ORIGINAL ARTICLE

# Barriers and Facilitators of Weight Management in Pregnancy for Women Overweight and Obese: A Qualitative Research

Elahe Banafshe[1], MSc; Nahid Javadifar[2], PhD; Zahra Abbaspour[2], PhD; Majid Karandish[3], PhD; Saeed Ghanbari[4], PhD

[1]Student Research Committee, Nursing and Midwifery School, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran
[2]Department of Midwifery, Reproductive Health Promotion Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran
[3]Nutrition and Metabolic Diseases Research Center, Clinical Sciences Research Institute, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran
[4]Department of Biostatistics and Epidemiology, School of Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

**Correspondence:**
Nahid Javadifar, PhD;
Department of Midwifery, Nursing and Midwifery School, Ahvaz Jundishapur University of Medical Sciences, Golestan Ave, Ahvaz, Iran
**Tel:** +98 9166121693
**Email:** nahidjavadifar_341@yahoo.com
**Received:** 10 April 2025
**Revised:** 16 May 2025
**Accepted:** 06 June 2025

## Abstract

**Background:** Excessive gestational weight gain (GWG) in overweight/obese pregnant women has multiple adverse outcomes on maternal and neonatal health. A better understanding of pregnant women's perceptions and experiences regarding barriers and facilitators of weight management during pregnancy is necessary to develop interventions to prevent excessive GWG among this group.

**Methods:** This qualitative study was conducted with 16 pregnant women having a body mass index (BMI) over 25. Data were collected through semi-structured in-depth interviews and analyzed using conventional qualitative content analysis.

**Results:** The findings of this study were categorized into two main themes: barriers and facilitators of weight management during pregnancy. Barriers included six subcategories: overeating due to previous habits and context, eating changes related to pregnancy, beliefs about weight management, physical activity limitations, difficulty adhering to a diet, and the use of defense mechanisms. Facilitators were grouped into three subcategories: social support from spouse, family, and friends; focus on weight control motivation; and education and counseling.

**Conclusion:** This qualitative study analyzed the challenges and facilitators of weight management in overweight and obese pregnant women. The results indicate multiple barriers and success factors affecting weight management. These findings emphasize that effective interventions should focus on identifying and overcoming existing barriers while strengthening facilitating factors, providing appropriate social and educational support considering cultural and individual beliefs to ensure better maternal and neonatal health outcomes.

Please cite this article as: Banafshe E, Javadifar N, Abbaspour Z, Karandish M, Ghanbari S. Barriers and Facilitators of Weight Management in Pregnancy for Women Overweight and Obese: A Qualitative Research. J Health Sci Surveillance Sys. 2025;13(3):265-274.

**Keywords:** Pregnancy complications, Maternal obesity, Weight gain, Qualitative research

## Introduction

The increasing prevalence of obesity is a major public health concern worldwide, with significant consequences for pregnant women.[1] In the United States, the prevalence of obesity in pregnant women ranges from 18% to 34%, while in European countries it varies between 7% and 25%.[2] In Iran, recent studies indicate that almost 30% of pregnant women are classified as obese or overweight.[3] Pregnant women significantly contribute to the "obesity epidemic" due to excessive weight gain during pregnancy and the inability to lose the extra weight post-pregnancy.[4]

Pregnant women with high BMI (Body Mass Index) are at risk for complications such as gestational diabetes, preeclampsia, cesarean delivery, postoperative infections, and prolonged hospital stays postpartum.[5] Maternal obesity increases the risk of slow labor progression and instrumental delivery.[6, 7] Additionally, these women are less likely to initiate and continue breastfeeding and may be at higher risk for postpartum depression compared to women with normal BMI.[5] In 2009, the Institute of Medicine (IOM) published guidelines for weight gain based on pre-pregnancy BMI.[8] Therefore, by keeping the pregnancy weight gain within the IOM range or less, obese women can reduce the health risks associated with pregnancy and contribute to the health of themselves and their fetus.[7]

National and international guidelines for weight management during pregnancy focus on dietary and exercise recommendations. However, studies indicate that the current methods of weight management during pregnancy are ineffective.[5] Interventions limited to diet and exercise are insufficient because excessive weight gain during pregnancy is attributed to various factors, including physiological, individual, social, and environmental factors, with complex psychosocial risks often overlooked in prenatal care.[8] Identifying modifiable risk factors influencing the progression of obesity is crucial.

While some research exists on women's experiences of weight gain during pregnancy, there is a lack of deep understanding regarding the specific experiences and perceptions of overweight and obese pregnant women. Examining these perspectives is essential for designing more effective weight management interventions tailored to this population.[9]

## Methods

This qualitative study used a conventional qualitative content analysis approach to analyze data collected through semi-structured in-depth interviews with 16 pregnant women. This approach involves systematically organizing and interpreting textual data to uncover patterns and themes without using specialized software for analysis.[10]

The study utilized an interpretive paradigm to explore the experiences and perceptions of overweight and obese pregnant women regarding weight management during pregnancy.[11] The study included 16 pregnant women with a pre-pregnancy or early pregnancy BMI over 25. Data were collected between October and December 2022 at comprehensive health care centers in Ahvaz, southwestern Iran. These centers serve a diverse population, allowing for varied sampling. Ethical approval was obtained from the ethics committee of Ahvaz Jundishapur University of Medical Sciences (IR.AJUMS.REC.1401.310).

Participants were selected using purposeful sampling to ensure diverse representation. Inclusion criteria were the ability to speak Persian, a healthy singleton pregnancy, maternal age of 18 years or older, and a BMI over 25 (pre-pregnancy or early pregnancy). Exclusion criteria included bed rest as prescribed by a doctor, self-reported psychological disorders such as anxiety or depression under medical supervision, a history of psychiatric hospitalization, alcohol or drug use during pregnancy, a history of eating disorders, multiple pregnancies, and pre-pregnancy diabetes.

### *Data Collection*

Semi-structured interviews were conducted using a guide designed to explore the participants' experiences in weight management. The interviews took place in a private room at the healthcare center. The study was conducted by a team of five researchers: EB conducted the interviews, while coding and data analysis were independently performed by two researchers (EB and NJ). Discrepancies were resolved through discussion and consensus with a third researcher (ZA). The analysis process involved regular discussions among NJ, EB, ZA, MK, and SG to ensure reliability and minimize biases.

In the maternity clinic waiting room, before prenatal care, the researcher introduced himself and the study, answering the participants' questions. Using open-ended questions like "Please describe your experience managing weight during pregnancy," "How did you feel and experience when trying to control your weight?" and "What did you do to control your weight?", the researcher encouraged mothers to share their weight control experiences during pregnancy.

Interviews lasted 45 minutes and were recorded after obtaining informed consent, and field notes were taken to ensure a deeper understanding of participants' meanings. A total of 16 interviews were conducted until data saturation, meaning no new themes emerged from additional interviews. Audio recordings were made using a digital voice recorder (Olympus VN-541PC). Transcriptions were done manually, and handwritten notes were taken during interviews to capture non-verbal cues and immediate reflections.

### *Data Analysis*

Data were analyzed manually without specialized software. The analysis followed the method suggested by Braun and Clarke, including:

1. Familiarization with the data: Transcripts were reviewed multiple times for deep familiarity with the content.

2. Generating initial codes: Initial codes were developed by systematically highlighting and

annotating interesting features of the data.

3. Identifying and reviewing themes: Codes were collated into potential themes, which were reviewed and refined by grouping related codes.

4. Defining and naming themes: Themes were clearly defined and named to reflect their content and significance.[12]

To ensure the trustworthiness of the study findings, we employed several techniques throughout the research process:

Triangulation: To enhance the credibility of the findings, data triangulation was used. This involved using multiple data sources, including in-depth semi-structured interviews, field notes, and consultations with other researchers. By comparing and cross-referencing data from different sources, the researchers were able to validate the findings and ensure a more comprehensive understanding of the participants' experiences.[13]

Peer Debriefing: Regular discussions and debriefings with research team members were conducted throughout the study. These discussions provided an opportunity to challenge assumptions, address potential biases, and ensure that the data analysis remained objective and grounded in the participants' experiences.[14]

Reflexivity: The researchers engaged in reflexive practices to acknowledge and mitigate any potential biases or preconceptions that could influence the study. Reflexivity involved maintaining detailed field notes about the researchers' perspectives and experiences throughout the research process. These notes were reviewed regularly to reflect on how personal biases might have affected the data collection and analysis.[15]

Audit Trail: An audit trail was maintained to document the research process and decisions made throughout the study. This included detailed records of data collection procedures, analytical steps, and decision-making processes. The audit trail provided transparency and allowed for an external review of the methodology and findings of the study.[16]

Code-Recode Procedure: The initial coding of the data was conducted independently by two researchers (EB and NJ). To ensure the consistency and reliability of the coding process, we recoded the data after some time, and any discrepancies were resolved through discussion. This process helped to verify the accuracy and consistency of the data analysis.[13]

By implementing these techniques, the study aimed to enhance the trustworthiness and rigor of the qualitative research findings, ensuring that the results are reliable and reflective of the participants' true experiences.[17]

## Results

Sixteen interviews were conducted with a diverse sample of overweight/obese pregnant women. The participants' age ranged from 19 to 42 years, with pre-pregnancy or early pregnancy BMI ranging from 28.3 to 52.5. Most participants had a history of miscarriage, cesarean section, hypertension, or gestational diabetes (Table 1). In this study, 9 themes were categorized into two general classes of barriers and facilitators to weight control during pregnancy (Table 2).

### *Barriers to Weight Control during Pregnancy*

Participating mothers mentioned a wide range of barriers, including overeating related to previous and contextual habits, changes in eating habits related to pregnancy, physical activity limitations, difficulty following a diet, personal beliefs, attitudes, and

**Table 1:** Sociodemographic characteristics of the participants in the qualitative research

| ID | Age | History of pregnancies[1] | Education level | Occupation | Pre-pregnancy BMI | Ethnicity | Gestational age at the time of interview | Economic status |
|---|---|---|---|---|---|---|---|---|
| 1 | 33 | G4P3L2ab1 | Bachelor's | Housewife | 35 | Fars | 36 W[2] | Moderate |
| 2 | 25 | G2P1L2 | Primary school | Housewife | 40 | Arab | 35 W + 4 D[3] | Week |
| 3 | 37 | G3P2L2 | Diploma | Housewife | 40 | Fars | 36 W + 2 D | Moderate |
| 4 | 19 | PG[4] | Diploma | Housewife | 29.3 | Arab | Postpartum | Week |
| 5 | 34 | G4P3L3ab1 | Middle school | Housewife | 40 | Turk | Postpartum | Moderate |
| 6 | 28 | G4P4L4 | Primary school | Housewife | 43.5 | Arab | Postpartum | Week |
| 7 | 26 | G4P3L3 | Middle school | Housewife | 39 | Arab | 32 W + 3 D | Week |
| 8 | 27 | G4P1L1ab3 | Middle school | Housewife | 27.75 | Arab | Postpartum | Moderate |
| 9 | 40 | G3P2L2 | Middle school | Housewife | 35 | Arab | 33 W | Week |
| 10 | 37 | G8P2D2ab5 | Bachelor's | Housewife | 43.5 | Fars | 34 W | Good |
| 11 | 32 | G3P1L1ab1 | Bachelor's | Housewife | 42.45 | Fars | 33 W | Moderate |
| 12 | 36 | G4ab3 | Master's | Employed | 52.5 | Fars | 36 W + 2 D | Week |
| 13 | 39 | G5P4L4ab1 | Primary school | Housewife | 32 | Arab | Postpartum | Moderate |
| 14 | 22 | PG | Diploma | Housewife | 28.3 | Arab | 33 W | Moderate |
| 15 | 42 | G5P4L4ab1 | Master's | Employed | 41 | Fars | Postpartum | Good |
| 16 | 37 | G5P2L2ab2 | Diploma | Housewife | 48 | Fars | 34 W | Moderate |

G: Gravid; P: Parity; L: Live's child; D: Died's child; ab: Abortion; W: Week; D: Day; PG: Primigravid

**Table 2:** Subcategories, categories, and themes related to experiences of weight management of pregnant women with overweight and obesity

| Themes | Categories | Subcategories |
|---|---|---|
| Obstacles to weight control during pregnancy | Overeating is related to previous habits and backgrounds | Eating unconsciously |
| | | Conscious overeating |
| | | Continuation of unhealthy dietary habits, since childhood and adolescence |
| | Changes in eating habits related to pregnancy | Related to the fetus |
| | | Related to the mother |
| | Restriction of physical activity | Infrastructures |
| | | Cultural |
| | | Physical problems |
| | | Failure to manage time |
| | | Climatic conditions and residence |
| | Difficulty in following a diet | Difficulty in obtaining food supplies |
| | | Difficulty in starting and maintaining a diet |
| | Beliefs | Related to weight control |
| | | Related to body image |
| | Employment of defense mechanisms | Searching for a culprit for the lack of success in weight control and making excuses |
| | | Postponing weight control until after childbirth |
| Facilitators of weight control during pregnancy | Social support | Physical support |
| | | Emotional support |
| | Focus on weight control motivations | Related to the mother |
| | | Related to the fetus-child |
| | Education and counseling | Education for the spouse |
| | | Internet and virtual spaces |
| | | Midwife and physician |

perceptions about weight control and body image, and the use of defense mechanisms.

1. Overeating related to previous habits and background: This category includes subcategories of unconscious eating, conscious overeating, and continuation of unhealthy eating habits from early life stages. Participants in this study reported that unconscious eating, which involves eating quickly and not paying attention to the amount of food consumed, was influenced by their overeating related to previous habits and background.

"When I'm upset, I eat a lot, I have a big appetite, I don't realize that I'm eating too much, and I'm not aware of it." (Participant 5)

Mothers also referred to conscious overeating for reasons such as gaining a sense of calm and pleasure from eating non-nutritious foods (snacks, fast foods) and not understanding the feeling of fullness.

*"When I'm upset or I get angry, I go and eat; that's how I deal with it. I eat more to calm myself down." (Participant 4)*

Participants used conscious and unconscious eating to control their stress. Additionally, they believed their current overeating continued from childhood and adolescence eating habits and family eating patterns.

2. Changes in eating habits related to pregnancy: Another barrier to weight control is the changes in eating habits related to pregnancy, which can be linked to the mother or the fetus.

Mother-related: Participating mothers cited physiological changes due to pregnancy, such as nausea and vomiting, pregnancy cravings, physiological hunger, and the need for increased meals during pregnancy as the barriers to weight management.

*"I have a strong craving for snacks; I have to eat snacks and pickles." (Participant 12)*

Fetus-related: Mothers believed that consuming more food during pregnancy was essential for their baby's health and that increased hunger during pregnancy reflected the unborn child's nutritional needs. They were concerned that insufficient weight gain might harm the baby.

*"I was afraid that if I controlled my weight, it might be a problem for the baby, or if my diet was wrong; that's why I didn't follow a diet." (Participant 1)*

3. Limitations in Physical Activity: Mothers attributed the limitations in physical activity to factors such as lack of financial means and access to sports facilities, cultural factors, inability to allocate time for physical activity, physical problems related to the mother or placenta, or fetus, and weather conditions. Cultural beliefs and the lack of social acceptance of women exercising in public were also significant factors. Some believed that doing regular housework could be a suitable and sufficient alternative to regular physical activity. Others thought that overall physical activity could harm the fetus. Additionally, societal culture led to fears of stigmatization, being judged,

and embarrassment, contributing to insufficient physical activity.

*"I can't go for a walk because if my husband's family sees me outside, they will talk, so I can only go to the gym." (Participant 7)*

*"They told me to walk for twenty minutes a day. I said it's hot; the doctor told me to walk at home. Our house was small, and I said, am I crazy to walk around myself ?!" (Participant 5)*

Mothers expressed concerns about the safety of physical activity for their babies. Most women reported that their physical activity was limited to daily housework such as climbing stairs, cleaning, playing with children, and walking. Some mothers considered their physical problems, such as back pain, or the risk of preterm delivery or placenta previa, as unavoidable barriers to physical activity.

*"I had a history of premature delivery, and my placenta was down in this pregnancy, so I really couldn't do anything during pregnancy. I had no mobility; that's why I gained weight." (Participant 13)*

4. Difficulty in maintaining a diet: Weight control and following a diet are a significant challenge for overweight/obese pregnant women. These women found it challenging to follow a diet mainly due to the difficulty in obtaining food items and starting and maintaining a diet. Preparation of two different meals for themselves and their families, need to weigh food items, underlying medical conditions requiring specific diets (anemia, diabetes, etc.), and the high cost of dietary foods made following a diet difficult.

*"..., I had to prepare something different for them and something diet-friendly for myself. It's very difficult." (Participant 1)*

Additionally, the monotony and lack of variety in food, the long time to see the results (weight control), and focus on unsuccessful past weight loss experiences were challenges related to starting and maintaining a diet during pregnancy.

*"I did try to lose weight, and I repeatedly approached a diet and exercise, but as soon as I didn't exercise or pay attention to my nutrition, if I had lost two kilograms, after a while, four kilograms was gained." (Participant 16)*

5. Beliefs: Negative beliefs about weight control, concerns about body image, and the inevitability of weight gain were significant barriers. Mothers' experiences showed that beliefs related to weight control, such as the impossibility of weight control in older pregnant women, the inevitability of getting fat during pregnancy, and more weight gain being a sign of a healthy fetus, negatively impacted their efforts to control weight.

*"I think if I were younger, maybe I could do it, but now, at 39 years of age, I really can't control my weight." (Participant 13)*

Beliefs like becoming ugly with weight loss, the insignificance of body fitness after marriage, and the preference for facial beauty over body fitness affected weight control during pregnancy though these beliefs are not necessarily related to pregnancy.

*"My face and under my eyes would become dull and dark with the diet, so I said forget about it; my face is more important than my figure." (Participant 12)*

6. Deployment of defense mechanisms: The study results showed that these mothers used defense mechanisms such as making excuses and seeking scapegoats for their failure to control weight and comforting themselves by postponing weight loss until after pregnancy to justify the lack of proper weight management during pregnancy. Participants often delayed weight control efforts, made excuses, or blamed external factors.

"After childbirth, I breastfeed the baby; I want to go to the gym with my sister, and I plan to lose weight after childbirth." (Participant 12)

Facilitators of Weight Control During Pregnancy

The experiences of mothers showed that significant facilitators such as access to social support resources, focus on weight control motivations, and education and counseling are important and influential factors in weight management during pregnancy.

1. Social Support Resources: Key social support resources, including spouses, family, and friends, play a crucial role in providing physical and emotional support to mothers for weight control. Physical support in the form of companionship in maintaining a healthy lifestyle and helping create leisure time for the mother is very important. According to these mothers' experiences, family support, especially from the husband, in modifying dietary habits and accompanying physical activity, had significant positive effects on their weight control. Combining this support with assistance in childcare and housework doubled these positive effects. Participating mothers emphasized the need for this support for weight control.

*"If I wanted to eat more junk food, my family, especially my spouse, would warn me." (Participant 1)*

According to the mothers' experiences, receiving emotional support such as continuous encouragement to maintain the diet and control weight, receiving repeated reminders of the benefits of weight control, loving and attentive warnings, and considering the mother's weight control as a family goal had a great impact on weight management.

*"My family supported me; they didn't bring things into the house that I crave or like to eat, such as soft drinks, desserts, or other things." (Participant 1)*

2. Identification and focus on weight control motivations: Mothers' experiences indicated that personal and fetus-related motivations significantly impacted weight management efforts.

Mothers considered focusing on motivations such as improving body image, emphasizing physical and emotional benefits, having a safer delivery, and enhancing sexual relationships as effective in better weight management during pregnancy. For some mothers, having a body shape that matches social norms, easily finding clothes, using previous clothes, and appearing younger were strong motivations for weight control. Some emphasized the physical benefits of weight control, such as feeling more energetic, reducing pregnancy and childbirth complications, and avoiding adverse health outcomes related to being overweight.

*"Now that my weight is decreasing, I feel lighter. Before, I used to suffer from back pain when walking; now I feel good, lighter, and my knees and ankles don't hurt when walking." (Participant12)*

*"I will be upset if my child grows up and says, "My friend's mom is not fat, why are you fat? " (Participant 12)*

*"... I didn't know that being overweight during pregnancy would have so many complications, but since I was hospitalized due to high blood pressure, I wish I had taken care of it from the beginning. I should have controlled my weight before pregnancy." (Participant16)*

For the vast majority of mothers, fetus-centered motivations were more important. According to mothers' experiences, using motivations such as the impact of weight control on fetal health and successful breastfeeding was highly effective in encouraging them to control their weight during pregnancy.

"Before pregnancy, I liked snacks, but I didn't eat them much during pregnancy because they said it's harmful." (Participant 4)

3. Education and Counseling: The study results indicated that the role of education and counseling, especially through healthcare providers such as midwives, physicians, and nutritionists, was crucial in facilitating weight management. This education and counseling should cover various aspects of weight control, including dietary recommendations, exercise guidelines, and the risks associated with being overweight during pregnancy. Continuous follow-up and support by healthcare providers were also considered beneficial.

*"My spouse encouraged me by saying things like your skin has become brighter, your sides have become smaller. These comments increased my motivation to lose more weight." (Participant1)*

Providing education and counseling via the Internet and virtual platforms through the introduction of reputable websites was emphasized by the mothers as an appropriate and cost-effective method. Many women identified the lack of knowledge as a significant barrier to appropriate weight gain during pregnancy. Women spoke about the lack of access to reliable information regarding nutrition and weight gain during pregnancy. Most participants reported that midwives monitored their weight gain during pregnancy but did not provide specific information on whether their weight gain was appropriate or not.

*"The recommendations of midwives and doctors are valuable and reliable, but they didn't give me any specific advice for weight control. They just asked me to be mindful of excessive weight gain." (Participant 13)*

Pregnant women with obesity experienced stigma and social rejection, especially from midwives and doctors. Empathy and awareness are essential traits for healthcare providers who aim to advise or guide individuals on how to change their lifestyle.

*"The way they treat you is crucial. The behavior of the healthcare staff, doctors; for example, when I came to the delivery ward for a cesarean section, one of the staff saw me and said, 'Why are you so overweight? Eat less.' One of the nurses treated me that way." (Participant 15)*

Some women described not receiving information in a suitable format, such as receiving written information when they preferred verbal communication during prenatal visits. Women preferred group sessions over one-on-one services.

*"It's better to have group programs because when there are multiple people, more questions are asked, you hear more answers, and you learn." (Participant 16)*

## Discussion

This qualitative study examines the experiences of overweight and obese pregnant women regarding weight management during pregnancy. Our findings highlight a range of barriers and facilitators that impact effective weight management. Understanding these factors is crucial for developing targeted interventions.

*A. Barriers to Weight Management*

*Previous Eating Habits:* Participants indicated that both unconscious and conscious overeating, shaped by prior behaviors and emotional patterns, posed major obstacles to effective weight control. Stress-related eating and the persistence of unhealthy childhood

dietary habits were commonly cited challenges. Pregnant women with obesity often reported turning to food for emotional comfort and continuing past eating patterns, which increased the risk of weight gain during pregnancy.[18-20]

*Pregnancy-Related Changes:* Eating behavior during pregnancy was significantly influenced by factors such as cravings, physiological hunger, increased meal frequency, and concerns for fetal health. These changes were described as key impediments to weight management. Hormonal and physiological alterations heightened appetite and cravings, often resulting in unintentional overeating.[21] Cultural beliefs, such as the notion of "eating for two," further encouraged excessive intake.[22] Fear of harming the fetus discouraged some women from limiting food or exercising.[18] While some perceived pregnancy as a chance to adopt healthier habits, others experienced internal conflict between promoting fetal health and relaxing previous restrictions.[23]

*Physical Activity Limitations:* Barriers to physical activity included cultural norms, limited access to facilities, physical discomfort, and social stigma. Concerns about judgment and inadequate infrastructure were frequently mentioned. Financial constraints, cultural misconceptions regarding exercise safety, and lack of time also prevented many from engaging in regular activity.[5, 18, 19, 21, 22, 24-26] In addition, pregnancy-related physical symptoms such as back pain or a history of preterm labor further restricted movement.[18, 19]

*Challenges in Following Dietary Plans:* Maintaining a healthy diet proved difficult due to the complexity of meal preparation, accommodating family food preferences, and the high cost of special dietary items. A history of failed weight-loss attempts contributed to feelings of discouragement. Other challenges included limited food variety, lack of nutritional awareness, and misinformation about healthy eating.[6, 21, 24, 27] Cultural expectations, particularly among certain ethnic groups, added further complexity to dietary adherence.[22]

*Beliefs and Attitudes:* Beliefs surrounding body image and the perceived controllability of weight gain significantly influenced eating and lifestyle behaviors. Some women viewed weight gain as unavoidable, while others believed it could be managed, though not always successfully.[19-22] Negative attitudes—often rooted in socio-cultural and economic contexts—diminished motivation to control weight.[19, 21, 25] In some cases, societal or familial norms reinforced misconceptions about body size, with some women believing that greater weight gain signifies a healthier baby.[18, 24, 25, 27] Negative experiences with healthcare providers also contributed to discouragement in pursuing weight management.[8, 9]

*Defense Mechanisms:* Several participants delayed taking action on weight control, believing it was more appropriate to address postpartum. Strategies such as breastfeeding were viewed as future solutions, while denial, blame, and excuses were used to rationalize inaction.[21, 22, 28] Weight gain was sometimes attributed to uncontrollable factors, like genetics or hormones, further limiting engagement in preventive behaviors. Some women with higher weight viewed pregnancy weight gain as natural, while others with lower weight were more concerned about its consequences.[19]

*B. Facilitators of Weight Management*

*Social Support:* Findings indicated that support from spouses, family members, and friends played a vital role in helping pregnant women manage their weight. This support often takes the form of encouragement, shared commitment to a healthy lifestyle, assistance in creating leisure time, consistent motivation, reminders of the benefits of weight control, caring warnings, and even treating weight management as a family goal. Social support has been shown to positively influence adherence to weight-related recommendations among pregnant women.[18, 20, 22] Furthermore, effective communication and counseling with healthcare providers can enhance women's experiences and foster greater engagement with weight control efforts.[9, 28]

*Weight Control Motivations:* Motivations rooted in concern for maternal and fetal health were found to significantly influence weight management behaviors. Women expressed a desire to improve their own health and that of their unborn child, reduce pregnancy and delivery complications, and boost self-confidence. Personal motivation, social support, and access to relevant information emerged as key facilitators.[2, 21, 26] However, factors such as fatigue, nausea, and physical discomfort may diminish women's confidence in managing diet and exercise. Tailored support that addresses these barriers can enhance their ability to maintain healthy behaviors during pregnancy.

*Education and Counseling:* The results highlighted the crucial role of education, counseling, and healthcare support in effective pregnancy weight management. Women benefited from receiving reliable, evidence-based information about nutrition and appropriate weight gain.[5, 19, 22, 28] Positive interactions with healthcare providers—especially midwives and doctors—were cited as valuable in this regard.[8, 9] Nonetheless, limited knowledge and poor access to trustworthy information were mentioned as potential barriers. In this study, the role of the husband in supporting weight management was considered important and influential, aligning with some prior research[29] although contrasting views also exist.[27] Group counseling sessions were preferred over individual consultations by many women, a finding consistent with earlier studies.[26]

*Clinical Implications*

The findings of this study revealed a general pattern that can guide recommendations and interventions related to pregnancy weight gain. Adhering to pregnancy weight gain guidelines may reduce adverse maternal and infant outcomes.[30] Intervention strategies to achieve this include utilizing a woman-centered program, using messages and materials tailored to the woman's weight status and literacy, enhancing self-management skills such as controlling eating in response to pregnancy cravings and reducing stress eating, including physical activity counseling and appropriate referrals such as to a psychologist and nutritionist, consistently and delivering messages about the risks of obesity and overweight during pregnancy, and providing continuous support for weight management during pregnancy.[20, 30]

*Strengths and Limitations*

This study provides an in-depth analysis of the experiences of overweight/obese pregnant women regarding weight management during pregnancy. As a qualitative research study, the results are specific to the population studied in a particular context.[31] However, our sample included mothers of various ages, numbers of pregnancies, and body mass index ranges within the overweight/obese category, allowing for the identification of diverse perspectives on pregnancy weight gain.[32]

The use of a conventional content analysis approach for analyzing the interviews was a strength of this study, as it revealed the nuances and experiences of overweight/obese pregnant women concerning eating behaviors and weight management. Additionally, continuous observation by two researchers during the extraction of the codes and themes was done. Transcripts were read multiple times, and the codes were revised, reviewed, and validated. Continuous group discussion during the analysis supported data validity and confirmation.[24]

Another strength of this study lies in the timing of the interviews. The women in their third trimester of pregnancy were allowed to reflect on their lifestyle and feelings about their bodies during pregnancy.[25] The data collected were likely more comprehensive regarding pregnancy experiences than studies interviewing women in early pregnancy or one year post-pregnancy. There were no instances of refusal to participate in this study, suggesting that selection and participation bias did not occur, and the findings from this sample could represent the target population.[30]

A key limitation of this study is that pre-pregnancy or early pregnancy weight was determined based on the women's self-reported information, which may not be accurate and could be subject to social desirability and recall bias. However, previous research on pregnancy weight gain has shown a strong correlation between self-reported pre-pregnancy weight and clinical weight.[30]

## Conclusion

This qualitative study examined the challenges and facilitators of weight management in overweight and obese pregnant women. The findings indicate that weight management during pregnancy is influenced by several barriers, including prior eating habits, natural body changes during pregnancy, physical activity limitations, diet adherence issues, and cultural beliefs. These barriers, especially when combined with defensive mechanisms such as postponing weight management until postpartum, add complexity to this process. Additionally, the study identified the factors that facilitate successful weight management, such as social support from family and friends, motivations related to improving personal and fetal health, and the role of education and specialized counseling in enhancing the positive experience of pregnant women in weight management.

These findings emphasize the importance of designing comprehensive and targeted interventions to assist pregnant women in managing their weight. Such interventions should focus on identifying and overcoming specified barriers and strengthening facilitating factors. Moreover, addressing cultural and individual beliefs and providing appropriate social and educational support can help improve maternal and infant health outcomes.

## Ethical Considerations

The study received ethical approval from the Ethics Committee of Ahvaz Jundishapur University of Medical Sciences with the code of IR.AJUMS.REC.1401.310.

## Acknowledgement

Not applicable.

## Authors' Contribution

NJ, EB, ZA, MK and SG conceptualized the project design. EB conducted the initial data collection. NJ, EB, SG, MK and ZA analyzed and coded the data. All authors contributed to the drafting of the manuscript and approved the final version.

## Funding

The financial support for this article, which was part of a PhD dissertation in midwifery, was provided by

Ahvaz Jundishapur University of Medical Sciences in Iran (RHPRC-0116).

## Conflict of Interest

None declared.

## References


1 Atkinson S, McNamara PM. Unconscious collusion: An interpretative phenomenological analysis of the maternity care experiences of women with obesity (BMI≥30 kg/m2). Midwifery. 2017;49:54–64. doi: 10.1016/j.midw.2016.12.008. PUBMED PMID: 28069317.

2 Christenson A, Johansson E, Reynisdottir S, Torgerson J, Hemmingsson E. ". . .or else I close my ears": How women with obesity want to be approached and treated regarding gestational weight management: A qualitative interview study. PLoS One. 2019;14(9):e0222543. doi: 10.1371/journal.pone.0222543. PUBMED PMID: 31536545; PUBMED CENTRAL PMCID: PMC6752788.

3 Pourmohammad M, Moghaddam-Banaem L, Molanouri Shamsi M, Karamnia Far M. The effect of a period of combined exercise training on gestational weight gain in overweight pregnant women. Sarem J Med Res. 2020;5(3):99–107. doi: 10.52547/sjrm.5.3.99

4 Jette S, Rail G. Resisting, reproducing, resigned? Low-income pregnant women's discursive constructions and experiences of health and weight gain. Nurs Inq. 2014;21(3):202–11. doi: 10.1111/nin.12052. PUBMED PMID: 24330165.

5 Holton S, East C, Fisher J. Weight management during pregnancy: A qualitative study of women's and care providers' experiences and perspectives. BMC Pregnancy Childbirth. 2017;17(1):351. doi: 10.1186/s12884-017-1538-7. PUBMED PMID: 29020931; PUBMED CENTRAL PMCID: PMC5637069.

6 Lingetun L, Fungbrant M, Claesson IM, Baggens C. "I just want to be normal" – A qualitative study of pregnant women's blogs who present themselves as overweight or obese. Midwifery. 2017;49:65–71. doi: 10.1016/j.midw.2016.12.010. PUBMED PMID: 28214043.

7 Furber CM, McGowan L. A qualitative study of the experiences of women who are obese and pregnant in the UK. Midwifery. 2011;27(4):437–44. doi: 10.1016/j.midw.2010.02.010. PUBMED PMID: 20483513.

8 Di Stefano A, Godard S, Bellaire J. Excessive gestational weight gain: Assessing patients' and providers' perceptions. Can Fam Physician. 2021;67(7):e188–96. PUBMED PMID: 34253599.

9 Nikolopoulos H, Mayan M, MacIsaac J, Miller T, Bell RC. Women's perceptions of discussions about gestational weight gain with health care providers during pregnancy and postpartum: A qualitative study. BMC Pregnancy Childbirth. 2017;17(1):97. doi: 10.1186/s12884-017-1257-0. PUBMED PMID: 28335749; PUBMED CENTRAL PMCID: PMC5364680.

10 Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res. 2005;15(9):1277–88. doi: 10.1177/1049732305276687. PUBMED PMID: 16204405.

11 Rathbun B. Politics and paradigm preferences: The implicit ideology of international relations scholars. Int Stud Q. 2012;56(3):607–22. doi: 10.1111/j.1468-2478.2012.00743.x.

12 Braun V, Clarke V. Thematic analysis: A practical guide. London: SAGE Publications Ltd; 2021. ISBN: 9781526417299.

13 Creswell JW, Poth CN. Defining features of phenomenology. In: Qualitative inquiry and research design: Choosing among five approaches. 3rd ed. Thousand Oaks, CA: Sage Publications; 2016. p. 78.

14 Anfara VA, Brown KM, Mangione TL. Qualitative analysis on stage: Making the research process more public. Educ Res. 2002;31(7):28–38. doi: 10.3102/0013189X031007028.

15 Finlay L. "Outing" the researcher: The provenance, process, and practice of reflexivity. Qual Health Res. 2002;12(4):531–45. doi: 10.1177/104973202129120052.

16 McMillan JH, Schumacher S. Research in education: Evidence-based inquiry. 7th ed. Boston, MA: Pearson; 2010. ISBN: 9780137152391.

17 Furness PJ, McSeveny K, Arden MA, Garland C, Dearden AM, Soltani H. Maternal obesity support services: A qualitative study of the perspectives of women and midwives. BMC Pregnancy Childbirth. 2011;11:69. doi: 10.1186/1471-2393-11-69. PUBMED PMID: 21943210; PUBMED CENTRAL PMCID: PMC3206482.

18 Faucher MA, Mirabito AM. Pregnant women with obesity have unique perceptions about gestational weight gain, exercise, and support for behavior change. J Midwifery Womens Health. 2020;65(4):529–37. doi: 10.1111/jmwh.13115. PUBMED PMID: 32558219.

19 Groth SW, Kearney MH. Diverse women's beliefs about weight gain in pregnancy. J Midwifery Womens Health. 2009;54(6):452–7. doi: 10.1016/j.jmwh.2009.03.003. PUBMED PMID: 19879517; PUBMED CENTRAL PMCID: PMC2799189.

20 Arden MA, Duxbury AMS, Soltani H. Responses to gestational weight management guidance: A thematic analysis of comments made by women in online parenting forums. BMC Pregnancy Childbirth. 2014;14:216. doi: 10.1186/1471-2393-14-216. PUBMED PMID: 24996464; PUBMED CENTRAL PMCID: PMC4081360.

21 White C, Davis D. Barriers and enablers in maintaining healthy gestational weight gain: A qualitative study. Women Birth. 2021;34(5):e461–7. doi: 10.1016/j.

wombi.2020.10.004. PUBMED PMID: 33357589.

22 Lindsay AC, Machado MMT, Wallington SF, Greaney ML. Sociocultural and interpersonal influences on Latina women's beliefs, attitudes, and experiences with gestational weight gain. PLoS One. 2019;14(7):e0219557. doi: 10.1371/journal.pone.0219557. PUBMED PMID: 31329694; PUBMED CENTRAL PMCID: PMC6642652.

23 Dinsdale S, Branch K, Cook L, Shucksmith J. "As soon as you've had the baby that's it..." A qualitative study of 24 postnatal women's experience of maternal obesity care pathways. BMC Public Health. 2016;16:411. doi: 10.1186/s12889-016-3099-7. PUBMED PMID: 27456365; PUBMED CENTRAL PMCID: PMC4957273.

24 Flannery C, Mtshede MN, McHugh S, Anaba AE, Clifford E, O'Riordan M, et al. Dietary behaviours and weight management: A thematic analysis of pregnant women's perceptions. Matern Child Nutr. 2020;16(4):e12906. doi: 10.1111/mcn.12906. PUBMED PMID: 32304189.

25 Padmanabhan U, Summerbell CD, Heslehurst N. A qualitative study exploring pregnant women's weight-related attitudes and beliefs in UK: The BLOOM study. BMC Pregnancy Childbirth. 2015;15:99. doi: 10.1186/s12884-015-0535-9. PUBMED PMID: 26627489; PUBMED CENTRAL PMCID: PMC4672455.

26 Sui Z, Turnbull D, Dodd J. Enablers of and barriers to making healthy change during pregnancy in overweight and obese women. Australas Med J. 2013;6(11):565–77. doi: 10.4066/AMJ.2013.1855. PUBMED PMID: 24348873; PUBMED CENTRAL PMCID: PMC3863770.

27 Knight-Agarwal CR, Williams LT, Davis D, Davey R, Shepherd R, Downing A, et al. The perspectives of obese women receiving antenatal care: A qualitative study of women's experiences. Women Birth. 2016;29(2):189–95. doi: 10.1016/j.wombi.2015.09.005. PUBMED PMID: 26475403.

28 Lindsay AC, Wallington SF, Greaney ML, Machado MMT, De Andrade GP. Patient-provider communication and counseling about gestational weight gain and physical activity: A qualitative study of the perceptions and experiences of Latinas pregnant with their first child. Int J Environ Res Public Health. 2017;14(11):1412. doi: 10.3390/ijerph14111412. PUBMED PMID: 29113070; PUBMED CENTRAL PMCID: PMC5707996.

29 Keely A, Cunningham-Burley S, Elliott L, Sandall J, Whittaker A. "If she wants to eat... and eat and eat... fine! It's gonna feed the baby": Pregnant women and partners' perceptions and experiences of pregnancy with a BMI >40 kg/m². Midwifery. 2017;49:87–94. doi: 10.1016/j.midw.2016.11.007. PUBMED PMID: 28214045.

30 Wang ML, Arroyo J, Druker S, Sankey HZ, Rosal MC. Knowledge, attitudes and provider advice by pre-pregnancy weight status: A qualitative study of pregnant Latinas with excessive gestational weight gain. Women Health. 2015;55(7):805–28. doi: 10.1080/03630242.2015.1039182. PUBMED PMID: 26399212; PUBMED CENTRAL PMCID: PMC4608553.

31 Faria-Schützer DB, Surita FGDC, Alves VLP, Vieira CM, Turato ER. Emotional experiences of obese women with adequate gestational weight variation: A qualitative study. PLoS One. 2015;10(11):e0141879. doi: 10.1371/journal.pone.014

32 Herring SJ, Henry TQ, Klotz AA, Foster GD, Whitaker RC. Perceptions of low-income African-American mothers about excessive gestational weight gain. Matern Child Health J. 2012;16(9):1837–43. doi: 10.1007/s10995-011-0911-6. PUBMED PMID: 22160656.