Original Article

Exploring the Experiences of Health-Promoting Behavior in the Workplace among Thai Pregnant Women: A Phenomenological Approach

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Abstract

Background: Inappropriate working conditions during pregnancy can negatively affect health-promoting behaviors and pregnancy outcomes. This study aimed to explore the experiences of health-promoting behavior in the workplace among Thai pregnant women. **Materials and Methods:** Giorgi's phenomenological methodology was used, and data were gathered through semi-structured interviews with 21 working-pregnant women in large industries in two regions of Thailand. Data were collected from December 2019 to June 2020. Purposive and snowball sampling were used to recruit pregnant women at 13–42 weeks of gestation. To analyze the data, three steps of Giorgi's phenomenological approach were employed. **Results:** The pregnant women described their lived experiences with health-promoting behaviors in the workplace into four major categories. Firstly, "positive attitude toward work in promoting health behaviors" contained three subcategories ("self-discipline," "social interaction," and "self-esteem"). Secondly, the idea that "changing temporary health behaviors is worthwhile for infants" was expressed into two subcategories ("eating adaptation" and "managing negative emotions"). Thirdly, "insufficient support from workplace policy" had three subcategories ("inconvenient accommodations," "inflexible break times," and "lack of healthcare support"). Finally, "negative perception of new work positions" consisted of two subcategories ("stress" and "low self-efficacy"). **Conclusions:** Positive attitudes toward work and infant health may encourage pregnant women to engage in healthy behaviors, while workplace support and policies are important in promoting healthy behavior and avoiding negative emotions. Health promotion interventions should encourage the value of work, promote maternal–fetal attachment, and increase health support policy to avoid mental health issues and promote healthy behaviors among working-pregnant women.

Keywords: *Health promotion, pregnant women, workplace*

Introduction

The participation of women in the labor force has been a part of the economic developments of the last century. Paid work is becoming increasingly normative for women until they marry and have a pregnancy.[1] However, working conditions during pregnancy, such as standing time, shift work and exposure to noise, heat, chemicals, and dust, can negatively affect a pregnant woman's quality of life, health-promoting behaviors, and health outcomes. Some factories require long working hours, overtime, and late-night shifts for pregnant women. These conditions, along with stress, fatigue, and accidents, can lead to poor pregnancy outcomes, including preterm labor.[2,3] However, these unfavorable outcomes can be prevented if pregnant women working in industrial facilities receive appropriate health support and engage in health-promoting behaviors.[4]

Health promotion is a key strategy for achieving the goal of well-being for people of all ages.[5,6] Among pregnant women, health-promoting behaviors are vital to good quality pregnancy outcomes with long-term effects on quality of life for mothers and newborns. However, several previous studies have found low mean health promotion behavior scores among pregnant women.[4] The working contexts of pregnant women reflect negative events hindering the practice of health-promoting behaviors.[3] Moreover, industrial situations and environments are unique in that they may increase the physical and mental risks of pregnant women.[3,7] Healthy behavior should be endorsed during pregnancy

How to cite this article: Nuampa S, Tangsuksan P, Patil CL. Exploring the experiences of health-promoting behavior in the workplace among Thai pregnant women: A phenomenological approach. Iran J Nurs Midwifery Res 2023;28:665-72.

Submitted: 05-Apr-2022. **Revised:** 18-Jun-2023. **Accepted:** 08-Aug-2023. **Published:** 09-Nov-2023.

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Access this article online

Website: https://journals.lww.com/jnmr

DOI: 10.4103/ijnmr.ijnmr_103_22

Quick Response Code:

through abstaining from many risky behaviors, including drinking alcohol and smoking, while avoiding infectious diseases, promoting proper weight gain and exercise, attending antenatal care regularly, and managing stress.[7] In working-pregnant women, several factors are barriers to health-promoting behaviors, such as insufficient knowledge about healthy lifestyles, lack of time and the absence of a comprehensive approach in the healthcare system,[4] relationships with supervisors or co-workers, and inadequate workplace policy support.[3]

Previous studies have shown that health promotion behavior during pregnancy is vital to good pregnancy outcomes. Nevertheless, working-pregnant women encounter several barriers in the working environment with the result of depleted health-promoting behaviors. There are limited reports on how pregnant women's interpretation of and experience with health-promoting behavior at work, particularly in large industries. In Thailand, the workforce is 59% female, which is higher than the global average of 45.9% and similar to other countries such as Indonesia (53%), Canada (60%), and China (62%).[8] There are more than 500 large factories in Thailand, and more than one-third of the Thai female workforce is employed by these factories.[9] More than half of these women experience at least one pregnancy while employed.[10] Therefore, this study aimed to understand interpretations and experiences with health-promoting behaviors among pregnant working women in large industries.

Materials and Methods

In the present study, the semi-structured in-depth interviews were conducted between December 2019 and June 2020. A qualitative phenomenological approach was used.[11,12] Twenty-one pregnant participants aged 20 years or older without complications, such as preeclampsia, gestational diabetes, heart disease, or thyroid disease, at 13–42 weeks of gestation and with ability to read and comprehend the Thai language were recruited for the study. Purposive and snowball sampling were used to recruit the sample at three industrial factories in Chachoengsao and Saraburi Provinces, Thailand. The factories were all large and had more than 1,000 employees producing technology and electronic devices. Recruitment continued until data saturation was achieved, after which enough data were collected to draw necessary conclusions and no new insight appeared.[13]

The researchers recruited pregnant female volunteers via workplace posters and volunteers who contacted the researchers directly to schedule an interview. When potential participants agreed to participate, they were asked to provide written informed consent. All interviews took place in a private setting that was convenient for the women and audio recordings were taken. The in-depth interviews lasted from 60 to 75 minutes. Prior to the main interview questions, general discussion was started to develop rapport. A two-part research instrument developed by the researcher based on the Health Promotion Model[6] and literature reviews about health promotion during pregnancy[14,15] were used, while the content validity of the interview guide was examined by three experts in obstetrics and gynecology. The first part of the research instruments collected data on demographic characteristics, health behavior, pregnancy, and delivery through the Personal Information Form (10-15 minutes to complete). The second part was the interview guide consisting of introductory, transitional, key, and open-ended questions.[16] Eight questions focused on pregnancy perception, health promotion experiences, and insightful opinions during the working pregnancy period. For example, the key questions were, "How do you take care of your health during pregnancy?" "Can you tell us about your health-promoting behavior during pregnancy?" Moreover, probing questions could be asked to clarify meaning during each interview. Data collection continued until saturation was accomplished in analysis.[13]

Giorgi's phenomenology approach was used in this study[12] with three interlocking steps consisting of the following: 1) phenomenological reduction means bracketing past knowledge about the phenomenon encountered and withholding an existential index; 2) the description approach is limited to what is given, and the argument is that a sufficiently rich description would include an intrinsic account of the phenomenon; and 3) the search for essence is the most invariant meaning for a context. In this study, the analysis process began with the verbatim transcription of the recorded interviews in Thai, followed by the extraction of field notes. The interviewer checked for accuracy by listening to the recordings and reading the transcripts to try to extract meaning from the lived experiences of the pregnant women who worked in large industries with health promotion behaviors. Essentially, the researcher had to "bracket" opinions and biases in order to analyze the phenomenon.[12] In order to discover meanings in the data, the researcher needed a sufficiently open attitude to let unexpected meanings emerge without specifically thematizing. Researchers have to rediscover, so the disciplinary value of each meaning unit can be more explicit. The method of free imaginative variation plays a key role in establishing essential intuitions along disciplinary lines. Operationally, the relevant meaning units are formed by a slower rereading of the description, marking the place and continuing to read until the next meaning unit is discriminated against, resulting in a series of meaning units that group similar meaningful experiences. Finally, the researcher re-describes and transforms a series of meaning units in order to determine the essential concrete structure into a subtheme, and the core meaning behind each of these subthemes is outlined into themes.[12]

To determine trustworthiness, this study applied the Lincoln and Guba[17] guidelines. Credibility was ensured

by member checking, which means repeating the meaning for all participants to ensure that the researcher understood the meaning and experiences without bias. In addition, the research team had to follow phenomenological research guidelines by using an audio recorder. Dependability was applied by using the thick descriptions of transcriptions and field notes. Confirmability was determined through audio recordings, immediately recording in the field notes, reading many times until understanding of the meanings was achieved and submitting to peer debriefing. Finally, transferability could be replicated in a similar context or with similar participants.[13]

Ethical considerations

The Human Research Ethics Committee at the primary researcher's institutional facility granted ethical approval (COA No.IRB-NS2019/31.0108). Written informed consent was obtained before starting the interviews with audio recordings. The participants received 10-dollar gift vouchers as reimbursement for their time.

Results

Part 1: Participant characteristics

A total of 21 pregnant women participated [Table 1]. The average maternal age in this study was 31.19 years (4.63). All of the women were married. Most had achieved high school diplomas and vocational certificates (80.95%). Nearly 80% of the participants disclosed sufficient income. Regarding family characteristics, 52.38% lived in nuclear families and 47.62% lived in extended families. In all, 80.95% of the women were multigravida and nearly 20% were primigravida. In addition, more than half of the pregnancies were planned (66.67%). Regarding the quality of prenatal care, most of the women had attended the first antenatal care visit early in the first trimester (66.67%), while nearly all the pregnant women were adherent to regular care (90.48%). The women had average weight gain of 0.45 kg per week during pregnancy within a range from 0.18 to 0.68 (0.15). Work experience averaged 7.59 (4.36), and working hours averaged 8.06 per day (0.24).

Part 2: Qualitative findings

The pregnant women who worked in large industrial facilities in this study valued the positive meaning of pregnant life in terms of psychological fulfilment such as "hopefulness," "happiness," and "having a life goal." In addition, recognizing a sense of motherhood, the women associated pregnancy with being more patient, avoiding risks, and increasing self-control. However, the pregnant women had to perform social roles at work outside the home, describing their experiences with health-promoting behaviors in the workplace from both negative and positive perspectives. Four themes consisted of the following: 1) positive attitude toward work promoting health behaviors; 2) a sense that changing temporary health behaviors is worthwhile; 3) insufficient support from workplace policy; and 4) negative perception of new work positions [Table 2].

Theme 1—Positive attitude toward work promoting health behaviors

Nearly all the pregnant women perceived optimistic aspects of working during pregnancy such as encouraging healthy behaviors in both physical and psychosocial dimensions.

Table 1: Participant characteristics and pregnancy information (*n*=21)

Participants	Maternal age (years)	Gestational age (weeks)	Gravity	Work experience (years)
1	37	14	2	10
2	26	21	4	3
3	33	39	3	5
4	44	20	2	9
5	35	26	2	10
6	27	36	2	1
7	28	35	2	6
8	40	20	4	16
9	27	24	1	12
10	25	37	2	10
11	31	19	2	6
12	33	26	2	3
13	30	15	2	15
14	29	27	2	10
15	25	33	1	4
16	35	35	2	5
17	32	36	1	6
18	33	28	2	6
19	32	32	3	6
20	25	34	1	3
21	28	34	2	4

Table 2: Four themes of experience about health-promoting behaviors in working-pregnant women

Themes	Subthemes
1. Positive attitude toward work promoting health behaviors.	1.1 Motivating self-discipline for healthy behavior.
	1.2 Social interactions can promote pregnancy health.
	1.3 Increasing self-esteem in the working role.
2. Changing temporary health behaviors are worthwhile for infants.	2.1 Adapting food patterns.
	2.2 Management of negative emotions.
3. Insufficient support from workplace policy.	3.1 Inconvenient accommodations.
	3.2 Inflexible break times.
	3.3 Lack of healthcare support.
4. Negative perception on new work positions.	4.1 Encountering stress in adapting to the moment.
	4.2 Perception on low self-efficacy.

The women valued work that could motivate and make them enthusiastic. This type of work enabled them to promote their health, have peer support, and be proud of the feminine role.

As positive perceptions of their work role influenced the women's health-promoting behaviors, three subthemes emerged: motivating self-discipline for healthy behavior; social interactions that promote pregnancy health; and increasing self-esteem in the working role.

Motivating self-discipline for healthy behavior

Several women perceived that working during pregnancy restricted their physical activities and energy in daily life. Working routines allowed them early awakening, meals on time, an early sleep pattern, and physical movement during the day as healthy behaviors that are good for pregnant women. For example, a 34-week primiparous woman explained how working in pregnancy could increase physical movement and patience in daily living as in the following statement: *"Working during pregnancy makes me more physically active, not lazy, and increases my patience. If I wasn't working, I'd sleep, watch television, and be a lazy postpartum mom" (Participant 20).*

Social interactions can promote pregnancy health

Several women described the workplace as a pregnancy support group offering them health information and support among women with a variety of experiences, including reducing stress, showing empathy, sharing information for promoting health during pregnancy, and providing healthy foods. A multiparous woman admitted that she had received useful health information from her friends in the workplace, as she described below: "*I can meet other pregnant women in my workplace. We talk and exchange ideas together and I get to know new information for my baby. If I stayed only at home…it would make me stressed" (Participant 5).*

Increasing self-esteem in working roles

Some women admitted that working during pregnancy allowed them to earn income with savings for the future in addition to supporting their families. This perception may boost self-esteem on the job during pregnancy and affect psychological health. A multiparous woman said, *"If I didn't work, I wouldn't earn any income. I want to save some money for my child's future" (Participant 21).*

Theme 2—Changing temporary health behaviors is worthwhile for infants

Most of the pregnant women perceived that infant health was an optimal concern worthy of making some changes toward healthy behavior. They believed in a strong association between their health and the health of their babies that could motivate health-promoting behaviors. Interestingly, nine months was a valuable time for building good health for the women's babies and resulted in long-term healthy children in the future.

For example, a multiparous pregnant woman described, *"If I take good care of myself during this time, I will get a healthy child when he grows up. I will not suffer during that time, so it is a worthwhile investment" (Participant 11).* These perceptions had two subthemes:

Adapting food patterns

All the pregnant women strongly perceived the links between healthy foods and healthy babies. They mentioned the essential nature of high nutrition and clean foods for promoting the health of mother and child, while some beliefs affected eating patterns, such as the belief that drinking coconut juice would result in white skin for the baby or the belief that eating fatty meat would increase vernix for the baby. The women tried to adapt their eating behaviors to be healthier and quit eating unhealthy foods. For example, a multiparous pregnant woman described her changing experiences with not eating unhealthy foods and starting to eat healthier foods, as she said, *"Actually, I used to prefer eating snacks and hated vegetables. When I got pregnant, I tried to change my bad habits. I want to take care of myself by eating healthy foods, because everything I eat goes directly to my baby" (Participant 21).*

Management of negative emotions

Several of the pregnant women tried to reduce and eliminate their negative emotions in several ways by using similar methods consisting of *"letting it go," "allowing time for relaxation,"* and *"escaping from stressors."* For example, a multiparous woman tried to escape from stressors in the workplace, as she said, *"I don't want to care about someone who will hurt me by their negative words, so I walk away when they gossip. If I hear and pay attention, I might start overthinking and feel stressed. I think this method is great for me" (Participant 8).*

Theme 3—Insufficient support from workplace policy

Nearly all the pregnant women who still worked in routine life were concerned about insufficient support policy in workplace barriers to their healthy behaviors consisting of inconvenient resting space, distance from toilet and canteen, stricter break times, and lack of specialist care in the workplace. These concerns had three subthemes:

Inconvenient accommodations

Several of the pregnant women needed more resting places during break and lunch times as well as toilets especially for pregnant women. They did not want to walk a long way or upstairs during the last trimester, while this trimester usually makes them easily fatigued and slow to move. Some workplaces did not provide space for pregnant women to take breaks and rest or nap, which directly influenced illness and unhealthy behaviors. For example, a 35-week pregnant woman described her uncomfortable accommodations in workplace, as she said, *"When I go to the canteen, it is so*

difficult, because I have to go upstairs to the second floor and far from here. I have to change into a new uniform every time…it's not comfortable" (Participant 7).

Inflexible break times

Several women described their difficult daily work environments, which included strict break times and inappropriate management for pregnant women, particularly in the third trimester. Another 32-week pregnant woman admitted that she often felt hungry and sleepy during work, but workplace policy did not have flexible times and comfortable places, as she described, *"I often feel hungry during work. I can't eat anything during a short break because the canteen is located so far away. I also feel sleepy sometimes. I just close my eyes for a while. My boss blames me and cuts my points, which affects my bonus" (Participant 19).*

A 34-week pregnant woman complained that the breakroom was far away from her workstation, while she had limited time, *"It's so far from my workstation. I have only 7-8 minutes to take breaks during the morning and afternoon. So, I decided to eat food or milk in front of the restroom" (Participant 20).*

Lack of healthcare support

Some women were concerned about fetal safety during work and perceived lack of healthcare support and specific antenatal consultation about the workplace. A 32-week pregnant woman needed health information to promote healthy behavior during pregnancy, as she recommended, *"I'd like to watch videos during lunch to learn about pregnancy care and how to have a healthy pregnancy. It'd be great!" (Participant 17).*

Another primiparous woman was concerned about fetal health and needed specialist support during work, as she expressed, *"The workplace should have medical equipment and a nurse specialist for pregnant women such as a fetal heart rate monitor. If I notice a decrease in fetal activity, I don't want to wait a day; I want to check it right away while I'm at work" (Participant 15).*

Theme 4—Negative perception on new work positions

Most of the pregnant women in this study had work experience of at least 3 years. They had been obligated and responsible for their jobs since before pregnancy. When the women became pregnant, their work tasks temporarily changed, requiring more adaptation to new responsibilities and insufficient family income. These situations might have caused negative feelings such as stress and low self-esteem, which might obstruct positive psychological aspects. The following two subthemes emerged as negative perceptions of working-pregnant women:

Encountering stress in adapting to the moment

Even though their new jobs offered more safety, some women had no prior training and needed more concentration, which led to more stress. For example, a multiparous woman stated that she felt stressed in her new position, as she said, *"Even though I had to change my work to be easier and more comfortable, I concentrate more than in the past, which makes me stressed. I worry about making a mistake" (Participant 2).*

Several mothers admitted that reducing work times affected their incomes. Pregnancy was a difficult time to deal with economic stress in their households. A woman who already had two children complained that she felt stressed due to income insufficiency. She said, *"Actually, I used to make more money with overtime. Now I worry and stress about being a burden to my husband" (Participant 7).*

Perception of low self-efficacy

A few mothers perceived low self-ability resulting in physical changes during pregnancy. This consequence affected their work capacities compared to the past. Some women worried about peer relationships and blame. A multiparous pregnant woman perceived negative emotions due to decreased ability to do her job: *"I'm tired of myself, because I can't work as hard as I used to before becoming pregnant… That makes me feel stressed about my ability" (Participant 5).*

Discussion

The findings of this study show that the pregnant women who participated valued health-promoting behaviors related to their infant health. Moreover, working roles during pregnancy affected experiences with health behaviors in both positive and negative ways in terms of physical, mental, and social impacts. Optimistic experiences for health promotion in working-pregnant women were mostly associated with intrapersonal influences, whereas health-impairing behaviors were associated with workplace environmental factors.

In terms of positive experiences with health-promoting behaviors in the workplace, the women expressed optimism about how their multiple roles facilitated healthy behaviors in all aspects. This study reported that work plays a role in motivating pregnant women to increase self-control in healthy activities. Self-control processes accounted for significant variance in behavior in pregnant women in previous studies.[18] New mothers reported higher levels of self-control during pregnancy and significant decreases in self-control from pregnancy until 6 months postpartum.[19] This study added a new aspect of work promoting self-control of health-related behavior during pregnancy. Pregnancy-specific health-related behaviors require initiation, maintenance, or modification during pregnancy, including healthy eating, physical activity, supplementation, screening tests, and preparation for birth.[20] Moreover, this study revealed that working during pregnancy could increase a woman's self-esteem.

According to a previous study, the level of self-esteem has been observed to be high among employed pregnant women compared to unemployed women.[21] Employment outside the home tends to strengthen spirits and bring positive psychological benefits.[22] This finding supports the idea that health-promoting behaviors require sustained efforts that depend upon positive views of the self that are beyond the scope of pregnancy. Furthermore, this study reported that informal peer support was a vital influence on health-related behaviors through sharing experiences, information, and emotional support. Positive effects across peer interventions influenced behavior change and had promising effects on health outcomes, including improved knowledge, attitude, beliefs, social connectedness, and engagement.[23] However, some past evidence has reported negative effects of work on health-related risks and behaviors during pregnancy and early motherhood.[24,25]

Furthermore, this study showed the pregnant women's perception of a healthy infant as the optimal expectation to be key in changing health behaviors. Similarly, previous studies have suggested that maternal–fetal relationships may facilitate behavior changes in pregnant women.[26] A study in Iran showed that health practices and maternal–fetal attachment were positively and significantly correlated with pregnancy outcomes.[27] A mother's attachment to the fetus would develop during pregnancy and help the mother prepare for the transition to motherhood.[28] Antenatal bonding increases in quality and intensity across the pregnancy period. Maternal–fetal bonding in the antenatal period is important because problems with bonding have been associated with negative health behaviors in pregnancy such as alcohol and nicotine use.[29,30] Moreover, dietary behavior was the first important change for the fetus in this study. Dietary changes adopted since the early days of pregnancy included consuming more fruits, vegetables, dairy products, and high-fiber foods.[31] However, some studies reported that dietary intake has been demonstrated to not meet the recommended food and nutrition intakes for pregnancy. Dietary behavior can be influenced by knowledge, which relies on seeking dietary information.[32] Therefore, antenatal health promotion should motivate maternal–fetal bonding for behavior changes and employ quality information on health-promoting behavior.

Regarding barriers to health-promoting behavior in working pregnant women, the pregnant women in this study requested workplace support policies, including a friendly environment and specialized support. Similarly, previous studies have found that pregnant women need accommodation support to help prevent adverse effects in the workplace.[33,34] Pregnant women with fatigue should be allowed flexible schedules and temporarily modified tasks with preparation of cots for lying down and taking breaks as needed.[33] However, this study did not mention workplace hazards such as chemical exposure and loading work activities, while the literature considered only common cases of adverse pregnancy outcomes.[3,4,25] Remarkably, this study showed the pregnant women's needs to healthcare providers who are experts in antenatal care in the workplace. Midwives and obstetrical nurses are trusted sources of information during pregnancy who can offer lifestyle advice and support.[35] However, they need comprehensive understanding of both healthy lifestyle promotion in pregnant women and their own role in antenatal care to support pregnant women in health behavior change to achieve positive outcomes.[36,37] In Thailand, large industries have to hire professional nurses to work full or part time. However, these nurses do not specialize in advanced midwifery. Thus, health professionals, particularly nurses in the workplace, should be trained in effective case management, consultation skills, health-promoting information, and support among pregnant women to improve health behaviors and pregnancy outcomes.

In addition to perception of new work positions, the study found that the pregnant women felt stressed with a sense of low self-efficacy potentially leading to negative mental health outcomes. A professional image is the aggregate of others' perceptions of an individual's competence and character in the workplace.[38] The transitional nature of pregnancy can leave women feeling anxious and stressed about their professional image and pregnant condition, particularly in the workplace.[3] Pregnancy-specific stress is associated with the practice of health-impairing prenatal behaviors.[14] Moreover, women felt the workplace culture was not "people-centered" and gave rise to excessive workloads and increased stress levels.[39] To eliminate the discrimination that pregnant women encounter, workplaces need to focus on creating environments in which women feel supported and prepare them for temporary changes in work positions. Working under supportive policy with a supportive supervisor and colleagues may diminish stress and prevent low self-efficacy, while nurses or health professionals in the workplace should be concerned and assess mental health in this transitional period. The limitations of this study might prevent application of the findings to other types of industries, except in large industry contexts and high-risk pregnant women.

Conclusion

The health promotion experiences of working pregnant women revealed positive perception of work and value of pregnancy linked with changing healthy behavior for fetal health. While workplace support is a vital component in facilitating health-related behavior at work through supportive environments, flexible schedules and provision of health professional specialists. Furthermore, negative mental health issues should be addressed by changing professional image identity in relation to new work during pregnancy.

Acknowledgments

The authors would like to thank the funding source of this work. This research project was supported by the China Medical Board of New York, Inc., Faculty of Nursing, Mahidol University. In addition, the authors would like to thank all the pregnant women who participated in this study, particularly the management teams of the large industries who facilitated the researchers in their work.

Financial support and sponsorship

China Medical Board of New York, Inc., Faculty of Nursing, Mahidol University

Conflicts of interest

Nothing to declare.

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