultural and personal determinants (Theme 3) depict the normative influences and self-concept, which determine behavioral intent.

The framework demonstrates that limited awareness and social norms reduce perceived threat and behavioral intention, leading to suboptimal oral-hygiene practices.

Figure 2. Conceptual integration of study findings with the Health Action Model (HAM). The model shows how awareness, barriers, and motivation interact to influence pregnant women's oral-hygiene behavior.

Discussion

This paper presented the belief, awareness, and behaviors of Kuwaiti pregnant women as it relates to oral hygiene using the theoretical framework of the Health Action Model (HAM). The results showed that oral-health practices of women were influenced by three interrelated areas, namely, low awareness, perceived barriers, and cultural personal determinants. Both are cognitive, motivational, and social elements as highlighted in the HAM (Tones, 1987; Tones and Tilford, 1994).

Interpretation of Main Findings

The subjects were generally aware of the effects of pregnancy on oral health without any knowledge on what risks to beware of and the relevance of professional care. This low awareness reflects the results of the research in the neighboring Gulf, where the women reported in pregnancy showed the misunderstanding about the safety of dental treatment (Albasry et al., 2019; Hashim, 2012). Likewise, as Al Khamis et al. (2016) found, Kuwaiti women tended to prefer regarding gum bleeding as a normal physiological phenomenon instead of a clinical issue.

This inaccurate knowledge in the Health Action Model undermines the belief system aspect, which is required to elicit behavioral intention towards preventive action.

The anxiety of harming the fetus became a behavioral inhibitor that dominated, which was anxiety towards dental anesthesia, X-rays, and stress during treatment. These results are consistent with the results of Amin and ElSalhy (2014) and Dinas et al. (2007), who also claimed avoidance as the result of misinformation and inadequate medical guidance. The discrepancy in the dental and obstetric recommendations also weakened the confidence and self-efficacy of women, which were the motivational factors that the HAM framework was built upon. These uncertainties may probably be encouraged by the lack of coordinated interprofessional communication within the Kuwait maternal-care system, as reported by Mossialos et al. (2018).

This was also dependent on cultural influence to shape behavior. Most of the respondents have followed the advice of their family members or avoided treatment after delivery because of the cultural belief that fetal safety is more important than preventive care in motherhood. Such findings resonate with other researchers in Turkey and the Gulf country where oral-health behavior of women is highly determined by a family norm (Ozen et al., 2012; Behbehani and Scheutz, 2004).

On the other hand, there were a few women, mainly better educated women who exhibited proactive behaviors as oral hygiene is linked to responsibility and maternal health. This group expressed more self-efficacy as a major construct in the motivational system of the Health Action Model and expressed the response of how knowledge and empowerment can transcend social constraints.

Integration with the Health Action Model

The application of HAM is what gives a systematic explanation of such dynamics of behavior. The model states that the interplay of three systems determines the oral-hygiene practices:

- Belief System: Perception and knowledge of risk determine whether people consider oral health a priority or not. Misinformation and poor perceived vulnerability also decreased women acting motivation in this study.
- Motivational System: Fear and conflicting recommendations were the emotional and psychological elements that suppressed the desire in women to get care even when they realized that they needed it.
- Normative System: The values of the culture and social pressure directed what the participants considered as desirable behavior in the course of pregnancy. The compliance to the standards of the family restricted the freedom of action of women.

The extrapolation of these results to the HAM shows that the promotion of oral health should focus on addressing the knowledge alone, but also, social norms and emotional confidence, which promotes the relevance of holistic interventions.

Comparison with International Literature

The findings are congruent with the international literature that reveals inadequate use of dental services by pregnant women, which is in most cases less than 50 percent (Boggess & Edelstein, 2006; Wu et al., 2015). Some misunderstandings about anesthesia and X-rays were observed in various situations (Lee and Shin, 2017; Ratnapalan et al., 2008). Nevertheless, the Kuwaiti results vary in terms of the intensity of the sociocultural control a manifestation of collectivist family values giving precedence to traditional advice in comparison with the clinical guidelines. This culture should be taken into consideration in the development of interventions because it influences the normative and motivational elements of HAM.

Practical and Policy Implications

The research highlights the dire situation of the necessity to incorporate the idea of oral-health education within the standard antenatal care. A standardized training and referral system between dentists and obstetricians would minimize cases of conflicting advice and bring on greater confidence in the safety of dental procedures (PHE, 2017).

Public health campaigns in the culture ought to involve the family members in their attempt to combat the traditional beliefs that prevent pre-emptive dental care. Additionally, the necessity of including oral-health screening in prenatal check-ups can be institutionalized at the national level, which facilitates the interdisciplinary collaboration (Ritte & Southerland, 2007; Mossialos et al., 2018).

Strengths and Limitations

This research paper will add a rich qualitative information to the insufficiently studied field of maternal wellbeing in Kuwait. Thematic analysis, NVivo coding, and the Health Action Model are used to offer a rich interpretive approach.

Nevertheless, the small sample size (n = 10) of private clinics restricts the generalizability of the findings to women in the public/rural context. Because it is self-reported, it is also possible that responses are biased in social desirability. The mixed-method design can be used in the future to triangulate qualitative themes with quantitative behaviors of behavior and knowledge (Queirós et al., 2017).

CONCLUSION

This paper researched awareness, beliefs, and practices of Kuwaiti pregnant women toward oral health through the prism of the Health Action Model (HAM). The results have shown that oral-hygienic behaviors throughout pregnancy are influenced by a complex lack of awareness, risk perception and high sociocultural effects. Most respondents showed some false beliefs about the safety of dental treatment, the fear of damaging the fetus, and reliance on family recommendations instead of the guidance of the medical staff. All these issues constrained their desire to use preventive dental care.

The Health Action Model facilitated the understanding of oral-health behavior in women and the role it was played under the influence of knowledge, emotional, and social aspects. Belief system (knowledge and perception of risk), motivational (confidence and fear) and normative (social and cultural expectations) are all mutually related and determined behavior. These systems are necessary that should be strengthened to enhance oral-health outcomes in pregnant women.

Practically, considering these results, one should mention the necessity of combined oral-health education in the antenatal programs to promote the cooperation of dental and obstetric caregivers. The education of women at the individual level in regard to knowledge gaps as well as the socially oriented cultural norms should be employed as a part of the public-health strategies that will enable the healthcare authorities in Kuwait to reduce the misconceptions and ensure that women get the necessary information that is accessible, reliable, and culturally-sensitive.By integrating oral-health promotion with the maternal-care policies, the healthcare authorities will be able to reduce the misconceptions, address the knowledge gaps, and, ultimately, support the healthier pregnancies and the enhanced maternal wellbeing in Kuwait.

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