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Sociocultural Factors Influencing Excess Gestational Weight Gain in Pregnant Puerto Rican Women

Sonia O. Roselló Aponte
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Walden University

College of Nursing

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Sonia O. Roselló Aponte

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the review committee have been made.

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Walden University

2025

Abstract

Sociocultural Factors Influencing Excess Gestational Weight Gain in Pregnant

Puerto Rican Women

by

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MA, Pontifical Catholic University of Puerto Rico, 2000

BS, Pontifical Catholic University of Puerto Rico, 1992

Proposal Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Nursing

Walden University

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Abstract

More than 50% of women experience excessive weight gain during pregnancy or are overweight at the start of pregnancy, increasing their risk of short and long-term maternal and fetal complications. The literature highlights the relationship between sociocultural factors and excessive gestational weight gain (EGWG) and the need to explore these factors in ethnic subgroups. The purpose of this descriptive qualitative study, guided by Nola Pender's health promotion model, was to explore the sociocultural factors that influence EGWG for pregnant women living in Puerto Rico. Semi-structured interviews were conducted with seven participants recruited from public and private prenatal clinics in Puerto Rico. Using content analysis, seven overarching themes emerged from the data analysis: (a) nutrition, (b) beliefs, (c) knowledge, (d) support systems, (e) healthcare providers, (f) effects of weight gain, and (g) generational change. The findings showed that social and cultural factors are interrelated and influence each other, facilitating or hindering the achievement of adequate gestational weight gain (GWG). This study provides valuable information to educate health professionals and support the need to develop culturally relevant interventions to promote weight control during pregnancy. Further research is recommended on the facilitators and barriers from this population's social and cultural context. The results of this study have significant implications for positive social change, contributing to improved maternal and child health, healthier families and communities, a higher quality of life, and reduced healthcare costs related to EGWG complications.

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Dedication

This study is the result of many years of effort, dedication, and sacrifice. I dedicate it, first and foremost, to Almighty God, who has always been present in my life and without whose guidance it would not have been possible to continue this path.

To my husband, for his love, unconditional support, motivation, understanding, and for believing in me throughout these seven years of study and dissertation.

To my son, the light of my eyes, for his love, understanding, and being my greatest inspiration, even in the most challenging moments. Thank you for allowing me to be an example of how hard work, perseverance, and faith in oneself allow one to achieve one's goals and never give up.

To my parents, for their love, constant prayers, and words of encouragement. Your confidence in me, expressed so many times with that "I believe in you, you can do it," has been an invaluable source of strength.

To my siblings and their families, who, despite the distance, were always there with their support and words of encouragement.

I gratefully dedicate this study to all of you for your love and unconditional support.

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Chapter 1: Introduction to the Study

A healthy gestational weight gain (GWG) is a priority in obstetric care to support fetal growth and prevent maternal and fetal complications (Fletcher et al., 2018; Walker et al., 2019). Gestational weight gain is a significant public health problem for women of reproductive age (Kunath et al., 2019; O'Brien et al., 2018). In Puerto Rico 63.9 percent of pregnant women gain excess weight during pregnancy. Recent studies mention that excessive weight gain during pregnancy is becoming a worldwide epidemic (Zhou et al., 2022). The Institute of Medicine (IOM), now the National Academy of Medicine (NAM), identified excessive gestational weight gain (EGWG) as a major contributing factor to obesity in the 21st century (Arnedillo-Sánchez et al., 2020). According to Hutchesson et al. (2020), the current obesity rates are a major health concern that, during the childbearing years, pose a potential risk for obesity for women due to EGWG and postpartum weight retention. Excess gestational weight gain poses risks to maternal and fetal health with short- and long-term outcomes for mother and child (Kunath et al., 2019; O'Brien et al., 2018; Walker et al., 2019).

Excess gestational weight gain (EGWG) contributes adversely to maternal and neonatal outcomes and the increased risk of postpartum weight retention, increasing the risk of maternal and offspring obesity (Goldstein et al., 2021; Walker et al., 2019). Other risks associated with EGWG are an increased risk of preeclampsia, eclampsia, cesarean birth, diabetes, macrosomia, postpartum weight retention, preterm birth, poor neonatal outcomes, body mass index (BMI) increase, and obesity (Champlin et al., 2021; O'Brien, 2017; Vanstone et al., 2017; Walker et al., 2019). The U.S. National Academy of

Medicine established healthy GWG recommendations specific to women's pregestational BMI (Kunath et al., 2019; O'Brien et al., 2018). However, according to various studies, more than 50% of pregnant women gain excessive weight during pregnancy, increasing their risks for maternal and neonatal complications (Goldstein et al., 2021; Kunath et al., 2019; Walker et al., 2019).

According to recent studies, beliefs, values, culture, and social and demographic factors influence how women care for their pregnancies (Champlin et al., 2021; Kunath et al., 2019; Lindsay et al., 2018; O'Brien et al., 2018; Walker et al., 2018). These are important factors to consider when providing care to pregnant women as they influence how women view weight gain and their weight gain during pregnancy (Champlin et al., 2021; Denzin et al., 2018; Goldstein et al., 2021). Studies found that cultural and sociodemographic factors can influence GWG (Denzin, 2018; Goldstein et al., 2021; O'Brien et al., 2018). Anthropometric differences and potential misclassification reinforce the need for diverse GWG guidelines (Champlin et al., 2021; Denzin et al., 2018; Garmindia et al., 2018; Siega-Riz et al., 2020). These diverse GWG guidelines will help to individualize prenatal care and obtain positive maternal and fetal outcomes across culturally diverse groups (Champlin et al., 2021; Denzin et al., 2018; Garmindia et al., 2018; Siega-Riz et al., 2020). Several studies also indicated the need for health professionals' awareness of factors influencing weight gain during pregnancy for the development of interventions and education according to the specific needs of the pregnant woman (Higginbottom et al., 2018; Lindsay et al., 2017; Ramírez-Martínez & Restrepo-Mesa, 2021; Vanstone et al., 2017).

In Puerto Rico, few studies have been conducted on GWG in recent years. These studies explored the topic from the nutritional perspective and demographic factors (Guilloty et al., 2015) and the relationship between GWG and preterm delivery (Eick et al., 2020). However, the sociocultural factors influencing EGWG in Puerto Rican women are not understood and have not been explored. A better understanding of the factors that influence EGWG in this population may assist in developing interventions, education, and gestational weight management programs according to this population's needs (Champlin et al., 2021; Denzin et al., 2018; Higginbottom et al., 2018; Siega-Riz et al., 2020).

Chapter 1 includes a brief overview of the study, background, problem, purpose, and research question. The chapter also includes a brief introduction to the study's conceptual framework, nature, limitations, and significance of the study.

Background

EGWG constitutes one of the major public health problems in the United States and Puerto Rico (Eick et al., 2020; Guilloty et al., 2015; Nunnery et al., 2018). According to Cruz-Carrión et al. (2019), 36.1 % of Puerto Rican women in Puerto Rico gain adequate weight during pregnancy, while 63.9 % gain excess weight. According to the results of Pregnancy Risk Assessment Monitoring System (PRAMS, 2021), the prevalence of selected maternal and child health indicators in 2019, 26.2% and 27.1% of Puerto Rican women started their pregnancies overweight or obese, respectively, increasing their risks of EGWG and maternal and fetal complications (Champlin et al., 2021; Vanstone et al., 2017). EGWG during pregnancy is a significant public health issue

due to its potential contribution to pregnancy and obstetric complications, maternal postpartum weight retentions, an increased risk of preeclampsia, cesarean births, diabetes, macrosomia, preterm birth, and poor neonatal outcomes and the late onset of conditions such as childhood obesity, metabolic syndrome, and chronic disease risks (Champlin et al., 2021; Kunath et al., 2019; Melby et al., 2019; O'Brien et al., 2018; Vanstone et al., 2017).

One of Healthy People 2030's goals is to increase the proportion of women with adequate weight gain during pregnancy (Office of Disease Prevention and Health Promotion [ODPHP], n.d.). The National Academy of Medicine identified EGWG as a significant factor contributing to obesity in the 21st century (Arnedillo-Sánchez et al., 2022). In 2009, the IOM published updated recommendations for GWG based on BMI to reflect changing demographics and epidemiological profiles among the obstetric population. Despite the IOM published updated recommendations for GWG and the recognition of the importance of a healthy GWG, there is still an increase in the proportion of women exceeding the guidelines set by the IOM (Halili et al., 2019; Vanstone et al., 2017).

Among the factors associated with EGWG are sociocultural factors. According to the literature, socioeconomic and cultural factors influence women's attitudes, knowledge, beliefs, perceptions, and health behaviors related to GWG (Lindsay et al., 2019). According to Vanstone et al. (2017), there is a need for care and interventions related to GWG management according to the patient's individual needs and sociocultural factors. Studies on GWG in Puerto Rico only studied demographic aspects of the

phenomenon. Guilloty et al. (2015) found that Puerto Rican women gained EGWG due to consuming sugary juices. Eick et al. (2020) studied the association between GWG and preterm birth (PTB) in Puerto Rican women. These researchers recommended future research on the factors contributing to GWG, such as an unhealthy diet and biological factors.

According to Lindsay et al., (2019) there is a need to understand Latina or Hispanic women's beliefs and experiences with GWG. Garmendia et al. (2018) found that the GWG recommendations by the IOM are based on a Caucasian population and that ethnic factors can influence GWG; therefore, they are unsuitable for Chilean women. The authors recommended adopting GWG guidelines based on the characteristics of the Chilean population for better short and long-term results in pregnant women. They established the need to study how ethnicity, race, and culture influence EGWG in pregnant women and the need for GWG guidelines according to the population's characteristics for positive maternal and fetal outcomes.

Denize et al. (2018) found that culture, acculturation, and sociodemographic factors influence GWG. They discovered that anthropometric differences and potential misclassification reinforce the need for culturally diverse GWG guidelines. These culturally diverse guidelines are necessary to individualize prenatal care and obtain positive maternal and fetal outcomes across culturally diverse groups. Higginbottom et al. (2018) concluded the need for health professionals' awareness of women's diverse backgrounds and situations and how their social, cultural, and individual contexts affect their health and eating practices. They recommended further research to understand

ethnocultural food practices and choices to improve culturally based competence in maternity care.

Siega-Riz et al. (2020) mentioned gaps in research related to factors influencing women's GWG. The authors noted that additional research should explore the social, racial, ethnic, economic, and psychosocial factors influencing women's GWG to develop interventions to optimize GWG. In addition, the literature does not consider background or origin and cultural variation within ethnic groups, and Hispanic women should not be considered a homogeneous group (Siega-Riz et al., 2020). Failure to account for the nativity and inter-ethnicity may mask the impact of cultural practices and beliefs on pregnant women and impede the development of culturally tailored interventions (Siega-Riz et al., 2020). Therefore, this study is important because by understanding the sociocultural factors that influence EGWG in Puerto Rican women, we can then educate and raise awareness among health professionals about these factors and how they influence GWG and provide education and interventions according to the needs of this population for adequate GWG and positive maternal and fetal outcomes.

Problem Statement

EGWG is a significant health problem for women of reproductive age, posing risks for the mother's and fetus's health with short- and long-term outcomes for the mother and child (O'Brien et al., 2018). However, there is a lack of knowledge of what sociocultural factors influence EGWG in Puerto Rican women. Although researchers have investigated this issue, no studies have explored this topic in Puerto Rico. Studies in Puerto Rico related to EGWG have identified demographic and nutritional factors

associated with GWG and preterm birth (Eick et al., 2020; Guilloty et al., 2015).

Guilloty et al. (2015) explored the nutritional factors, pre-pregnancy BMI, and sociodemographic characteristics with GWG, concluding that women gained EGWG due to the consumption of fruit juices. Eick et al. (2020) explored the association between GWG and PTB. The authors found that GWG significantly contributes to PTB in Puerto Rico, with the strongest association between low GWG and PTB for underweight women. The authors recommended further research on other factors contributing to GWG, such as an unhealthy diet and biological pathways through which GWG may contribute to PTB. There is no literature on the sociocultural factors influencing EGWG in Puerto Rican women.

Various authors studied EGWG in diverse populations, but not with women living in Puerto Rico. Champlin et al. (2021) conducted their study with a Latino population that included various Latino nationalities, recommending future research on cultural perspectives among Latino subgroups to ensure culturally relevant support for these women. Vanstone et al. (2017) discussed the need for care and interventions related to GWG management according to the patient's needs and sociocultural factors. Lindsay et al. (2019), in their study with Hispanic and Latina women, indicate the need to understand these women's beliefs and experiences with GWG. Arnedillo-Sánchez et al. (2022) found that women's beliefs regarding healthy GWG may act either as a protective factor or risk factor for GWG, depending on women's pre-pregnancy BMI and despite knowledge of the recommendations. Higginbottom et al. (2018) concluded the importance of health professionals' awareness of women's diverse backgrounds and

situations and how their sociocultural and individual contexts affect their health and eating practices. The authors recommended further research to understand ethnocultural food practices and choices and to improve culturally based competence in maternity care. Also, other studies found that there are ethnic factors that may influence GWG (Garmendia et al., 2018; Melby et al., 2019). In these studies, the authors mentioned that the IOM gestational weight gain recommendations are based on a Caucasian or Western population and are not compatible or adequate for Chilean and Japanese women, respectively. The researchers recommended adopting GWG guidelines based on the characteristics of their populations for better short and long-term results in pregnant women. They also mentioned the need to study how ethnicity, race, and culture influence EGWG in pregnant women and the need for GWG guidelines according to the population's characteristics for positive maternal and fetal outcomes.

The U.S. National Academy of Medicine indicates that Hispanic women should not be considered homogeneous, and that literature does not consider nativity and cultural variation within ethnic groups (Siega-Riz et al., 2020). Failing to account for nativity and inter-ethnicity may mask the impact of cultural practices and beliefs on pregnant women and impede the development of culturally tailored interventions (Siega-Riz et al., 2020). Therefore, there is a gap in the lack of studies on identifying factors influencing behaviors and decisions related to EGWG gain in Puerto Rican women. The literature recommends future research on cultural perspectives among subgroups of Latinas to ensure culturally relevant interventions and support (Champlin et al., 2021; Siega-Riz et al., 2020).

Purpose Statement

The purpose of this descriptive qualitative study was to explore the sociocultural factors that influence EGWG for pregnant women living in Puerto Rico. Excessive gestational weight gain is weight gain during pregnancy above the IOM recommended weight, which varies depending on the pre-pregnancy BMI (de Jersey et al., 2017; Dude et al., 2020). Studying factors influencing GWG in different Hispanic subgroups is essential. Failure to consider these factors may impact women's cultural practices and beliefs and impede the design of culturally sensitive interventions for the care of pregnant women (Champlin et al., 2021; Siega-Riz et al., 2020). According to the literature, health professionals should know the factors that influence weight gain during pregnancy to design strategies, interventions, and education according to the pregnant women's specific needs (Higginbottom et al., 2018; Lindsay et al., 2017; Ramírez-Martínez & Restrepo-Mesa, 2021; Vanstone et al., 2017). Also mentioned in the literature is the need for health professionals' awareness of women's diverse backgrounds and situations and how their sociocultural and individual contexts affect their health and eating habits (Higginbottom et al., 2018). Exploring Puerto Rican women's experiences with EGWG can identify factors influencing their perceptions, attitudes, beliefs, and health behaviors and decisions to improve interventions and education related to GWG management in this population (Vanstone et al., 2017).

Research Question

The research question for this study was: What sociocultural factors influence excessive gestational weight gain for pregnant women living in Puerto Rico?

Theoretical Foundation

The theory that I used to underpin this study is Nola Pender's (1982) health promotion model (HPM) to explore and understand the sociocultural factors that influence pregnant women's health perceptions, attitudes, decisions, and behaviors related to gestational weight gain. Nola Pender first published this theory in 1982, and since then, the author has modified the model several times in the 1980s, 1996, and 2002 (Aqtam & Darawwad, 2018). Pender developed the HPM to incorporate health-enhancing behaviors and apply them across the lifespan. The theory assumes that individuals are self-reflective and capable of regulating their behaviors and transforming their environment (Garcia, 2016). The holistic model is used to promote healthy behaviors through interventions with patients and seeks to illustrate the multifaceted nature of the human, focusing on helping people achieve higher levels of well-being and identifying background factors that influence health behaviors (Khoshnood et al., 2018; Sheehan, 2006). The model provides a way to explore the biosocial processes that motivate individuals to engage in behaviors that enhance their health and well-being. The theory explains and predicts how individuals' perception and environment influence their health-related choices (Sheehan, 2006). The theory proposes that individuals' characteristics and beliefs influence their level of commitment and probability of demonstrating health promotion behavior. Its purpose is to help nursing professionals know and understand the key determinants of health behaviors as a basis for behavioral counseling aimed at promoting wellness and healthy lifestyles (Alligood, 2018; George, 2014; Pender et al., 2015, 2019).

The logical connections between the framework and the nature of the study include that the HPM is a holistic model that considers sociocultural, socioeconomic status and family influence to predict health behaviors. Therefore, it can better capture the lifestyle profiles of diverse individuals and groups, such as expressions of their cultural backgrounds and past experiences that may influence their health behaviors (Garcia, 2016; George, 2014). Using various concepts of the HPM will provide information that will help health professionals assist pregnant women in changing health behaviors for positive maternal and fetal outcomes and healthy lifestyles.

The model concepts that I used were individual characteristics and experiences, including the women's background (her culture) and personal factors (biological, psychological, and sociocultural factors (Pender et al., 2002, 2015, 2019). The model also explores how interpersonal factors such as family, peers, health professionals, social norms, and social support can influence an individual's decisions and determine the predisposition to adopt health-promoting behaviors (Pender et al., 2002, 2015, 2019). Some cultures also give more importance to interpersonal influences than others (Pender et al., 2015). Situational influences are the direct or indirect situations within a woman's context that may impede or facilitate a behavior (Alligood, 2018; George, 2014; Pender et al., 2002, 2015, 2019). Therefore, I used these HPM concepts to explore and understand the sociocultural factors influencing their health behaviors and GWG. In this study, I developed an interview guide through a literature review identifying concepts considering the purpose and research question and a review of GWG studies using the HPM to identify concepts of the theory for interview questions.

Nature of the study

I used a descriptive qualitative design to explore and describe the sociocultural factors influencing EGWG for Puerto Rican women in Puerto Rico. According to Kahlke (2014) and Merriam and Tisdell (2016), a descriptive design aims to elicit understanding, meaning, and findings that provide a rich description of the phenomenon under study. The approach allows for exploration and provides a comprehensive description of the Puerto Rican women's experience of GWG within their context, allowing a better understanding of the phenomenon (Sandelowski, 2000; Willis et al., 2016). The emphasis is on the individual or group's perceptions and feelings rather than the meaning beneath those expressions, allowing the exploration of participants' beliefs and attitudes about GWG within their context (Willis et al., 2016). The description includes explaining the data, permitting an understanding of health-related experiences, including the sociocultural factors that shape the participant's experiences.

I used purposeful sampling to recruit a sample of pregnant women from public and private obstetrics and gynecology (OB/GYN) practices in Puerto Rico. The sample included low-risk women 21 years or older with singleton pregnancies over 22 weeks gestation without preexisting conditions, pregnancy-related conditions, or complications who speak English or Spanish and live in Puerto Rico. Pregnant women interested in participating in the study contacted me in person in the prenatal care facilities or by phone at the number provided in the recruitment announcement. I conducted semistructured face-to-face interviews using an interview guide to explore the women's experiences with GWG and the sociocultural factors influencing EGWG in this

population. The interviews were 60 minutes and recorded and transcribed for analysis. I used content analysis to analyze, and report repeated patterns, categories, and themes in the collected data (Patton, 2015; Willis et al., 2016). I read and reviewed each transcript with the recordings to immerse myself in the data and familiarize myself with the data (Vaismoradi et al., 2013). Then, I used open coding to divide the data into coded segments (Saldaña, 2016; Vaismoradi et al., 2013). I then analyzed, compared, and reorganized the codes to create categories (Saldaña, 2016; Vaismoradi et al., 2013). These categories were analyzed, compared, and reorganized to create themes and formulate a description of the research topic (Vaismoradi et al., 2013).

Definitions

This study used the following definitions of terms:

Excess gestational weight gain: Weight gain during pregnancy above the recommended as established by the Institute of Medicine, which varies depending on the pre-pregnancy body mass index (de Jersey et al., 2017; Dude et al., 2020).

Gestational weight gain: The amount of weight gained by a pregnant woman from conception to birth (Melby et al., 2019).

Sociocultural factors: Determinants within the participants' context that influence pregnant women's health perceptions and decisions related to GWG, such as race, ethnicity, language, educational level, socioeconomic status, access to health services, knowledge, family, peers, support, access to information, employment, beliefs and values (Lindsay et al., 2019; O'Brien et al., 2017).

Puerto Rican women: Women born in and living on the island of Puerto Rico or born in the United States to at least one parent born in Puerto Rico and living on the island. (Oxford English Dictionary, 2025)

Healthcare providers: Healthcare professionals that provide care to pregnant women, such as nurses, midwives, general practitioners, obstetricians, and nutritionists (Christenson, 2019; Hashmi et al., 2018; Lindsay et al., 2017, 2019; Walker et al., 2019).

Assumptions

In this qualitative descriptive study, I explored the sociocultural factors influencing EGWG in pregnant Puerto Rican women. An important assumption of this study was that all participants will openly and honestly answer the interview questions. The first assumption related to GWG is that pregnant women visualize weight gain as a normal part of pregnancy. Second, social and cultural factors within their context influence women's health care and health decisions. Third, women's perception of GWG influences their weight gain during pregnancy. Fourth, women want to gain an adequate amount of weight during pregnancy. Fifth, women do not want to gain excess weight during pregnancy. Sixth, want to avoid complications related to excess weight gain during pregnancy. Seventh, women want to receive education about adequate weight gain during pregnancy.

Scope and Delimitations

This study explored the sociocultural factors that influence EGWG in Puerto Rican women living on the island of Puerto Rico. Excessive weight gain during pregnancy is related to maternal and fetal complications and short- and long-term

complications or health conditions in both the mother and infant. Studies have mentioned that sociocultural factors influence pregnant women's behavior and health decisions regarding GWG. However, research on GWG in Puerto Rico is scarce. Studies conducted on the topic outside Puerto Rico include Puerto Rican women within groups of Hispanic participants from various Hispanic subgroups, visualizing Hispanic women as a homogeneous group. According to several authors, research on the factors that influence GWG within the different ethnic subgroups is necessary to increase the knowledge of health professionals about the factors that influence weight gain and the development of interventions according to the women's specific needs (Champlin et al., 2021; Siega-Riz et al., 2020).

The study included low-risk pregnant women 21 years or older living in Puerto Rico receiving prenatal care in public and OB/GYN private practices. The inclusion criteria also included pregnant women with singleton pregnancies over 22 weeks gestation without preexisting conditions, pregnancy-related conditions, or complications and speak English or Spanish. Pregnant women living in the United States were excluded because they undergo acculturation. Their experiences, customs, context, and access to health services differ from those of pregnant women in Puerto Rico. Women with less than 22 weeks gestation were not included because, before this time of pregnancy, women may present discomforts such as nausea and vomiting that influence their weight gain. Also excluded from the study were women who are not residents, lived in the United States, or moved from another country to Puerto Rico. In addition, pregnant women not receiving prenatal care or receiving care in high-risk prenatal clinics, those

with multiple pregnancies, those with preexisting conditions, and those with pregnancy-related conditions or complications that can also influence the amount of weight gain during pregnancy were excluded.

This descriptive qualitative study explored the sociocultural factors influencing EGWG in Puerto Rican women. I obtained a purposeful sample of 10 participants attending public and OB/GYN private practices in the northwestern part of Puerto Rico. Therefore, the sample was small and limited to a specific island area. Also, the study's findings were specific to this population according to their sociocultural practices, perceptions, and beliefs, which differ from other Hispanic subgroups. These factors limited the transferability of the findings of this study (Holloway & Galvin, 2018).

Several theories exist that describe health behaviors and the factors that influence them. However, the health belief model (HBM), social cognitive theory, and theory of planned behavior were not selected for this study because they do not provide a holistic view of the human being in their context. For example, the HBM assumes that individuals fear disease and that this motivates health actions in reaction to the degree of fear and the benefits of the activities to change behavior (Abdolaliyan et al., 2017; Garcia, 2016; McEwin, 2019). The individuals internalize whether the benefits of a promoted behavior change outweigh its practical and psychological costs or barriers and decide whether to act to change their behavior (Abdolaliyan et al., 2017; Garcia, 2016; McEwin, 2019).

The social cognitive theory assumes that interpersonal environments are important for health-related behaviors and that the individual's ability to manage and

control behavior is important for human functioning (Garcia, 2016; Nagourney et al., 2019). Therefore, it recognizes the influence of the environment on healthy behaviors but emphasizes the capacity of individuals to alter their environment for their benefit by adopting healthy behaviors and acting collectively (Garcia, 2016; Nagourney et al., 2019).

The theory of planned behavior assumes that individuals are rational and make decisions based on their available information. Therefore, the goal is to understand and predict behaviors under the individual's control and explain the relationship among the beliefs, attitudes, intentions, and behaviors. According to the theory, the most important determinant of an individual's behavior is intention, the cognitive representation of the individual to perform a behavior determined by attitudes toward the behavior, subjective norms, and perceived behavioral control (McEwin, 2019; Zamani et al., 2021).

The three theories incorporate the concepts of perceived benefits, perceived barriers, and self-efficacy but do not evaluate how culture affects an individual's decision to make health behavior changes. Pender's HPM is complete as it considers how an individual's personal factors and interpersonal and situational influences affect their decision to make health changes. Also, researchers have used the HPM in studies assessing how cultural factors influence pregnant women's health decisions (Georgescu et al., 2017; Goodarzi et al., 2018; Liu et al., 2017).

Limitations

This study had several limitations. Qualitative methodologies are flexible and holistic; the researcher is the data collection instrument and uses small samples. The goal

of qualitative studies is to explore and understand the experiences of individuals within their context. This study included a sample of seven pregnant women attending public and private OB/GYN practices in Puerto Rico, limiting the transferability of the findings to the rest of the island and Hispanic subgroups and countries.

In qualitative studies, there is a risk of bias since the researcher may bring his/her previous knowledge and experiences to the study. Thus, my role as the data collection instrument within the study could influence the validity and credibility of the study. I have a personal and professional connection to the study. First, as a Puerto Rican woman who started her pregnancy overweight and managed to gain an adequate amount of weight during pregnancy with the support of her husband, family, and obstetrician. In addition, my professional experience as an obstetrical nurse working in prenatal care and Labor and Delivery with pregnant women who gained excess weight during pregnancy. In recent years, as an educator in the academic setting during clinical rotations, I observed women gaining excessive weight during their pregnancies. My knowledge and personal experiences as a health professional that a healthy weight gain is possible during pregnancy may affect the assumptions and data interpretation. Therefore, reflexivity of my experiences during the research process was essential for the credibility and validity of the study.

Discussions about weight gain are considered a sensitive topic making participants uncomfortable and hesitant to share their experiences. Therefore, I took measures to reduce the participants' discomfort. Among the steps taken were-to reassure them that their participation in the study was voluntary and that they could withdraw

from the study at any time. Their privacy and confidentiality would also be protected at all times. I informed the participants that I would not use their names in the study report and suggested they choose pseudonyms for the interviews and transcripts. I allowed the participants to choose a private place for the interviews where they felt comfortable, and the conversation could not be overheard. Also, I gave the participants time to think and answer the questions as they wished without any pressure (Rubin & Rubin, 2012).

Furthermore, I showed empathy and respect for what they told me by being attentive and listening to what they said without interrupting their stories. These strategies helped the participants feel comfortable talking about their experiences (Rubin & Rubin, 2012).

Significance

The study explored the sociocultural factors that influence GWG in Puerto Rican women. According to various authors, many researchers view Hispanic women as a homogeneous ethnic group (Champlin et al., 2021; Siega-Riz et al., 2020). The authors mentioned that one should not consider Hispanics a homogeneous ethnic group as there are subgroups within the ethnic group. Each subgroup has different cultural beliefs and perspectives. Also, these subgroups' cultural practices and beliefs may mask and impede the development of culturally sensitive interventions for pregnant women. Therefore, this study will contribute to social change by increasing nursing knowledge and contributing to future research on the human-environment relationship that influences GWG gain in Puerto Rican women. The objective is to use the results to educate healthcare professionals on the sociocultural factors influencing EGWG to create prenatal weight management interventions and education programs according to this population's specific

needs. Therefore, this study will positively impact social change by improving the health of mothers, infants, families, and communities, improving their quality of life, and lowering healthcare costs.

Summary

Chapter 1 included an introduction to the research topic. Excessive gestational weight gain is a global problem (Zhou et al., 2022). The increased incidence of obesity in women of reproductive age increases the risk of excessive weight gain during pregnancy, maternal and fetal complications, and short- and long-term health conditions (Hutchesson et al., 2020; Kunath et al., 2019; O'Brien et al., 2018). According to the literature, sociocultural factors are associated with excessive weight gain during pregnancy (Lindsay et al., 2019). Socioeconomic and cultural factors influence women's attitudes, beliefs, perceptions, and health decisions related to GWG (Champlin et al., 2021; Kunath et al., 2019; Lindsay et al., 2018; O'Brien et al., 2018; Walker et al., 2018). Also, ethnic groups are not homogeneous; each group has traditions, beliefs, and health practices that influence women's health behaviors and decisions. Health professionals need to know these factors to provide education and interventions according to the specific needs of women (Higginbottom et al., 2018; Lindsay et al., 2017; Ramírez-Martínez & Restrepo-Mesa, 2021; Vanstone et al., 2017).

Chapter 1 also included a summary of recent studies related to the topic. The research problem is the need for knowledge of what sociocultural factors influence EGWG in Puerto Rican women. A qualitative descriptive study was conducted to explore the sociocultural factors that influence GWG in Puerto Rican women living in Puerto

Rico. The research question was: What sociocultural factors influence EGWG for pregnant women living in Puerto Rico? I explained the theoretical framework of the health promotion model and will discuss the model in more depth in Chapter 2. I also defined the main concepts and presented the study assumptions, scope, delimitation, and limitations. I concluded the chapter by explaining the significance of the study and its contribution to social change in a social field.

Chapter 2 summarizes recent and relevant literature on EGWG. A description of the search strategies, including key terms and databases searched. Also, I will present a more in-depth discussion of the health promotion model selected as the theoretical framework for this study and justification for its application. In addition to the theory's origin, and a literature summary showing how recent studies have used the theory.

Chapter 2: Literature Review

Chapter 2 addresses the research topic. Excessive gestational weight gain is a global problem (Zhou et al., 2022). The increased incidence of obesity in women of reproductive age increases the risk of excessive weight gain during pregnancy, maternal and fetal complications, and short- and long-term health conditions (Hutchesson et al., 2020; Kunath et al., 2019; O'Brien et al., 2018). According to literature, sociocultural factors are associated with excessive weight gain during pregnancy (Lindsay et al., 2019). Socioeconomic and cultural factors influence women's attitudes, beliefs, perceptions, and health decisions related to GWG (Champlin et al., 2021; Kunath et al., 2019; Lindsay et al., 2018; O'Brien et al., 2018; Walker et al., 2018). Also, ethnic groups are not homogeneous; each group has traditions, beliefs, and health practices that influence women's health behaviors and decisions. Health professionals need to know these factors to provide education and interventions according to the specific needs of women (Higginbottom et al., 2018; Lindsay et al., 2017; Ramírez-Martínez & Restrepo-Mesa, 2021; Vanstone et al., 2017).

Chapter 2 summarizes recent and relevant literature on EGWG. A description of the search strategies, including key terms and databases searched. Also, I will present a more in-depth discussion of the HPM selected as the theoretical framework for the study and justification for its application. In addition, I present the theory's origin and a literature summary showing how recent studies have used the theory.

Literature Search Strategy

The literature I selected for this study included studies on GWG and EGWG. I performed a search of relevant peer-reviewed scholarly research literature. The databases used included EBSCOHOST, CINAHL, Medline Plus, Science Direct, Proquest, PubMed, and Wiley Online. I also searched the Walden Library and Proquest for recent dissertations on GWG. The literature review also included the use of Google Scholar and sites such as the Puerto Rico Department of Health, United States Department of Health and Human Services (HHS), Centers for Disease Control and Prevention (CDC), the Pregnancy Risk Assessment System (PRAMS), and the Pan American Health Organization (OPS). I limited the literature search to studies published between 2017 and 2023.

The literature review includes quantitative, qualitative, and mixed methods studies and systematic reviews with and without meta-analysis. The review also contains full text articles in English and Spanish. Articles related to gestational women with gestational diabetes, preeclampsia, or other pregnancy complications and non-pregnant women were excluded from this review because the study aim was to understand weight gain in Puerto Rico pregnant women. Also included in the review were articles describing primary studies and data from government agencies and nonprofit organizations related to GWG.

Keywords and phrases used for the literature review were *gestational weight gain, excess gestational weight gain, social-cultural factors, social factors, cultural factors, behavioral factors, support, family support, health behaviors, culture, religion,*

perceptions, attitudes, beliefs, Puerto Rico, Puerto Rican women, Latina women and Hispanic women, and health promotion model. Boolean operators 'and' and 'or' were used to combine or exclude keywords. I also combined the search terms and phrases with the additional qualifier of *Puerto Rico* to identify studies focused on the population of interest. The initial combinations of GWG and Puerto Rican women and EGWG and Puerto Rican women yielded no results. Therefore, I used the combination of GWG and Puerto Rico and EGWG and Puerto Rico, which yielded only two results. Only one study focused on GWG in women in Puerto Rico. Therefore, due to the limited to no literature on studies conducted in Puerto Rico or with Puerto Rican women, the search was expanded to include studies of gestational weight gain in women of various cultures and other countries.

A search using the combinations of EGWG, and sociocultural factors yielded 49 articles. In contrast, the combination of GWG and Latina or Hispanic women yielded 150 results, and that of EGWG and Latina or Hispanic women yielded ten articles. The combination of EGWG and sociocultural factors produced one result. Furthermore, GWG and sociocultural factors yielded three results. Also, the search for EGWG and perceptions or attitudes or beliefs yielded 55 results, and gestational weight gain and perceptions or attitudes or beliefs yielded 352 results. I also reviewed the reference lists of selected articles for other relevant articles.

I reviewed the articles' abstracts to select those relevant to the study. The researcher reviewed the selected articles and excluded those irrelevant to the study. The selected articles were printed for further review, reading, highlighting, and annotations,

and further exclusion of articles unrelated to the research topic, finalizing 56 articles selected for the literature review of the study.

Theoretical Foundation

The study used Nola Pender's health promotion model (HPM)(1982) as a theoretical framework to explore the sociocultural factors influencing EGWG in pregnant women living in Puerto Rico. The HPM was developed to help patients prevent disease through improved health behaviors. Nola Pender developed the model after observing that patients only received care from nurses and healthcare professionals after they had developed health problems (Lightner, 2022). She believes that preventive measures can reduce the incidence of disease or health problems by improving the person's quality of life (Aqtam & Darawwad, 2018; Lightner, 2022). Furthermore, healthy lifestyle promotion would decrease health costs. Therefore, she investigated various health models, such as the health belief model, discovering that these models focused on using negative motivation. Negative motivation uses fear to lead individuals to adopt healthy behaviors (Aqtam & Darawwad, 2018; Lightner, 2022). The discovery that various health models used negative motivation to lead individuals to adopt healthy behaviors led her to develop a model focused on positive motivation to encourage a healthy lifestyle and health-promoting behaviors (Lightner, 2022). In 1975, she published the article "A Conceptual Model for Preventive Health Behavior" to investigate how individuals make decisions about their health care (Lightner, 2022). In 1982, the HPM was presented, and subsequent research led to three revisions of the model (1987, 1996, 2002) since its initial publication (Aqtam & Darawwad, 2018).

Nola Pender's background in nursing, human development, social psychology, and education led her to develop her theory using the holistic view of nursing, social psychology, and learning theory as foundations (Aqtam & Darawwad, 2018). The theory also integrates constructs from Albert Bandura's social learning theory and Feathers' expectancy value theory (Alligood, 2018). Social learning theory postulates the importance of cognitive processes for behavior modification. Bandura establishes that cognitive and personal factors, behavior, and environmental or contextual events are interactive. Behavior can modify cognition, other personal factors, and the environment. Bandura notes that self-efficacy is the motivation individuals must change behaviors. He mentioned that people perform acts based on their self-confidence and self-efficacy, increasing the probability of achieving positive behavioral changes (Khoshnood et al., 2018). Therefore, the individual will work towards a behavior change goal if they see it as beneficial and attainable. According to Pender (2002), Feather, in his expectancy-value model of human motivation, mentioned that behavior is rational and economic, so the individual will perform and persist in a given action to the extent that the results of the action are of positive personal value and the probability based on available information that the action will produce the expected outcome (Khoshnood et al., 2018).

The HPM provides a framework to explain and predict specific health behaviors. According to the model, individuals are biopsychosocial beings shaped by their environment and seek to create an environment where they can express their inherent and acquired human potential. The HPM promotes healthy behaviors through interventions with patients (Sheehan, 2006), focuses on helping them achieve higher levels of well-

being, and identifies background factors that influence health behaviors (Khoshnood et al., 2018). Pender mentions that in the individual's environment, social factors such as socioeconomic status, culture, age, and the person's knowledge, beliefs, attitudes, and support system influence the individual's health behaviors. She indicates the importance of nursing and health professionals understanding these factors to intervene effectively with individuals and communities (Pender et al., 2019).

The model assumes that (a) individuals attempt to generate living conditions that allow them to express their potential; (b) are self-reflective; (c) value positive growth and attempt to balance change and stability; (d) attempt to control their conduct or behavior; (e) have an active role in shaping and transforming their environmental contexts; and (f) healthcare professionals exert interpersonal influence on individuals' health behaviors; (e) have an active role in shaping and transforming their environmental contexts; (f) healthcare professionals exert interpersonal influence on individuals' health behaviors; and (g) lasting behavior modification is based on to self-initiation of change (Alligood, 2018; George, 2016; Pender et al., 2002). These assumptions allow exploration of the sociocultural factors that influence GWG in the pregnant women's context. In addition, how these factors influence the decisions made regarding GWG and the adoption behaviors for appropriate GWG during pregnancy. In addition, the interpersonal relationship between health professionals, family, and peers influences pregnant women's health decisions and behavior modification.

The HPM's major concepts are individual characteristics and experiences, behavioral-specific cognitions, and affect and behavioral outcomes (Alligood, 2018;

George, 2016; Pender et al., 2002, 2011, 2019). Individual characteristics and experiences include previous related behaviors (e.g., behaviors that may facilitate or be barriers to engagement in health-promoting behaviors such as physical activity or smoking). Personal factors include biological, sociocultural, psychological, and socioeconomic factors, including race, age, and ethnicity (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019).

The second main concept is behavioral-specific cognitions, and affect is the most susceptible to change through nursing interventions; therefore, considered important for the individual's motivation and the core of the interventions (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019). The behavioral-specific concept includes nine sub concepts. Cognitions and effects include perceived benefits of action, which are the intrinsic or extrinsic factors considered benefits because of behavior change, such as feeling better, increased energy, social interaction, and monetary rewards (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019). Perceived barriers to action are factors or situations considered barriers to behavior change, such as time, expense, and difficulty giving up eating high-sugar or high-fat foods (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019). Perceived self-efficacy is the ability individuals believe they must perform a particular behavior. Activity-related affect is the positive or negative feelings that occur before, during, or after the behavior (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019).

Interpersonal influences can influence health promotion and behavior change. These include norms, social support, modeling, beliefs, family, healthcare providers, and

peers (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019). Situational influences are the individual's personal perceptions or thoughts of any situation that may impede or facilitate health promotion and behavior change and may include perceptions of available options and characteristics of the context in which the behavior is proposed (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019). According to Pender, commitment to a plan of action initiates health behaviors (Pender et al., 2002, 2011, 2019). Thus, commitment to a plan of action is identifying and planning strategies that lead to the planned health behavior (Pender et al., 2002, 2011, 2019).

Competing demands and preferences are the obstacles; "alternative behaviors that appear in awareness as possible courses of action immediately before a planned health-promoting behavior occurs" (Pender et al., 2019, p. 44). Competing demands are those over which the individual has little control, such as family and work responsibilities (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019). Competitive preferences are behaviors over which the individual has or exerts high control, such as choosing between a cookie and a fruit, soda over water, or selecting high-fat or high-sugar foods over low-fat or low-sugar foods (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019).

The last main concept is behavioral outcomes, a health-promoting behavior whose purpose is for the individual to obtain positive health outcomes such as improved functional capacity or quality of life (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019). Therefore, it may involve an increase in existing healthy behaviors, replacement of risky or unhealthy behaviors, or both, such as healthy diet intake,

engaging in regular exercise, stress management, and forming positive relationships (Alligood, 2018; George, 2016; Pender et al., 2002, 2011, 2019).

Several theoretical models focus on an individual's health beliefs and perceptions and the sociocultural or personal factors or determinants that influence the individual's motivation to change behaviors. However, the HPM is envisioned as a holistic model that considers sociocultural factors and family influence to predict health behaviors (Garcia, 2016). As a holistic model, the HPM enables capturing the lifestyle of individuals as expressions of their cultural background and past experiences, facilitating a better understanding of Puerto Rican women's perspectives regarding GWG and perceived barriers to achieving healthy weight gain during pregnancy (Garcia, 2016).

Previous Application of the HPM

The HPM has been used for health promotion in culturally diverse communities (Aşci & Rathfisch, 2016; Agtam & Deawwad, 2018; Jalili Bahabadi et al., 2020; Khoshnood et al., 2018) and populations like the diabetic, adolescent weight gain, adolescent physical activity, weight management in pregnancy reducing health costs (Borhani et al., 2017; Eren et al., 2017; Lari et al., 2018). The use of the HPM in research on GWG has evidenced that social-cultural factors, family support, and education influence GWG (Cyphers et al., 2017; Goodarzi et al., 2018). Therefore, the HPM is a holistic model that considers sociocultural factors, socioeconomic status, and family influence to predict health behaviors. The model captures the lifestyle profiles of diverse individuals and groups as expressions of their cultural backgrounds and past experiences that may influence their health behaviors (Garcia, 2016).

Researchers have conducted studies to measure or classify health-promoting behaviors and analyze their relationship with GWG. Jalili-Bahabadi et al. (2020) investigated predictors of health-promoting lifestyles of pregnant women in Yazd Province based on HPM constructs. The researchers used the Health Promotion Lifestyle Profile II (HPLP-II) and a questionnaire based on the HPM concepts of perceived self-efficacy, affect, social support, benefits, and barriers. The authors found that of the HPM concepts, social support, perceived benefits, and perceived barriers are important predictors of health-promoting lifestyles in pregnant women. In addition, perceived self-efficacy, perceived benefits, and social support directly impact health promotion behaviors and perceived benefits. According to the authors, if women have the desired social support, their self-efficacy in adopting a healthy lifestyle and their control over their health behaviors will increase and increase the likelihood of healthy lifestyles. The researchers recommended HPM-based educational intervention research to promote healthy lifestyle behaviors in pregnant women. They indicated that the study results could help plan appropriate interventions for promoting healthy lifestyles in pregnant women.

Goodarzi-Khoigani et al. (2018) examined the impact of nutrition education on the number of meals served per day in Iranian pregnant women based on the HPM. The authors found that nutrition education based on the HPM improved women's nutritional habits. They observed improvement in the women's diets and the daily amount of fruits, vegetables, dairy, meat, and wheat consumed. The results were consistent with those mentioned by Pender in that individuals make changes in their health behaviors (commit to actions) based on perceived benefits, barriers, and self-efficacy to establish or continue

with health promotion behaviors. Furthermore, family and peer support, the support system, sociocultural norms (interpersonal influences), and triggers in their environment (situational influences) are part of the women's context that influence health behaviors. The individual engages in a health promotion plan if the health actions are attractive and considers the individual's needs and preferences (Goodarzi-Khoigani et al., 2018).

Cyphers et al. (2017) used the HPM to explore the relationship between religiosity and health promotion behaviors in pregnant women. The authors found that religiosity was associated with health-promoting behaviors. Also, among participants from different ethnic groups, only Hispanic ethnicity and religiosity were significantly related to health-promoting behaviors. Furthermore, religiosity as a personal and interpersonal influence was related to health-promoting behaviors. It was recommended that future studies guided by the HPM obtain additional information on the relationship between religiosity and health-promoting behaviors.

Aşci and Rathfisch (2016) sought to determine the effect of lifestyle interventions offered in the prenatal care setting on healthy lifestyle adaptation, development of dietary habits, GWG within the levels recommended by the 2009 IOM guidelines, and decreased postpartum weight retention. The researchers used the HPLP-II to measure healthy lifestyle behaviors. They also used the HPM to allow women to express their experiences and opinions about nutrition and physical activity through open-ended questions based on HPM concepts. Thus, they customized counseling and behavioral skills development interventions according to individuals' barriers to displaying the behavior and their self-efficacy in performing the behavior. The authors found that interventions offered by the

nursing staff were effective in ensuring optimal GWG and healthy lifestyle development and that lifestyle interventions that only included the pregnancy stage were ineffective in reducing postpartum weight retention.

Hyedari and Khorashadizadeh (2014) reviewed the use of the HPM as a theoretical framework. The researchers reviewed 74 research articles of various methodologies from a database from 1990 to 2012. The authors found that HPM has been used in research studies to predict effective factors or barriers to health-promoting behaviors and to detect the effects of intervention programs on health-promoting behaviors. In addition, studies were conducted to study the model, identify health promotion behaviors and quality of life, predict the stage of change in related factors that affect health promotion behavior, and prevent events that interfere with health prevention behaviors (Hyedari & Khorashadizadeh, 2014). Also, developing other models similar to HPM, comparison of the model with other models, and determining the relationship of variables associated with health promotion behaviors (Hyedari & Khorashadizadeh, 2014). The researchers mentioned that the model is useful for obtaining data on developing interventions, preventing unhealthy accidents and risk factors for diseases, and changing health promotion practices and activities (Hyedari & Khorashadizadeh, 2014). Also, by using HPM as a theoretical framework, researchers can design and implement more specific studies to improve healthy lifestyles and detect important factors of health-related behaviors in different age groups, gender, income, employment status, and educational levels (Hyedari & Khorashadizadeh, 2014).

Aqtam and Darawaad (2018) conducted an integrative literature review to examine how researchers use the HPM in research studies. They reviewed seventeen studies published between 2008 and 2018, of which 16 used a quantitative methodology, and one used a qualitative method. Researchers found that the studies' purposes were diverse but fell into two main categories: one to describe aspects of HPM in different populations and the second to study the relationship between different HPM variables or between selected HPM variables and others. The studies' contexts and populations varied in educational level, age, health conditions, and gender, including pregnant women, indicating that HPM is applicable and generalizable (Aqtam & Darawaad, 2018). Several studies use one or two concepts of the HPM. Others used more than two, indicating that researchers may use the HPM as a theoretical framework (Hyedari & Khorashadizadeh, 2014) or as a conceptual framework for studies to predict health-promoting behaviors (Aqtam & Darawaad, 2018).

Shobeiri et al. (2018) conducted a quasi-experimental study to evaluate a nutritional program's effect on pregnant women's nutritional behaviors using Penders HPM. The authors used a sample of 100 primigravidas referred to health centers in Iran between October 2015 to March 2016. The nutritional program included four educational sessions for the study group in two weeks. The researchers found that nutritional interventions improved the nutritional behaviors of pregnant women. In addition to an improvement in the HPM components of self-efficacy perceived benefits, perceived barriers, situational influences, behavior-related affect, and commitment to action, there

were considerable differences in scores after the intervention in the pregnant women compared to the control group.

Khoshnood et al. (2018) analyzed and critiqued Penders' HPM using Barnum's criteria for the model's analysis, application, and evaluation. The researchers searched and analyzed more than 1,278 books and articles from various databases. After a review of the initial articles, they included 28 in the analysis. The authors found HPM's philosophical assertions and content consistent and clear. Its application in research studies demonstrated the ability to predict the behavioral outcomes of individuals. The HPM has been applied in studies with individuals of diverse ages and cultures with different health problems, including smoking cessation, weight control, exercise, and stress management, and is therefore not limited to specific health behaviors and is useful in a variety of settings, including workplaces, homes, and health care facilities. The model allows for personalized nursing interventions with care plans designed with specific goals for each patient. The model accounts for people's perceptions and how these perceptions can affect their health behaviors. Pender's HPM can be used in studies that seek to predict the factors/barriers effective in health-promoting behaviors, test the model, and identify individuals' quality of life in predicting the change phase in related factors that affect health-promoting behavior. Also, prevent events that interfere with health-promoting behavior, develop another model, compare HPM with another model, and determine the relationship of variables associated with HPM on health-promoting behaviors in medical research. The HPM adds knowledge to the nursing discipline and

can help strengthen the resources and capabilities of individuals, families, and communities to obtain a better quality of life.

Previous studies illustrate the wide use of the HPM in the field with diverse populations, contexts, and health conditions to identify facilitating factors and barriers in health promotion behaviors. It has also been used to identify situational, personal, and interpersonal influences, such as family support, that influence these behaviors. In addition, the use of the HPM in creating education programs and promoting healthy health behaviors. Various researchers use the model as their study's theoretical framework, and others use concepts of the model as part of a conceptual framework for research studies. The model has also validated data collection instruments for quantitative and qualitative studies. In this study, I used several concepts from the theory for data collection. The HPM concepts used were individual characteristics and experiences, including the woman's background, personal factors, interpersonal factors, and situational influences, to identify the sociocultural factors that influence the health outcomes of pregnant Puerto Rican women concerning EGWG in Puerto Rico.

Literature Review

A literature review found several studies that have explored EGWG. These studies explore various factors that influence women's health behaviors during pregnancy. Others explore the complications related to excessive weight gain during pregnancy and the short- or long-term conditions that the mother and infant may develop due to EGWG during pregnancy. Some studies explore the sociocultural factors that influence excessive weight gain in pregnant women, especially when obesity rates are

high, and more than 50 percent of women start their pregnancies overweight and gain excessive weight during pregnancy. However, there are few studies related to sociocultural factors that influence excessive weight gain in Puerto Rican pregnant women. The literature review revealed that there are few studies conducted in Puerto Rico and that ethnic and sociocultural factors that need to be explored that influence the health behaviors of pregnant women that lead to excessive weight gain during pregnancy. Below, I present a literature review related to the following concepts of this study: gestational weight gain, excessive gestational weight gain, and sociocultural factors.

Gestational Weight Gain

Adequate weight gain during pregnancy is necessary and a priority in the care of pregnant women for healthy fetal growth and development and prevention of short- and long-term maternal and infant complications (Fletcher et al., 2017). Therefore, it is an element assessed during prenatal care measured by considering the difference in weight from the first prenatal visit to the pre-birth weight, considering pre-pregnancy weight that is usually self-reported by the woman (Kominiarek & Peaceman, 2017). Prenatal healthcare providers should assess the pregnant woman's weight at each prenatal visit and monitor for weight gain to ensure healthy weight gain during pregnancy (Deputy et al., 2018; Kominiarek & Peaceman, 2017). Providing education or counseling to the woman is also recommended if changes in weight gain goals occur, such as inadequate weight gain or excessive weight gain during pregnancy (Kominiarek & Peaceman, 2017).

Since the early 20th Century, health professionals have questioned how much weight women should gain during pregnancy and suggested that women gain 15 to 20

pounds (Rasmussen, 2009). During the 1960s to 1970s, GWG guidelines increased to 20 to 25 pounds due to elevated neonatal and infant mortality rates and the Committee on Maternal Nutrition's recognition of the positive association between GWG and birth weight (Champion & Harper, 2020; Kominiarek & Peaceman, 2017; Rasmussen, 2009). The publication of *Nutrition During Pregnancy* in 1990 led to a change in GWG guidelines to improve birth weight and provide specific recommendations according to a woman's pre-pregnancy weight and limit the amount of weight a woman could gain over her pre-pregnancy weight (Kominiarek & Peaceman, 2017; Rasmussen, 2009).

In 2009, the IOM published *Weight Gain during Pregnancy -Reexamining the Guidelines*. The publication updated the guidelines for weight gain during pregnancy using the World Health Organization (WHO) BMI categories, gestational weight gain ranges for the second and third trimester, and specific goals for women with a BMI greater than 30 (Champion & Harper, 2020; Kominiarek & Peaceman, 2017; Rasmussen, 2009). According to these guidelines, underweight women with a BMI of 18.5 or less can gain between 28 and 40 pounds during pregnancy. While a woman at her ideal weight and a BMI between 18.5 and 24.9 can gain between 25 to 35 pounds during pregnancy. Also, an overweight woman with a BMI between 25.0 and 29.9 can only gain 15 to 25 pounds during pregnancy, and an obese woman with a BMI over 30 should gain between 11 to 20 pounds (Kominiarek & Peaceman, 2017; Rasmussen, 2009).

According to the IOM, the updated GWG guidelines were created for use with women in the United States and not designed for use in populations in which women are shorter and thinner than American women (Rasmussen, 2009). They do not provide

specific guidelines for subpopulations such as racial-ethnic minorities, short women, adolescents, and women with higher obesity classifications. Furthermore, according to the guidelines, first-trimester weight gains of 1.1 to 4.4 pounds for all women are not attributed to fat deposits but to early placental development and expansion of maternal blood volume (Kominiarek & Peaceman, 2017). However, in Puerto Rico, healthcare professionals use the IOM guidelines with pregnant women. The review of educational material used by the U.S. Department of Agriculture's Special Supplemental Nutrition Program for Women, Infants, and Children Program (WIC) in Puerto Rico shows the recommendations for GWG as established by the IOM in 2009 (WIC, 2022) in a population whose physical structures and anthropometric measurements differ from those of American women.

In the US and Puerto Rico, weight gain during pregnancy involves assessing and monitoring the pregnant woman's weight during prenatal care. This practice contrasts with GWG management in other countries. In the United Kingdom, there are no national guidelines for GWG (Kominiarek & Peaceman, 2017). The National Institute for Health and Clinical Excellence (NICE) does not recommend routine weighing unless concerns with the woman's nutrition or clinical interventions may influence weight gain goals (Kominiarek & Peaceman, 2017). However, in the literature reviewed, several authors mention that national GWG guidelines, if existing, vary by country, although many may be similar to those of IOM (Garmendia et al., 2018; Hasan et al., 2021; Mardones et al., 2021; Melby et al., 2019; Nomura et al., 2019; Surita et al., 2013). However, by specifying the importance of BMI, GWG guidelines may mask other important factors

that influence GWG for maternal and child health in ethnically diverse populations worldwide (Melby et al., 2019).

Previous studies have shown that racial-ethnic differences or variations in women of reproductive age may influence the weight they gain during pregnancy. These differences include anthropometric measurements of the pregnant woman according to their race or ethnicity. Denize et al. (2018) conducted a systematic review and meta-analysis to describe discrepancies in GWG according to the 2009 IOM guidelines across different cultures. They analyzed 86 articles for cultural differences in achieving GWG guidelines or goals. It was found that using IOM gestational weight gain guidelines and WHO and BMI categories may lead to misclassifying pregnancy risks in Asian women. According to their findings, Asian women's genetic profile and anthropometric differences differ from Caucasian women, recommending the need for culturally diverse guidelines.

Garmendia et al. (2018) conducted a secondary analysis of 62,579 singleton term delivery records at a hospital in Santiago, Chile, between 2003-2012 to examine whether the GWG guidelines proposed by the IOM in 2009 are appropriate for Chilean women. They also examined whether better recommendations were using the characteristics of Chilean women and recommendations stratified by women's weight and height. The researchers obtained GWG recommendations tailored to the Chilean population by developing a mathematical optimization model and compared them with the IOM recommendations. They found that the IOM gestational weight gain guidelines are based on the Caucasian population. The GWG recommendations obtained by the model

perform better than those suggested by the IOM, and ethnic factors can influence GWG. Therefore, they recommended adopting GWG guidelines based on the characteristics of the Chilean population to obtain better short and long-term results in pregnant women.

Deniz et al. (2018) conducted a systematic review and meta-analysis to describe the discrepancies in achieving GWG according to the Institute of Medicine (IOM) guidelines in different ethnic and cultural groups. The authors mentioned that the updated 2009 IOM guidelines recognized culture as a potential factor influencing the achievement of adequate GWG. However, until then, the magnitude of culture's influence was unknown. Their study found that culture, acculturation, and sociodemographic factors influence GWG. In addition, white women were more likely to gain weight above established guidelines than Asian and Hispanic women. However, White and Black women were more likely to gain excess weight. Hispanic women were reported to gain less weight than recommended by the IOM and were at less risk of excess weight gain. Excess weight gain during gestation was common in Asian women. The authors concluded that the anthropometric differences in women could lead to potential misclassification. They reinforce the need for culturally diverse GWG guidelines to individualize prenatal care and obtain positive maternal and fetal outcomes in culturally diverse groups.

Melby et al. (2019) conducted a comparative study to assess the appropriateness of ethnically blind IOM GWG guidelines by examining the risks of SGA based on GWG inadequacy categorized using the IOM and Japanese GWG guidelines. The authors mentioned that 25% of Japanese women start their pregnancies underweight, and many

intentionally diet during pregnancy to have smaller children and facilitate delivery. They used the maternal child health books of 384 elementary and middle school children from a rural region of Nagano, Japan. The researchers found that using the IOM guidelines, 76% of the women had inadequate GWG, and only 3.4% had EGWG. However, using the Japanese GWG guidelines, 21.7 percent of women had inadequate GWG, and 19.8 percent had EGWG. There also were differences in the number of women with adequate GWG when comparing the two guidelines. When using the IOM guidelines, only 21 percent of women had adequate GWG, while 58 percent of pregnant women had adequate GWG using the Japanese GWG guidelines. Thus, they concluded that the GWG guidelines that represent the Caucasian-American population as a reference lead to GWG recommendations that do not represent ethnically diverse women and may obscure other factors that influence maternal and infant health and pregnancy outcomes.

Hasan et al. (2021) conducted a retrospective cohort study to assess whether weight gain during the second and third trimester of pregnancy above the 2009 IOM guidelines is associated with adverse maternal, fetal, and neonatal outcomes among women in a rural area of Bangladesh. Also, to examine the applicability or suitability of the recommended guidelines in this population. This retrospective cohort study included 1569 mother-infant pairs. The authors used data from a previous Pregnancy Weight Gain study, and nurse-midwives took anthropometric measurements of the pregnant women. The researchers found that women who gained weight below the IOM recommendations during the second and third trimesters were at increased risk of delivering low birth weight (LBW) or small for gestational age (SMA) infants. In addition, women who

gained weight above the IOM guidelines were more likely to have macrosomic or large-for-gestational-age (LGA) neonates than those who gained weight within the recommended IOM guidelines. They suggested following the 2009 guidelines established by the IOM to set weekly weight gain goals for pregnant women in Bangladesh, including monitoring their weight gain and counseling. Also, short women should set weekly GWG goals near the lower end of the recommended range according to their pre-pregnancy BMI. They concluded that the 2009 IOM GWG guidelines during the second and third trimesters might be appropriate for Bangladeshi women.

Healthcare providers who offer prenatal care have an essential role in educating and counseling pregnant women about GWG. A diverse group of healthcare professionals provides care to this patient group. Among these are obstetrician-gynecologists, nurses, nurse midwives, or other health care providers caring for pregnant women. These healthcare professionals should know the GWG guidelines to educate women about appropriate weight gain during pregnancy. However, studies have found that providers are not knowledgeable about GWG guidelines. Women report receiving little or no education on the topic or conflicting information from healthcare providers, leading to inadequate GWG in pregnant women (Deputy et al., 2018).

Deputy et al. (2018) examined the association between advice offered by health care providers and GWG and inadequate GWG stratified by BMI category. They estimated the proportion of women who received advice from health care providers on GWG consistent with the 2009 IOM guidelines using cross-sectional data from the Pregnancy Risk Assessment Monitoring System for the years 2010-2011. The researchers

found that only 26.3% of pregnant women received consistent advice from their healthcare providers about the IOM GWG guidelines. At the same time, 26.0% reported not receiving advice. The authors also found that 15.5% of women received weight gain advice that started below the recommended guidelines and 18.3% above the recommended guidelines, influencing the amount of weight women gained during pregnancy. Inadequate weight gain was higher in women who received weight gain advice below the established guidelines (33.5%) and EGWG among women who received advice above the recommended guidelines. Furthermore, among women who received advice consistent with IOM guidelines, 42.2% had adequate GWG. Thus, the more the advice deviated from established guidelines, the greater the risk of inadequate or excessive weight gain. These findings suggest that healthcare providers should improve their knowledge or awareness of the 2009 IOM GWG guidelines.

Walker et al. (2019) explored the perceptions and experiences of general practitioners (GPs) in implementing GWG recommendations in their antenatal care practices in Australia. The investigators interviewed 20 GPs from two hospital networks in Australia offering antenatal care services in both regional and metropolitan settings. The authors found that although Australian and international GWG guidelines are used in Australia, providers' awareness and knowledge of these guidelines were low. They only provided basic information at the beginning of pregnancy and only provided education to the women they felt required more or when asked directly by the woman. In addition, providers mentioned the lack of or little training for managing weight gain during pregnancy, the lack of specific skills to work with complex GWG cases, the lack of clear

guidelines related to GWG, and the accessibility to resources to support counseling offered to pregnant women. These issues lead to women receiving little or incorrect information about GWG, leading to weight gain during pregnancy over or under recommended GWG guidelines. These findings are consistent with the study by Deputy et al. (2018), in which patients received inadequate information about GWG. The authors also recommended promoting providers' knowledge about GWG guidelines through dissemination, implementation, and professional development of healthcare providers (Walker et al., 2019).

A systematic review by Callaghan et al. (2020) summarized published evidence on nurse-midwives and obstetricians' knowledge of pre-pregnancy BMI-based GWG guidelines and assessed potential gaps in providers' knowledge. The authors found that nurse-midwives and obstetricians' knowledge of these guidelines was low. However, the evidence presented was mixed due to the variation in methods used to estimate their knowledge and the GWG guidelines used in different countries. In addition, they found that although these healthcare professionals reported high levels of self-reported knowledge, especially among nurse-midwives, the results showed knowledge deficits among healthcare providers and the need for training. These findings are important for clinical practice as although they feel confident in their knowledge, they do not have adequate knowledge to provide evidence-based advice to pregnant women. However, the review had several limitations. Among them, healthcare professionals' self-reported knowledge increased the risk of bias. Also, differences in GWG guidelines made making comparisons difficult. The studies reviewed were conducted in high-income countries,

requiring more studies in low-income countries. However, they identified a need to examine health professionals' recognition of GWG guidelines and to educate and train obstetricians and midwives on appropriate and evidence-based GWG advice for health promotion within clinical practice.

Nikolopoulos et al. (2018) explored the perceptions and experiences of Spanish- and Portuguese-speaking Latina women pregnant with their first child regarding patient-provider communication and GWG and PA counseling during pregnancy. According to the study findings, managing weight during pregnancy is important for women as it can affect maternal and fetal health. However, communication with healthcare providers about GWG was poor despite being weighed at each prenatal visit, leading women to question whether controlling weight gain during pregnancy was important to their healthcare providers. Providers only touched the subject when the women gained too much weight outside of established guidelines and not in a positive way. Pregnant women want to have a healthy and uncomplicated pregnancy. Therefore, from the beginning of the pregnancy, women want to know and learn about their weight gain goals (Nikolopoulos et al., 2018). They also want to receive respectful, empathetic, appropriate advice, guidelines, and counseling to maintain adequate nutrition and physical activity to achieve healthy weight gain and positive pregnancy outcomes (Nikolopoulos et al., 2018). Therefore, discussions about GWG during prenatal visits as part of standard prenatal care are essential. In addition, healthcare professionals' increased awareness, knowledge, and training on this topic are necessary for improving care related to weight

management during pregnancy and services offered to this population (Callaghan et al., 2020; Deputy, 2018; Walker, 2019).

The results of these studies also show the use of the IOM guidelines with women of varying ethnicities and anthropometric measurements (Deniz et al., 2018; Hasan et al., 2018; Melby et al., 2019). Others suggest creating guidelines according to women's anthropometric differences and ethnic diversity (Garmendia et al., 2018; Hasan et al., 2021). Therefore, GWG involves not only following the guidelines established by the IOM but also taking into account the ethnic diversity and anthropometric measurements of pregnant women to provide adequate education and care and prevent short and long-term maternal and infant complications. Due to these findings, I established how to define GWG in the study. For the research, I defined GWG as the amount of weight gained by a pregnant woman from conception to birth (Melby et al., 2019).

Excess Gestational Weight Gain

Weight gain during pregnancy is an indicator of maternal and fetal health (Nikolopoulos et al. 2017). It is one of the standard measures used during prenatal care and an indicator that has the strongest relationship with pregnancy outcomes (Goldstein et al., 2017; Goldstein et al., 2018; Villa Candel et al., 2020). Weight gain above or below established IOM guidelines increases the likelihood of complications during pregnancy (Goldstein et al., 2017; Goldstein et al., 2018; Nikolopoulos et al., 2017; Villa Candel, 2020; Walker, 2019). Excess weight gain has become a worldwide epidemic (Kunath et al., 2019; O'Brien et al., 2018). As obesity increases globally, the number of women of reproductive age who start their pregnancies overweight or obese increases

(McDowell et al., 2018; Kunath et al., 2019; O'Brien et al., 2018). It also increases the incidence of complications associated with obesity during pregnancy, making it a public health concern for women of reproductive age (McDowell et al., 2018; Kunath et al., 2019; O'Brien et al., 2018). Thus, optimizing GWG is challenging for healthcare providers offering care to pregnant women globally.

In the United States, more than 50% of women start their pregnancies overweight and gain excess weight during their pregnancies (Dude et al., 2020; Goldstein et al., 2021; Kunath et al., 2019; Nunnery et al., 2018; Walker et al., 2019). In Puerto Rico, more than 50% of women start their pregnancies overweight or obese, while 63.9% of women gain excess weight during pregnancy despite EGWG being a modifiable risk to prevent adverse pregnancy outcomes (Callaghan et al., 2020; Cruz-Carrión et al., 2019; PRAMS, 2021). Despite that women start their pregnancies overweight and gain excess weight during pregnancy, there is no clear definition of EGWG. The difficulty in defining EGWG is due to exploring several variables related to the topic in literature. Among these are pre-pregnancy obesity, obesity occurring during pregnancy, weight gain during pregnancy, and changes in BMI during pregnancy regardless of pre-pregnancy BMI, making it difficult to define. However, many authors define EGWG as weight gain above IOM guidelines or established weight guidelines based on a woman's BMI (Callaghan et al., 2020; Dude et al., 2020; McDowell, 2018).

Several studies have explored the causes of EGWG. McDowell et al. (2018) found that the causes of EGWG are multifactorial, among which they mentioned low income influencing nutrition due to lack of access to healthy foods, lack of physical

activity opportunities, and low health literacy about healthy food selection. In addition, psychosocial factors influence EGWG. Among the factors are family support and stress and being from minority racial and ethnic backgrounds, and multiparity. McDowell et al. (2018) also found that EGWG is associated with adverse pregnancy and neonatal outcomes. Among the negative outcomes for mothers are hypertensive disorders of pregnancy, gestational diabetes, increased incidence of cesarean section, and postpartum weight retention. They mention large for LGA and macrosomic neonates among the adverse effects for the fetus and neonate. These findings are consistent with those from Goldstein et al. (2017) review, in which excessive weight gain during pregnancy was associated with a 4% increased probability of LGA neonates, 6% of macrosomia, and an increased probability of cesarean deliveries. The authors found that long-term consequences of EGWG for the child are an increased probability of developing obesity and asthma in childhood. These findings are similar to those of Voerman et al. (2020), in which EGWG was found to be associated with a 39-72% increased risk of childhood overweight, and that the proportion of obesity and overweight in early childhood associated with EGWG was 11.4% and 15.4% and 19.2% in middle and late childhood, respectively. Furthermore, a maternal pre-pregnancy BMI was also associated with an increased risk of childhood overweight and obesity. These findings highlight the importance of education and weight management for women in the preconception stage and the importance of healthy weight gain during pregnancy to prevent short- and long-term maternal and neonatal complications.

Kominiarek et al. (2018) conducted a secondary analysis to evaluate the association between GWG and maternal and neonatal outcomes in a large, geographically diverse cohort group. The authors used data from all deliveries at 25 hospitals for three years (2008 to 2011). The researchers found that non-Hispanic white women had the highest weight gain proportion above the IOM guidelines recommended. Kominiarek et al. (2018) also found differences among the three GWG categories according to race, age, ethnicity, parity, baseline BMI, previous cesarean section, chronic hypertension, gestational diabetes, and tobacco use, and type of health insurance. Also, there is an association between EGWG and cesarean sections in nulliparous and multiparous women, hypertension during pregnancy, macrosomia, shoulder dystocia, and neonatal hypoglycemia, unlike McDowell et al. (2018), who found an association between EGWG and preterm delivery. These findings support the findings of the systematic review and meta-analysis by Goldstein et al. (2017) and reinforce the need to evaluate healthcare providers' interventions during prenatal care to prevent EGWG during pregnancy. However, the study conducted by Kominiarek et al. (2018) had a limitation. The researchers used data from 2008 to 2011, in which two publications on GWG guidelines could have influenced healthcare providers' practices. In addition, the utilization of self-reported pre-pregnancy weight or measurement taken during the first prenatal visit, whereby the woman's self-reported pre-pregnancy weight may not have been the correct.

Sun et al. (2020) investigated the sociodemographic characteristics affecting pre-pregnancy BMI and the effects of pre-pregnancy BMI and GWG on maternal and neonatal complications. The authors found that women living in northern China and

being of racial or ethnic minorities influenced GWG. Thus, there are geographic, racial, ethnic, and ethnic factors that affect a woman's pre-pregnancy BMI and weight gain during pregnancy. In addition, overweight, obesity, and EGWG increase the risks of developing gestational diabetes, pregnancy-induced hypertension, macrosomia, and LGA neonates.

Several researchers have explored pregnant women's knowledge of obesity-related complications and excessive weight gain during pregnancy (Rafat et al., 2022; Di Stefano et al., 2021; Vanstone et al., 2017). Rafat et al. (2022) conducted a cross-sectional study examining women's perceptions and knowledge of the complications of obesity and EGWG and ways to manage appropriate GWG. For the study, the researchers recruited 216 pregnant women from antenatal clinics at two institutions in India. The authors found that women frequently misclassified their weight and BMI and inappropriately estimated their GWG. However, the women were aware of maternal complications associated with obesity and EGWG, such as gestational diabetes, hypertensive disorders, difficulty in vaginal delivery, cesarean delivery, and postpartum hemorrhage, but had little knowledge and misconceptions about the difficulty in breastfeeding, increased incidence of postpartum hemorrhage, and postpartum weight retention. However, they had little knowledge about infant complications related to maternal obesity and EGWG. These findings are similar to those of Vanstone et al. (2017) review, in which women had little knowledge about the risks of EGWG on maternal and fetal health. Also, little knowledge about healthy weight gain during pregnancy and reported higher GWG ranges than those established by clinical guidelines

in their country. The results of Rafat et al. (2022) research highlight the importance of educating women about the adverse effects of EGWG on infants, which could motivate pre-pregnancy weight loss and GWG to avoid adverse short- and long-term maternal and perinatal outcomes.

Di Stefano et al. (2021) conducted a qualitative study to estimate counseling practices among healthcare providers and potential health interventions for women from diverse cultural backgrounds. The study findings were similar to those of (Rafat et al., 2022; Vanstone et al., 2017), in which women had some knowledge about the maternal risks of EGWG but were unaware of the long-term risks of EGWG in the mother and child. Women at the SETFHT center, who served mainly middle to upper-class women and a few immigrants with specific knowledge of adequate weight gain during pregnancy, proactively sought information and initiated discussions about weight gain with their healthcare providers. While women at the FHC center that served immigrants and refugees were not concerned about weight gain, their interactions with healthcare providers were more passive. They did not bring up the issue for discussion with their providers. These results show a difference in socioeconomic and cultural diversity discussed in other studies and should be considered when providing care to pregnant women from diverse socioeconomic and cultural groups (Hasan et al., 2021; Melby et al., 2019). Also, the women mentioned receiving little counseling or advice from their healthcare providers and were not counseled about nutrition and exercise unless they initiated the conversation. Di Stefano et al. (2021) noted that the study participants were interested in receiving counseling and accessible resources from the provider. Notably,

the FHC group of women were also interested in specific language resources and accessibility to culturally sensitive prenatal classes and services. Di Stefano et al (2021) findings are similar to those found in studies on GWG, in which women mentioned receiving little or no advice or education from healthcare providers. Leading to patient interpretation that the issue is not important or that their weight gain is adequate, often leading to excess weight gain during pregnancy (Deputy et al., 2018; Nikolopoulos et al., 2018; Walker et al., 2019).

Another aspect investigated on EGWG is healthcare providers' self-efficacy and knowledge of advising pregnant women about the risks of excessive weight gain during pregnancy and adequate weight gain. According to the previously mentioned study by Di Stefano et al. (2021), healthcare providers were knowledgeable about the maternal and fetal neonatal risks of excessive weight gain during pregnancy. However, although they reported providing counseling and resources to patients, their practices differed according to the literacy of the population they served. They mentioned barriers to counseling as lack of time due to other priorities within prenatal care and language barriers, the culture of relying on relatives, and distrust of healthcare providers culturally embedded in the immigrant group. The results of Di Stefano et al. (2020) study support the importance of providing individualized care and interventions and considering the background of the population or patients to provide culturally centered care.

Sociocultural Factors

Several studies mentioned sociocultural factors that may influence EGWG in the literature review. These include culture, beliefs, socioeconomic and psychosocial factors,

knowledge, family and peer support, health care providers, race, and ethnicity. This section of the literature review presents studies that explore different sociocultural factors that influence EGWG.

Vanstone et al. (2017) focused on factors and circumstances that women identify as essential to achieving adequate GWG, what they accept as an adequate GWG, and strategies to promote healthy weight gain. The researchers identified various barriers to adequate weight gain, the lack of knowledge about the recommendations for adequate GWG, and the maternal and fetal risks of EGWG beliefs, emotional, practical, logistical, social, and structural factors, and lack of family support. However, Vanstone et al. (2017) mentioned a higher income, family support, and a trusting relationship with the health care provider as facilitating factors. Strategies identified to manage GWG were access to affordable healthy foods, individualized nutritional education, counseling according to cultural and personal preferences, nonjudgmental counseling, individualized counseling, psychological support, and educational programs that include the woman's partner and family. These results show how social, psychological, cultural, intrapersonal, and educational factors and the relationship with the health professional influence pregnant women's attitudes, beliefs, and health behaviors. Understanding how these factors influence women's health decisions is essential to prevent EGWG and complications for the mother and fetus and to provide individualized interventions according to the needs of the women and family.

Cyphers et al. (2017) explored the relationship between religiosity and health promotion behaviors in pregnant women. The authors found that religiosity was

associated with health-promoting behaviors. Also, among participants from different ethnic groups, only Hispanic ethnicity and religiosity were significantly related to health-promoting behaviors. Furthermore, religiosity as a personal and interpersonal influence was related to health-promoting behaviors. These influences include organized religiosity, attending religious classes and services, personal prayer, reading religious material, and surrendering to God. The researchers recommended future studies guided by the HPM to obtain additional information on the relationship between religiosity and health-promoting behaviors. The results would help develop health promotion interventions and support for women of all religions.

Higginbottom et al. (2018) conducted a focused ethnographic study to explore and understand how Chinese immigrant women's health beliefs and practices affect their food selection during the perinatal period. The authors found that Chinese immigrant women's holistic underlying cultural conceptualization of health influenced their food choices and practices during the perinatal period. The focus during pregnancy was on maintaining a holistic balance, emphasizing staying healthy, eating fresh foods, and leading an active and emotionally balanced lifestyle. The women's general health beliefs, as well as beliefs and knowledge about specific types of foods considered healthy and having a positive influence on their body and fetus, influenced their selection of health practices during the perinatal stage. They avoided other unhealthy foods that could cause adverse effects on pregnancy, lactation, and the fetus. These results contrast several studies in which women pay little attention to weight gain and are driven by cravings and cultural beliefs that pregnancy is when they can eat for two and eat as much as they want (Lindsay et al.,

2019). The women also made nutritional decisions based on traditional Chinese medicine, socioeconomic environment, and sources of information. Also, the women's family support affected their ability to make dietary decisions and implement dietary or health practices, and foods consumed. In addition, the support and information received from health care providers regarding perinatal diet were considered not culturally relevant. These results are consistent with studies that mention family and peer influence on pregnant women's health decisions, in addition to the importance according to the needs and culture of the pregnant woman (Arnedillo-Sánchez, 2022; Champlin et al., 2021; Vanstone et al., 2017). Higginbottom et al. (2018) concluded that health professionals should be aware of women's diverse backgrounds and situations and how their sociocultural and individual contexts affect their health and eating practices. They further recommended further research to understand ethnocultural food practices and choices and to improve culturally based competence in maternity care.

Nunnery et al. (2018) assessed the prevalence and severity of EGWG, examined the association between GWG and health status, including infant size for gestational age, and identified predictors of EGWG among low-income pregnant women. The researchers found that more than half of the women had overweight or obese peak pregnancy BMI and gained a significant amount of excess weight gain than women who were at the normal weight beginning their pregnancy. Nulliparous women were gaining more excess weight, increasing the risk for postpartum weight retention. Women with unplanned pregnancies also experienced significant EGWG, increasing the risk for postpartum weight retention and poor maternal and infant outcomes. Marital status also influences

weight gain, as single and, divorced, or separated women experience excess weight gain during pregnancy. The researcher's findings suggest that the lack of social support influences weight gain during pregnancy and the need for further investigation into the role of social networks among low-income pregnant women. The researchers also concluded that African American women are more likely to exceed IOM weight gain recommendations or guidelines during pregnancy. Also, socioeconomic status, income, education, and food security were not significantly associated with EGWG. Nunnery et al. (2018) recommended interventions to target pre and perinatal counseling and education programs to maintain a healthy weight gain during pregnancy.

Fathnezhad et al. (2018) conducted a systematic review to assess the status and position of pregnant women's health-promoting lifestyle behaviors. The researcher's secondary objective was to study the factors related to these behaviors and assess attitudes, barriers, and facilitators of health-promoting behaviors. The researchers found that health promotion behaviors and adoption of healthy lifestyles among pregnant women were average. Fathnezhad et al. (2018) also identified several factors influencing health promotion behaviors and the adoption of healthy lifestyles. Among the factors found were pregnancy-related factors such as physiological changes or discomforts of pregnancy, age, marital status, psychological causes, educational level, self-care, income and employability, race, culture and religion, efficacy, and social support. Among the facilitators for adopting healthy lifestyles and health promotion was a concern for fetal or neonatal health. In addition, the researchers found that women were motivated to change their health behaviors. However, the women encountered several barriers to adopting

health behaviors, the most important being the time factor and lack of time to engage in health behaviors. In addition, the woman's partner or spouses' participation facilitated health promotion and healthy lifestyle adoption. Fathnezhad et al. (2018) concluded that to increase health promotion behaviors in pregnant women, providers can use incentives to improve pregnant women's accountability and create opportunities for education and consultation to optimize health promotion and pregnancy outcomes. The researchers also recommended individualizing health behavior assessments based on each woman's needs and situation, and future qualitative studies to examine strategies and interventions designed in cultural-social backgrounds based on the needs of individuals and families.

Fletcher et al. (2018) conducted a qualitative study to develop a personal conceptual model of how Latina women understand a healthy pregnancy and measure their understanding of how GWG and nutrition affect their health and their child's health. The researchers developed a conceptual framework for GWG in this population based on the findings. Fletcher et al. (2018) found that several factors can be facilitators and barriers to a healthy pregnancy in Latina women. Among the barriers were discomforts and physiological changes that occur during pregnancy, emotions and body image, low energy, low motivation to eat healthy foods, and an active lifestyle, finding that is consistent with studies by other researchers (Fathnezhad-Kazemi & Hajian, 2019; Vanstone, 2020; White & Davis, 2021). Also, overeating was related to indulging in cravings and cultural beliefs that failure to indulge in cravings would have adverse consequences in pregnancy. In addition, Fletcher et al. (2018) identified social support as a critical component that could be a barrier or facilitator for healthy behaviors during

pregnancy. Social support included family support as well as support from the healthcare provider. The researchers also identified external health influences as the primary source of information in addition to family and the Internet, which were influential factors in patients' decision-making and health behaviors. However, women forgot the recommended weight gain guidelines discussed by their healthcare providers and had difficulty incorporating the counseling given to them. Also, social isolation due to being away from family and unemployment influenced women's health, dietary decisions, and dependence on their partners in contrast to their home countries, where they had an extensive family support system, a finding consistent with the study by Champlin et al. (2021). In addition, the women's background also influenced their weight-related behaviors during pregnancy. The researchers concluded that the developed model suggests an opportunity to identify specific interventions for population subgroups and future interventions for promoting healthy GWG according to the needs and Latina women's worldviews.

Hashmi et al. (2018) examined perceptions and common practices of diet and physical activity among women in a migrant population on the Myanmar-Thailand border. The authors found that social factors impacting pregnant women's nutrition were related to financial, food accessibility, and family considerations. They also found that women's cultural beliefs that a woman can eat anything during pregnancy because the "baby asks for it" and lack of awareness about nutrition influenced women's health decisions. In addition, midwives lacked the confidence to provide women with counseling on proper nutrition. There was also limited awareness of healthy diets and

lifestyles among women in migrant communities on the Myanmar-Thailand border.

Hashmi et al. (2018) suggested the development of culturally appropriate interventions for these women and communities to address maternal nutrition in this population.

Lindsay et al. (2019) explored first-time pregnant and low-income Latina women's beliefs, attitudes, and experiences regarding GWG to identify barriers to participation and adherence to interventions designed to promote healthy GWG. The researchers found a social and cultural acceptance of weight gain during pregnancy, the greater the weight gain, the healthier the fetus. Women were not sure if their GWG was within a healthy range and reported attitudes of acceptance and resignation of excess weight gain during pregnancy. Some women thought they did not have control over their weight during pregnancy. The participants were more concerned about their baby's health than the amount of EGWG and their health. The women also perceived pregnancy as a time they did not need to worry about eating habits and could give in to cravings and eat for two. Family and friends also reinforced this perception of freedom to eat as much as they want during pregnancy without feeling guilty or ashamed. Also, social and cultural beliefs promoted a culture of pampering and indulging pregnant women with food. Women of Hispanic and Brazilian cultures had a sociocultural acceptance of consuming unhealthy food or cravings during pregnancy. Lindsay et al. (2019) mentioned that their study results could be used to develop prenatal care and interventions to alter modifiable risk factors associated with EGWG.

Halili et al. (2019) examined the relationship between psychosocial factors and GWG and the relationship between physical activity practices, barriers, and facilitators to

exercise in achieving weight gain according to IOM guidelines. The researchers found that women with low self-efficacy and external locus of control are less likely to meet the IOM guidelines for GWG. Women concerned with gaining too much weight during pregnancy are more likely to adhere to GWG recommendations. Inaccurate beliefs and perceptions about nutritional requirements and GWG, negative attitudes, and minimal or no education or counseling from health professionals were identified as EGWG-related factors. Women described intrapersonal factors, social support, and environment as barriers to exercise during pregnancy. The researchers recommended investigating interventions and education, considering psychological and social factors during prenatal care for positive pregnancy outcomes. This study shows how psychological and social factors can be facilitators or barriers to achieving adequate GWG, and the need to know and understand these factors and how they influence women's health behaviors related to GWG.

Vanstone et al. (2020) explored pregnant women's experiences, thoughts, and opinions about GWG by asking about factors relevant to GWG. The authors found few women prioritized GWG and focused on other goals. Women did not plan to deliberately implement the adoption of health behaviors for healthy weight gain during pregnancy. Women made in-the-moment decisions influenced by competing factors, including hunger, food preferences, childcare, limitation in financial resources, and lack of time for healthy food preparation, making weight management during pregnancy difficult. In addition, hunger, related physiological adaptations, pregnancy-related discomforts, lack of complete information, not receiving education or counseling on weight management

during pregnancy from health professionals, previous pregnancy experiences, and their interactions with health professionals also influenced health decisions made. Although women knew about established weight gain guidelines, they did not apply them adequately due to a lack of knowledge of their BMI, leading to inadequate or excessive weight gain during pregnancy. Vanstone et al. (2020) concluded that health professionals are important in providing education and individualized counseling to pregnant women regarding gestational weight gain.

McDonald et al. (2020) conducted a prospective cohort study to develop and validate a predictive model of excessive weight gain during pregnancy using physical, social, and psychological determinants of EGWG collected in early pregnancy. The authors found several psychological, physical, and social factors predictive of EGWG. Among these were nulliparity, being overweight before pregnancy, planning weight gain during pregnancy, eating in front of the television, and disagreement with weight gain control. Also, the perception that family and peers believe pregnant women should eat twice as much as before pregnancy, difficulty with emotional control, and identifying as being agreeable. These findings are similar to those of various studies in which eating in front of the television, planning for weight gain, and support received from family and peers, as well as the belief that weight gain during pregnancy is not important, were influential factors in GWG (Feng et al., 2021; Lindsay et al., 2019; McDonald et al., 2020; White & Davis, 2021). The researchers also found protective variables for EGWG, such as being underweight pre-pregnancy and identifying oneself as conscientious. The researchers recommended future prospective studies that include predictions with

validation and exploration of factors such as using food as a reward and biomarkers to predict EGWG.

White and Davis (2021) explored the experiences of 15 women from various pre-pregnancy BMI categories regarding their GWG. The authors found that women identified physiological changes during pregnancy, lack of social support, knowledge, and accessibility to reliable information as barriers to GWG. Consistent with findings from Deputy et al. (2018) and Feng et al. (2021), the researchers also identified the lack of appropriate information from healthcare providers and psychological factors as barriers to appropriate GWG. The authors also found that women identified personal and cultural attitudes, motivations, and beliefs as barriers and facilitators of GWG. They indicated that a pre-pregnancy lifestyle was a motivating factor in maintaining a healthy weight during pregnancy. Facilitators included a supportive social network, a healthy pre-pregnancy lifestyle, access to reliable resources, and a desire to optimize health during pregnancy. The authors concluded that the study confirms that women experience several social, psychological, personal, and cultural factors that influence their GWG. Furthermore, health professionals should consider these factors when providing care and education to pregnant women.

Champlin et al. (2021) conducted a meta-ethnographic study to understand Latina women's attitudes, beliefs, and practices in the United States related to GWG. The author's findings were consistent with Arnedillo-Sánchez (2022) and Vanstone et al. (2017), identifying information and support as barriers influencing GWG. These included a lack of reliable information, also influenced by culture and the social and physical

isolation of the family. Women sought information from their providers, health programs, and family members or women in the family, leading to mixed messages. Leading women to balance and evaluate information from various sources, leading to confusion. Cultural acceptance of weight gain also influenced women's body image. However, at the same time, the partners preferred a fit and attractive body. Also, consistent with Arnedillo-Sánchez et al. (2022), the belief that the more weight gained, the healthier the child is. The authors recommended developing culturally relevant educational or counseling interventions and future research on cultural perspectives among subgroups of Latinas to ensure that the interventions and support designed are culturally relevant. The study is consistent with other studies and establishes the need to study and understand the social and cultural factors that influence EGWG in pregnant women and that the interventions and education developed are culturally relevant and tailored to the specific needs of women (Arnedillo-Sánchez, 2022; Vanstone et al., 2017).

In a prospective cohort study, Feng et al. (2021) sought to understand the influence of personality, cognition, affect, behavior, obstetric and psychological, behavioral, physical, and demographic factors on EGWG. The authors found that women's pre-pregnancy BMI and planning weight gain above established guidelines influenced EGWG. Women who do not report their intended weight gain are at increased risk of EGWG. According to the authors, this is a modifiable finding establishing the importance of healthcare providers' support and advice consistent with results from previous studies that identified lack of support and education by healthcare providers as a factor associated with inadequate GWG and EGWG (Deputy et al., 2018; Lindsay et al.,

2017; Nikolopoulos et al., 2017). Frequent eating in front of the TV, eating sensibly in front of others, and overeating alone were also identified as factors associated with EGWG. The authors mentioned that women's nutritional beliefs and preferences, friends and family, history of restricted intake, and health professionals' advice about EGWG might influence these factors. Feng et al. (2021) recommended future research to gain a holistic understanding of the factors associated with EGWG and the development of interventions to modify the psychological and behavioral factors leading to EGWG.

Ramírez-Martínez and Restrepo-Mesa (2021) conducted an ethnographic study to describe the eating behaviors of overweight pregnant women from two municipalities in Antioquia, Colombia. The study participants were 24 pregnant women who began their pregnancies overweight or obese. The researchers identified five factors influencing the participants' eating behaviors: socioeconomic status, social support network, health status before or during gestation, health professionals' recommendations on feeding and weight gain, and participants' knowledge about nutrition and the implications of EGWG on maternal and fetal health. The study has a clinical impact on educating health professionals working in prenatal care who should receive training in the dietary and nutritional care of overweight pregnant women. The researchers recommend studies that evaluate the benefit of possible nutritional interventions to modify the factors identified in the study.

Arnedillo-Sánchez (2022) evaluated the prevalence of unhealthy GWG and analyzed the role of pregnant women's knowledge of the IOM GWG guidelines, their expectations, and beliefs in addition to the counseling and information provided by nurse-

midwives as factors contributing to inadequate and excessive weight gain during pregnancy. The authors found that there is an increased prevalence of EGWG. Like Vanstone et al. (2017), the authors found that a lack of knowledge and access to reliable information and guidance from health professionals about GWG influences women's engagement in healthy behaviors. Also, although women may be aware of recommendations related to GWG, sociocultural factors and body image beliefs about healthy weight gain may influence GWG. These results are consistent with those found in Vanstone et al. (2017). They show the importance of considering the woman's prior knowledge and how beliefs and sociocultural factors influence what they may consider a healthy GWG. Also, health professionals need to know about the GWG guidelines and the importance of educating women about them and providing support during prenatal care considering their sociocultural background (Arnedillo-Sánchez, 2022).

Fealy et al. (2022) conducted a secondary analysis of qualitative data from an Australian randomized controlled trial to describe the experience and perspectives of women participating in an Australian weight management intervention trial. The authors found that women considered GWG an important topic applicable to all women that health care providers did not openly discuss during their prenatal visits, leading women to initiate conversations about the subject with their health care providers. However, it is also a sensitive topic that healthcare providers should address sensitively and respectfully. On the other hand, the information received from providers was incomplete, recommending improved services, disseminating information on GWG, and providing feedback on weight gain and the purpose of weight monitoring. These results are similar

to other studies where women reported receiving little or no information from providers, and that the information was usually incomplete or incorrect (Vanstone et al., 2017).

Women further identified several early and late pregnancy factors as barriers that influence the maintenance of dietary and exercise behaviors. Among the barriers mentioned were nausea, fatigue, pelvic discomfort, and impaired physical mobility. The women also mentioned lifestyle factors, such as family commitments, that influenced their eating habits. These results are consistent with those by White and Davis (2021), in which the barriers identified by patients were physiological changes such as nausea and vomiting, but also a lack of time and reliable information (Vanstone et al., 2017). Fealy et al. (2022) recommended future qualitative and quantitative research to assist women in achieving healthy weight gain during pregnancy and monitor the progress according to guideline recommendations and their translation into practice.

Summary and Conclusions

The literature review showed the current knowledge regarding EGWG. Over the years, in addition to EGWG, the factors associated with EGWG are being investigated, considering not only physiological and demographic aspects but expanding the research to sociocultural and racial-ethnic factors (Deputy et al., 2018; Garmendia et al., 2018; Goldstein, 2018; Lindsay et al., 2019). Researchers conducted studies with diverse population groups, including Japanese, Chinese, Spanish, Chilean, Colombian, Hispanic, or Latino (Fletcher et al., 2018; Garmendia et al., 2018; Hashmi et al., 2021; Ramirez & Restrepo, 2021; Sun et al., 2020). However, there is little literature directed at ethnic

subgroups, specifically in relation to Hispanic subgroups, showing the proposed study's importance.

Several sociocultural factors that could influence EGWG were also identified. The interpersonal factors mentioned in the literature included family and peer support, support and counseling from health professionals, women's family and peer beliefs about GWG, and social norms (Ramirez & Restrepo, 2021; Vanstone et al., 2017; Vanstone et al., 2020; White & Davis, 2021).

Women's personal factors, such as race, ethnicity, age, physiological changes and discomforts of pregnancy, and socioeconomic, psychological, social, and cultural factors, can influence how women care for themselves and the decisions they make related to GWG (Fathnezhad et al., 2018; Fathnezhad et al., 2019; Vanstone et al., 2020). In addition, individual factors and women's experiences may also be barriers and facilitators for EGWG, such as women's experiences with GWG in previous pregnancies (Vanstone et al., 2020).

Situational influences described, such as the women's perceptions of EGWG, childcare, lack of time, and women's context, which may include access to health services and information or resources about GWG (Fathnezhad et al., 2019; White & Davis, 2021). Several studies have mentioned the importance of taking into account the physiological differences of ethnic groups in the assessment and estimation of adequate weight gain in diverse populations (Denize et al., 2018; Garmendia et al., 2018)

In Puerto Rico, there is a lack of studies on EGWG. The few studies conducted in Puerto Rico related to EGWG are directed to its effects on pregnancy, and others only

investigate demographic and nutritional factors (Eick et al., 2020; Guilloty et al., 2015). However, the reviewed studies show the importance of investigating racial, ethnic, and sociocultural factors that influence EGWG and women's decisions from diverse populations (Siega-Riz et al., 2020; Champlin et al., 2021; Lindsay et al., 2019). Other findings from the reviewed studies mention the importance of studying ethnic subgroups and for health professionals to know the background of their patients to provide care according to women's beliefs, values, and cultural diversity in addition to the specific needs of women and diverse populations (Siega-Riz et al., 2020; Champlin et al., 2021; Lindsay et al., 2019). Therefore, this literature review shows the importance of investigating the sociocultural factors that influence EGWG in Puerto Rican women living in Puerto Rico to extend knowledge in the discipline of nursing to provide quality care according to the needs of Puerto Rican women.

In Chapter 3, I will describe the study design and methodology. In addition, I discuss the rationale for the study design, my role as a researcher, and the instrument for data collection, including sampling strategies and the study population. I also discuss ethical considerations and issues of trustworthiness.

Chapter 3: Research Method

This qualitative descriptive study explored the sociocultural factors that influence EGWG for pregnant women living in Puerto Rico. Gestational weight gain is a phenomenon widely explored in several countries and studies. However, limited literature has explored the sociocultural factors that influence GWG in Puerto Rican women living in Puerto Rico. Several authors have mentioned the importance of studying these factors in ethnic subgroups and the need to know and consider these factors when providing care to pregnant women and providing culturally sensitive care to the individual needs of pregnant women (Champlin et al., 2021; Garmindia et al., 2018; Siega-Riz et al., 2020). The results of this study will assist in providing knowledge to nurses and healthcare professionals about the factors that influence EGWG, as well as the development of education and strategies for managing GWG in Puerto Rican women.

In this chapter, I describe the methodology, research design, and rationale for selecting a descriptive qualitative method to explore the sociocultural factors that influence excessive weight gain during pregnancy in Puerto Rican pregnant women. I also describe my role as a researcher, potential biases, and the measures I used to manage them. The recruitment process is explained, starting with the study sample's presentation, the study justification, and the participant inclusion criteria. In addition, I discuss the strategies in the proposed research, from recruitment to data collection and analysis. Finally, ethical considerations are described, including the data collection and consent process, population and recruitment methods, sample size, and rationale for sample selection. I conclude the chapter by discussing the study's trustworthiness.

Research Design and Rationale

There are several factors during pregnancy that influence attitudes, knowledge, beliefs, perceptions, and health behaviors related to GWG (Champlin et al., 2021; Kunath et al., 2019; O'Brien et al., 2018; Walker et al., 2018). Excessive gestational weight gain is considered one of the major public health problems in the United States and Puerto Rico and is defined as weight gain above the IOM guidelines (Callaghan et al., 2020; Dude et al., 2020; Kunath et al., 2019; O'Brien et al., 2018). Excessive gestational weight gain has been widely investigated due to the associated risks to maternal, fetal, and neonatal health (Champlin et al., 2021; Goldstein et al., 2021; Kunath et al., 2019; O'Brien et al., 2018; Vanstone et al., 2017; Walker et al., 2019).

According to studies, values, beliefs, culture, and social and demographic factors influence how women care for their pregnancy. These are important factors to consider when providing care to pregnant women as they may influence how they view weight gain and their weight during pregnancy (Champlin et al., 2021; Denzin et al., 2018; Goldstein et al., 2021; Kunath et al., 2019; Lindsay et al., 2018; O'Brien et al., 2018; Walker et al., 2019). Also, according to literature, due to anthropometric differences in ethnic groups and subgroups, there is a potential for misclassification and the need for diverse GWG guidelines to individualize prenatal care and obtain positive maternal and fetal outcomes across culturally diverse groups (Champlin et al., 2021; Denzin et al., 2018; Garminia et al., 2018; Siega-Riz et al., 2020). However, few studies have been conducted in Puerto Rico, and there is little knowledge about such factors in Puerto Rican

women. Hence, the study's importance in answering the research question: what sociocultural factors influence gestational weight gain in Puerto Rican pregnant women?

The study used a descriptive qualitative methodology to answer the research question. The descriptive qualitative method is used when this qualitative approaches suits the objectives of the study (Bellamy et al., 2016; Miriam & Tisdell, 2016). The method draws on the strengths of one or more qualitative approaches to answer the research question (Bellamy et al., 2016). The emphasis of this approach is on the perceptions and feelings of the participants rather than the meaning beneath those expressions. The approach does not seek to understand the essence of the meaning of an event or experience like phenomenology. Instead, it aims to understand how individuals make sense of their lives and experiences. Descriptive qualitative studies seek to understand the participants' phenomenon, process, or expectations. Thus, their goal is to elicit understanding, meaning, and findings that provide a rich description of the phenomenon under study (Kalke, 2014). In the descriptive qualitative approach, the question informs the methodology and allows the use of other methodologies to develop the study design.

Using the descriptive qualitative approach, researchers collect data through interviews, observations, fieldwork, and data analysis to answer the research question (Patton, 2015). Researchers conduct semistructured or structured interviews or focus groups using open-ended exploratory questions informed by literature (Bellamy et al., 2016). Purposeful sampling supports obtaining a broad range of opinions about the event or experience. Thus, researchers using descriptive qualitative methodology seek a broad

representation of the population under study to obtain a wide range of opinions, ideas, or reflections of real-world events or processes as opposed to other qualitative approaches (Bellamy et al., 2016).

This study used a descriptive qualitative design to explore and describe the sociocultural factors that influence EGWG in Puerto Rican pregnant women living in Puerto Rico. This design was appropriate to answer the research question because, as a researcher, I sought to explore and understand the sociocultural factors that influence EGWG in Puerto Rican women. Qualitative description allows for exploration and provides a direct and comprehensive description of the participants' experiences within their context, enabling a better understanding of the phenomenon (Sandelowski, 2000; Willis et al., 2016). Through this approach, I sought to answer direct questions without framing the research in a specific tradition (Patton, 2015). The emphasis was on participants' perceptions and feelings rather than the meanings beneath those expressions, allowing exploration of the participants' beliefs and attitudes about GWG within their context (Willis et al., 2016). The goal was to provide a rich description of the findings to achieve an understanding of the phenomenon under study (Miriam & Tisdell, 2016). The description explained the data, allowing an understanding of the health-related experiences and the sociocultural factors that shape the participants' experiences. The approach also permits the researcher to answer the sociocultural factors and barriers to health care in the population to be studied (Willis et al., 2016).

Role of the Researcher

Qualitative research designs require the researcher to maintain rigor and integrity for the design, collection, implementation, analysis, and dissemination of the data collected in the study (Patton, 2015). These designs rely on the skill and integrity of the researcher as the data collection instrument. My role as the researcher was to listen, observe, collect, and analyze the data and report the results (Ravitch & Carl, 2016). Because of this, there was a risk of bias because I brought my previous experiences, knowledge, perceptions, and beliefs to the study, which could have influenced the validity and credibility of the study. Therefore, I did not allow bias in data collection, interpretation, and analysis.

As a researcher, I have a professional and personal connection to the study. First, I had a personal connection as a Puerto Rican woman who began her pregnancy overweight and, with the support of her husband, family, and obstetrician, managed to gain adequate weight during her pregnancy. Second, my professional connection as an obstetric nurse and experience working with pregnant women who gained excessive weight during their pregnancies in the prenatal care and delivery room. During this clinical experience, I observed women returning with excessive weight gain despite appropriate education and referrals to a nutritionist. Although I currently work in an academic setting, I often observe women gaining excessive weight during their pregnancies during clinical rotations in hospital settings. My personal and professional knowledge and experiences as a health professional that gaining a healthy amount of weight during pregnancy is feasible, may affect or influence the assumptions made for

the research and interpretation of data. Therefore, to maintain the credibility and validity of the study, reflexivity of my experiences during the research process was essential to eliminate bias due to my experiences, which could have influenced the research process (Peddle, 2022; Ravitch & Carl, 2016). Although I currently work in the academic field, I had no contact with clients in prenatal care clinics or private medical practice offices. However, since Puerto Rico is a small island and I reside in the northwest area of the island, someone I know may have responded to the request for volunteer participants for the study. Therefore, if the situation arose, I would have excluded the requesting participant from the study.

Weight gain is considered a sensitive topic to discuss. Therefore, participants may feel uncomfortable and hesitate to share their experiences. As a researcher, I must reduce the participants' discomfort. I reassured them that their participation in the study was voluntary and that they could withdraw from the study at any time. I also assured them I would always protect their privacy and confidentiality. I informed them that I would not use their names in the study report and suggested they choose pseudonyms for the interviews and transcripts. I allowed the participants to choose a private place where they felt safe and comfortable for the interviews, and no one could overhear the conversation.

I showed empathy and respect for their responses by being attentive and listening to what they had to say without interrupting their stories. I gave them time to think and answer the questions in a way they want without pressure (Rubin & Rubin, 2012). These strategies helped participants feel comfortable discussing their experiences (Rubin & Rubin, 2012). There were no other ethical concerns. As a researcher, I attempted to

collect data about participants' experiences, thoughts, and feelings with the primary responsibility to protect the participants and the data they entrusted to me.

Methodology

Participant Selection Logic

The participants for this study were be low-risk pregnant Puerto Rican women living in Puerto Rico receiving prenatal care in public and private OB/GYN practices that meet the study's inclusion criteria. The inclusion criteria included low-risk pregnant Puerto Rican women 21 years or older living in Puerto Rico receiving prenatal care in public and private OB/GYN practices. Pregnant women with singleton pregnancies over 22 weeks gestation without preexisting conditions, pregnancy-related conditions, or complications and speak English or Spanish. The exclusion criteria included pregnant women under 21 years of age and women who are not residents or live in Puerto Rico or moved from another country to Puerto Rico. Pregnant women not receiving prenatal care or care in high-risk prenatal clinics, less than 22 weeks gestation, have multiple pregnancies, women with preexisting conditions, and women who do not speak English or Spanish.

Once Institutional Review Board (IRB) approval was received (04-11-24-0976681), I distributed recruitment flyers (see Appendix A) with eligibility criteria for the study and researcher contact information at prenatal care centers and private practice offices. Women interested in volunteering to participate in the study contacted me. During the phone call, I asked screening questions to confirm her eligibility to participate in the study with a screening questionnaire (see Appendix B) to ensure that the potential

participant could provide rich and detailed information about her experience with EGWG. Women not qualifying for the study were dismissed and thanked for their time and willingness to participate. Women who qualified to participate in the study proceeded to the informed consent process. I met with the participant in a private room in the clinic on her appointment date to discuss the study, answer questions, and sign the consent. Signing the consent form on the date of the patient's appointment ensured that the participant did not incur additional costs for participating in the study. I sent the consent form via email to women who requested a phone or face-to-face interview and provided an email address and they responded with an "I consent" to participate in the study.

Qualitative research samples tend to be small to support the depth of analysis fundamental to the mode of inquiry (Guest et al., 2006). I used purposive sampling to recruit participants for the study. I initially proposed a sample of 10, I collected data until saturation was reached. Purposeful sampling allows the selection of participants with experience in the research topic and collecting rich, detailed information (Turner, 2010). According to Patton (2015), purposive sampling is important for selecting information-rich cases that provide rich and complex data on the phenomenon of interest. I also used snowball sampling if participants knew other women who met the study criteria to obtain the necessary sample size (Polit & Beck, 2017). Potential participants were recruited at public prenatal clinics and private OB/GYN offices in the northwestern region of Puerto Rico.

Guest et al. (2006) asserted that sample size depends on the study purpose and design, and what the researcher seeks to answer. Sample size may not be determined

prior to data collection and depends on when the researcher reaches saturation (Boddy, 2016; Guest et al., 2006). Saturation is when the researcher does not obtain new data from interviews, there is enough information to replicate the study, and further coding is not possible (Doyle et al., 2020). Boddy (2016) and Guest et al. (2006) mentioned that a sample of 12 participants is sufficient to achieve saturation, but according to Doyle et al. (2020), predetermining the sample size before data collection may hinder the analytic process through the collection of too little or too much data. If researchers use saturation to determine sample size, they should emphasize how and at what level they reached saturation to provide credibility to the sample size (Doyle et al., 2020). Therefore, the sample size calculation was an estimate until I concluded that saturation had been reached through the iterative data collection and data analysis process.

Patton (2015) mentioned that qualitative inquiry research usually focuses in depth on small samples selected for a specific purpose. Hernández Sampieri et al. (2014) mentioned that sample size is unimportant in qualitative studies because the researcher's interest is not to generalize the results but to seek depth. Therefore, obtaining rich data is more important than the number of participants (López & Whitehead, 2013). Although several authors recommend specific sample sizes for various approaches, no defined parameters exist (Mason, 2010; Hernández Sampieri et al., 2014). The composition and size of the sample depends on the development of the inductive research process, in which, during data collection and analysis, researchers identify the moment they reach data saturation (Patton, 2015; Hernández Sampieri et al., 2014; Willis et al., 2016).

Instrumentation

Data collection instruments for the study included a demographic questionnaire (Appendix C) and individual semistructured in-depth interview questions using open-ended questions (Appendix D). The interviews were audio-recorded and lasted 60 minutes. Semistructured interviews are the most widely used means of data collection in qualitative research because they allow the collection of rich and detailed data on the participants' stories and experiences, allowing them to answer in their own words as they wish and elaborate on their answers (Holloway & Galvin, 2017; Ravitch & Carl, 2016; Rubin & Rubin, 2012). Rubin and Rubin (2012) noted that semistructured interviews focus on a specific phenomenon and include a limited number of questions prepared in advance. The researcher develops an interview guide that focuses on the phenomenon under study and helps gather data to answer the research question (Holloway & Galvin, 2017). The guide may include follow-up and probing questions that the researcher can use during the interview (Ravitch & Carl, 2016). The protocol helps the researcher maintain some control over the interview to meet the study's purpose.

The first step in developing research questions is to conduct a literature review to develop questions for collecting meaningful data (Jacob & Furgerson, 2012). I developed the research questions through a literature review of the articles collected for the study by identifying concepts considering the purpose of the study and the research question. I also reviewed studies on GWG using the HPM to identify concepts from the theory for developing interview questions (Aşci & Rathfisch, 2016; Cyphers et al., 2017; Goodarzi-Khoigani et al., 2018; Khoshnood et al., 2018; Shobeiri et al., 2018). Through these

questions, I gathered data that provided a rich and in-depth description of their experiences to answer the research question.

I divided the questions into three categories according to the individual characteristics and experiences, personal factors, and interpersonal factors, concepts of the HPM (Appendix E). Questions related to the concept of individual characteristics and experiences collected data on the women's experiences with GWG and the cultural factors that influenced their health practices and decisions related to GWG (Arnedillo-Sánchez et al., 2022; Ayyala et al., 2020; Champlin et al., 2021; Lindsay et al., 2019; Pender et al., 2002, 2015). Questions related to the concept of personal factors referred to the biological, psychosocial, and sociocultural factors that influenced the participants' health behaviors. These questions explored their experiences with GWG, their perceptions, knowledge, and resources used to obtain information regarding dietary habits, and the factors that influence them (Goodarzi-Khoigani et al., 2018; Lindsay et al., 2019; Vanstone et al., 2017, 2020; White & Davis, 2021). Questions related to the category of interpersonal factors explored family support from peers and health professionals, and social support that may influence health decisions and determine the predisposition to adopt health-promoting behaviors influencing their GWG (Fealy et al., 2022; Goodarzi-Khoigani et al., 2018; Lindsay et al., 2019; Pender et al., 2002, 2015; Piccinini-Vallis et al., 2021; Vanstone et al., 2020; White & Davis, 2021).

I asked several open-ended experiential questions to explore participants' experiences and actions (Patton, 2015). I also asked questions about their opinions or values to explore participants' beliefs and feelings, and questions that elicit emotional

responses to their experiences or thoughts (Patton, 2015). Knowledge questions were also asked to inquire about what participants know about weight gain during pregnancy (Patton, 2015).

Interview Development

In the study, I used an interview guide developed through a literature review and tested in a previous course. The interview guide was tested in interviews with two women about their experiences with EGWG, exploring the sociocultural factors that influence EGWG. The interviews conducted using the guide were 50-60 minutes long. The participants reported that the interview questions were easy to understand. In addition, although the topic investigated is considered sensitive, they felt comfortable answering the questions and that the topic should be explored in Puerto Rico. The data collected during the interviews were adequate to answer the research question. Data was collected on social, cultural, and economic factors influencing GWG. In addition, about the knowledge that the participants had about GWG. Data on the influence of family, peer, and health professionals' support on women's decisions regarding their care and GWG, and women's beliefs about GWG were also collected.

Procedure of Recruitment, Participation, and Data Collection

I used purposive and snowball sampling in the study to recruit participants. Also, snowball sampling allowed the selection of participants through referral from study participants. Potential study participants were recruited from public and OB/GYN private practice offices in Puerto Rico. I distributed recruitment flyers (Appendix A) with eligibility criteria for the study and researcher contact information at prenatal care centers

and private practice offices. Also, if the organization had a webpage or social media account, I requested consent to post flyers on their webpage and social media accounts (Appendix G). Women also received flyers among the documents they received during their appointment. Pregnant women interested in participating in the study contacted me via telephone at the number provided in the recruitment announcement at the clinic facilities. During the phone call, I administered a screening questionnaire (Appendix B) to the women who contacted me to participate in the study to determine their eligibility for the research. Women who qualified to participate in the study proceeded to the informed consent process. The consent took place in a private office that had a door that could be locked. I sent the consent form via email to women who requested a phone or face-to-face interview, and provided an email address, and they responded with an "I consent" to participate in the study. The women answered a demographic questionnaire (Appendix C) to collect demographic data. I conducted interviews on the participants' appointment dates in a private office with a door that could be locked for privacy in the participating clinics or via telephone. For participants who preferred interviews via telephone, I asked that they be in an area that ensured their privacy during the telephone interview.

I conducted the study, including recruitment, obtaining consent, conducting the interview, audiotaping, transcribing interviews, and analyzing and coding collected data. During the consent process, I explained the study to participants and answered their questions before they signed the consent form. I explained that they would participate in one in-depth semistructured interview that would last approximately 60 minutes to collect

information. Also, all interviews would be audio recorded on a digital recorder owned by the researcher. I conducted interviews in Spanish, the participant's first language. The participant's confidentiality was protected by using pseudonyms instead of their names to protect their privacy. Upon conclusion of the interview, I answered participants' questions, thanked them for participating in the study, and provided a \$20 incentive. The incentive consisted of a \$20 gift card. Participants could also call me if they wished to have a copy of a summary of the results.

Data Analysis

I determined data saturation as the interviews were conducted, transcribed, analyzed, and coded. I used concept analysis to analyze the collected data. Audio-recorded interviews were transcribed verbatim in Spanish using the Rev.com transcription service. I listened to the audio recordings while reading the transcripts to ensure no data was omitted. The transcripts were then translated into English using the Rev.com transcription service, and I reread the transcripts to ensure no omissions in the translations. Translations are essential to accurately convey participants' meanings and ensure the trustworthiness of the research (Yunus et al, 2022). During translation, there is a risk of loss of meaning, and differences in language can affect the understanding and interpretation of the data, compromising the study's trustworthiness (Yunus et al, 2022). In addition, the interpretation of words or phrases that are not used in English or do not have an English translation may influence the transcription and analysis of the data collected (Yunus et al, 2022). Therefore, once the transcripts were translated into English, since I am a bilingual Puerto Rican and Spanish is my first language, I read the translated

transcripts and compared them with the original transcripts and recordings to ensure that the participant's message and meaning were not lost.

Once translated transcripts were revised, I downloaded the transcripts in English into the Microsoft Excel transcription template used in a previous research course to transcribe and analyze data. I read the interview transcripts and notes to familiarize myself with the data and have a sense of the whole (Elo & Kyngäs, 2008; Hernández Sampieri & Mendoza, 2018; Saldaña, 2016). The open coding process began with me rereading each transcript, coding each sentence for a significant word or phrase, and noting these in the second column of each transcript (Elo & Kyngäs, 2008). I reread transcripts for second cycle coding using axial coding to identify patterns, joining and color-coding significant units into categories in the third column to identify similar content (Hernández Sampieri & Mendoza, 2018; Polit & Beck, 2017; Saldaña, 2016). I analyzed the categories to identify common themes with color codes in the fourth column.

Issues of Trustworthiness

Trustworthiness refers to the quality, authenticity, and truthfulness of qualitative research results and readers' confidence in the study results (Cypress, 2017; Houser, 2018; Toma, 2011). In qualitative studies, researchers use the criteria of credibility, dependability, transferability, and confirmability proposed by Guba and Lincoln to ensure the trustworthiness and quality of a study (Cypress, 2017).

Credibility

Lincoln and Guba envisioned credibility as the goal of qualitative research (Polit & Beck, 2017). Credibility is established when the study results represent and describe the reality of the study participants, and there is confidence in the veracity of the data and interpretations (Polit & Beck, 2017). Hernández Sampieri and Mendoza (2018) mentioned that credibility is if the researcher has managed to capture the full and deep meaning of the participants' experiences linked to the problem statement and to communicate the participants' language, thoughts, emotions, and views.

In the study, I provided an in-depth description of the study phenomenon that helped convey the situations investigated and the context surrounding them (Ravitch & Carl, 2016; Hernández Sampieri & Mendoza, 2018; Shenton, 2004). I provided a rich description of the research process, including data sources, sampling and recruitment strategies, data collection procedures, instrumentation, and data analysis plan. I audio-recorded the semistructured interviews, transcribed them verbatim, and read them several times with the recordings to ensure no omitted data and veracity (Polit & Beck, 2017).

As a qualitative researcher, I constantly reflected on my assumptions or biases about the factors that contribute to excessive weight gain during pregnancy and prevented my beliefs and opinions from affecting the clarity of the interpretations of the data (Hernández Sampieri & Mendoza, 2018). Finally, an audit trial in which my advisor reviewed the research process, coding, and interpretations. In addition, I discussed my experiences, findings, and interpretations with my research advisor to confirm that they were truthful, accurate, and consistent with the reality expressed by the participants.

Transferability

Transferability is the degree to which researchers can transfer study results to other contexts or participants (Anney, 2014; Holloway & Galvin, 2017; Hernández Sampieri & Mendoza, 2018). Therefore, as a researcher, I provided a rich and in-depth description of the research process, including the recruitment process, inclusion criteria, purposeful sampling, participants, context, data collection methods, and findings to enable readers to assess that the findings are transferable (Polit & Beck, 2017; Ravitch & Carl, 2017; Hernández Sampieri & Mendoza, 2018; Shenton, 2004). I collected sufficient rich data through semistructured interviews to generate deep and rich content. In addition, I continued to collect data until saturation was achieved, indicating the collection of sufficient data (Polit & Beck, 2017).

Dependability

Dependability refers to the study results being consistent and accurate (Holloway & Galvin, 2017; Hernández Sampieri & Mendoza, 2018). To ensure dependability throughout the study, I maintained an audit trail in which I documented a detailed description of the research process, including my role as a researcher within the context of the study, decisions, and activities within the research process, sampling, participant recruitment, data collection, recordings, transcription, and data analysis (Holloway & Galvin, 2017; Polit & Beck, 2017; Toma, 2011). I also reviewed transcripts for errors and omissions (Hernández Sampieri & Medoza, 2018). In addition, I documented changes or decisions made during the research process, the study's ethical considerations, and the steps taken to resolve them. The audit trail also included the notes taken and observations

during the interviews. Research advisers reviewed the audit, research methods, and study design to increase study dependability (Patton, 2015).

Confirmability

Confirmability refers to the demonstration that the data reflect the participant responses and that the data interpretations are not the views of the researcher and are free of bias (Hernández Sampieri & Mendoza, 2018; Holloway & Galvin, 2017; Polit & Beck, 2017; Tosa, 2011). Thus, ensuring confirmability allows other researchers examining qualitative data to reach the same conclusions (Hernández Sampieri & Mendoza, 2018). To ensure the confirmability of the study, I used reflexivity. I kept a reflective journal to document my reflections during the research process, which included my beliefs, biases, assumptions during the research process, data collection, analysis, and interpretation, and how they were handled to ensure that the study results are reliable. The Committee Chair, an experienced qualitative researcher, reviewed the coded transcripts.

Ethical Procedures

Researchers face several ethical issues in all study stages involving human subjects. When using human subjects as participants, the investigator must exercise care to protect their rights (Polit & Beck, 2017). I applied to the Walden University IRB before contacting potential participants. Once IRB approval was received, the data collection process began. I provided participants with a consent form that provided them with information about the nature and purpose of the study, the voluntary nature of the study, and their right to withdraw from the study at any time. I read the consent form to each participant and offered the opportunity to ask questions and clarify their doubts

(Sanjari et al., 2014). I also informed participants that the interviews would last 60 minutes, be recorded, and their identity protected using pseudonyms, that their names would not appear in the study report, and that the information they provided would be kept confidential (Sanjari et al., 2014). Once the participants had clarified their doubts, they signed the consent form. During the audio-recorded interviews, I made a verbal reminder that the consent is voluntary. If they agreed to have the interview recorded, the participants would verbalize their consent. Interviews were conducted in private offices at prenatal care centers and OB/GYN practices behind closed doors that would provide privacy and would not be overheard. They also ensured they were in a private place without interruptions during the interview. Participants interviewed by telephone were asked to provide their email when they provided their demographic data for emailing gift card incentives.

Interview recordings and transcripts were kept in a protected file on my computer. I am the only one with access to the password-protected computer. I used codes to identify the transcripts and did not use or store identifying information. Participants were notified that only my dissertation committee would access the data. As required by the Walden University IRB, I keep the recordings and transcripts in a locked file for five years after completion of the research (Walden University, n.d.). I maintained a backup of the data on a flash drive stored in a locked file at my home.

After IRB approval (# 04-11-24-0976681), I distributed the recruitment materials to prenatal care centers and private practice OB/GYN offices. Recruitment flyers were posted on the institutions' websites and Facebook pages. The flyers mentioned that I

would offer a \$20 gift card incentive after the interview as a thank-you for their participation. After the interview, I gave the participants gift cards with a thank you for their participation.

The vulnerability of the participants was considered. Pregnant women are considered a vulnerable population. However, the study was non-interventional and low risk because I conducted interviews for data collection. Another factor considered is that weight gain during pregnancy is considered a sensitive topic, so there was a low risk that some of the questions may affect the participants emotionally. I did not pressure or coerce participants to answer questions that made them feel uncomfortable. Participants could also refrain from answering questions or terminate the interview at any time. Sanjari et al. (2014) mentioned that researchers should have a protocol to deal with affected participants. Therefore, if participants were emotionally upset during the interviews, they were encouraged to call the Mental Health and Addiction Services Administration's toll-free Psychosocial First Aid Hotline (PAS) at 1-800-981-0023.

Summary

This qualitative descriptive study explored the sociocultural factors that influence EGWG for pregnant women living in Puerto Rico. There is a gap in literature related to the sociocultural factors that influence EGWG in Puerto Rican women. It is important to investigate how sociocultural, ethnic, and racial factors from diverse populations influence EGWG and women's health decisions, in this case, Puerto Rican women (Siega-Riz et al., 2020; Champlin et al., 2021; Lindsay et al., 2019). The results from this study are important for increasing nursing and healthcare professionals' knowledge and

contributing to future research on the sociocultural factors that influence EGWG gain in Puerto Rican women, and also for educating healthcare professionals and creating prenatal weight management interventions and education programs according to Puerto Rican women's needs.

In Chapter 3, I discussed the research design and methodology, my role as a researcher, trustworthiness, and ethical aspects of the study. It is essential that all research studies have alignment at all stages of the study and that potential participants are protected within the study. Therefore, the role of the researcher, in addition to data collection, is to protect participants from harm and manage their biases to collect thick, rich data of value for analysis and to obtain reliable results. In Chapter 4, I will discuss the study setting, participant demographics, data collection and analysis, evidence of trustworthiness, and results of the study.

Chapter 4: Results

The purpose of this descriptive qualitative study, guided by Nola Pender's health promotion model, was to explore the sociocultural factors that influence EGWG for pregnant women living in Puerto Rico. The research question for this study was: What sociocultural factors influence excessive gestational weight gain for pregnant women living in Puerto Rico?

In Chapter 4, I include a description of the setting, demographics, data collection and analysis, evidence of trustworthiness, and results. I conclude with a summary of the qualitative research on the sociocultural factors influencing EGWG in pregnant Puerto Rican women.

Setting

The setting for this research was public prenatal care centers and private OBGYN offices in Puerto Rico. The Public Prenatal Practices and Private Offices provided a private office with separate entrances and a door that could be locked for privacy so that no one could overhear the interview. The setting was familiar to the participants, as this is where they receive their health care services. The environment was comfortable for the participants. The offices were small but had enough space for two people and a comfortable area with chairs and a table or desk where we could have a conversation. The offices were clean with adequate lighting and provided privacy for the participants providing a sense of trust. None of the participants seemed stressed during the interviews.

Three participants requested telephone interviews. I informed the participants that the interviews would take 60 minutes and asked them to choose a time when they

would be accessible and in a private area free of distractions and interruptions. All telephone interview participants were in their homes, and I was in my home office during the interviews to provide privacy and lessen distractions and interruptions on my side. The interviews were conducted between October 2024 and June 2025.

During recruitment, one of the organizations did not agree to participate in the study, and some prenatal clinics were closed. Therefore, I had to seek collaborative agreements with two new organizations during recruitment. These were submitted for IRB approval via an amendment form and were approved, permitting the continuation of the recruitment process.

Demographics

All participants were over 18 years of age. The average age of the participants was 27 years, 86 percent were between 20 and 29, and 14 percent were between 30 and 39. Eighty-six percent (86%) of participants had a college education, while 14 percent had a high school education. Twenty-eight percent of participants were single, 28.5% cohabited, and 42.8% were married. Twenty-eight percent of participants were from the western region, 28.5% from the central area, and 42.8% from the island's northern region. Eighty-six percent of participants were primigravida, while 14% were multigravida. All participants had singleton pregnancies and were receiving prenatal care. Forty-three (43%) percent of participants received prenatal care in public prenatal care clinics, while 57 percent of participants received prenatal care in private OB/Gyn practices.

All participants met the inclusion criteria. All participants signed the consent form before participating in the study. After signing the consent, all participants answered a demographic questionnaire.

Data Collection

After receiving Walden University IRB approval, I visited and delivered the collaboration letters to the organizations previously contacted to collaborate in the study. One of the organizations responded negatively, indicating they did not have space to provide an office for the interviews. Another institution requested that the agreement be sent to them by email. I sent the email, and after a visit, several emails, and phone calls, they did not respond to the request. A third institution requested making changes to the collaborative agreement and flyers. The changes they requested were that the last sentence on the flyer mention that the interviews are part of a doctoral study conducted by Sonia Roselló Aponte. They also asked to place their institutional logo on the Collaborative Agreement. Another request was to coordinate with the institution's nursing director on the office or room I would use before the interviews. In addition, they also requested changes regarding participants who were or might be emotionally affected by interviews for psychological services, requiring the document to state that the emotionally affected participants would be referred to the organization's emergency room for evaluation. After discussing the request with an IRB representative, I changed the sentence on the collaborative agreement so that it stated that emotionally affected participants would be referred to the Mental Health and Addiction Services Administration's toll-free Psychosocial First Aid Hotline (PAS), available at 1-800-981-

0023, as stated in the IRB-approved consent form. I discussed the requested changes with an IRB representative, made them, and submitted them for approval. The IRB approved the changes, and I distributed the flyers at public prenatal care centers and private OBGYN practice offices that the IRB approved. I had to seek more collaborative agreements with two new organizations during recruitment. I submitted the collaborative agreements for IRB approval, which were approved, permitting the continuation of the recruitment process.

Recruitment and Screening

Participants were recruited using purposeful and snowball sampling. I distributed flyers in the waiting rooms of public and private prenatal clinics. Participants contacted me via telephone at the number provided in the flyers. I received 17 calls inquiring about the study. Of these 17, nine potential participants expressed interest in participating in the study.

During the phone call, I administered a screening questionnaire (Appendix B) to the nine potential participants to determine their eligibility for the research. The screening questionnaire results were reviewed and evaluated before formally inviting potential participants to participate in the study. Of the nine potential participants, only seven met the inclusion criteria. The researcher invited the seven eligible participants to participate in the study. The participant eligibility criteria for the study, as described in Chapter 3, were as follows: low-risk pregnant Puerto Rican women 21 years or older living in Puerto Rico receiving prenatal care in public and private OB/GYN practices. Lived all or most of their life in Puerto Rico, were pregnant women with singleton pregnancies over 22

weeks of gestation without preexisting conditions, pregnancy-related conditions, or complications, and who speak English or Spanish. The exclusion criteria were pregnant women under 21 years of age and women who are not residents of or live in Puerto Rico, or who have moved from another country to Puerto Rico. Pregnant women not receiving prenatal care or care in high-risk prenatal clinics, those less than 22 weeks of gestation, have multiple pregnancies, women with preexisting conditions, and women who do not speak English or Spanish.

Interviews

The individual face-to-face interview process began with the consent process. Participants who qualified for the study proceeded to the informed consent process. The date and time for consent signing and interview were based on the participant's preferences and were separate from the date of their prenatal appointment. I contacted the institutions to coordinate for an available office. I called the participants the day before the consent signing and interview to confirm their appointment and study participation. I received the participants at the entrance of the centers and escorted them to the office provided by the institution, where the consent signing and interview would take place. The consent signing and interviews were conducted at the private office offered by the public or private OB/GYN practices, with separate entrances and a door that could be locked for privacy so that no one could overhear the interview. I began with an introduction explaining the study, ensuring the participants' anonymity and confidentiality of all information collected and recorded during the interview, that they would participate in one in-depth, semistructured 60-minute interview, the interviews

would be audio recorded on a digital recorder owned by the researcher, and validating the participant's decision to participate and that she was comfortable with the process. I asked participants to read the consent form and provided time for them to read, ask questions, and explain /discuss the form with the participants before they signed the consent form. I ensured adequate time was available to complete the interview. Once the participants signed the consent form, I provided them with a copy. Before the interview began, I informed the participants that I would start the recording, and all participants agreed to begin the interview.

Three of the seven participants preferred telephone interviews. I emailed the participants the informed consent with an explanation of the study. The participants answered "I consent" to the email with the consent form. The participants were asked to establish a date and time for the telephone interview and to ensure they were in an area that ensured their privacy during the telephone interview. I called the participants the day before the consent signing and interview to confirm their appointment and study participation. I began the interview with an introduction explaining the study, ensuring the participants' anonymity and confidentiality of all information collected and recorded during the interview, that they would participate in one in-depth, semistructured 60-minute interview, and that the interviews would be audio recorded on a digital recorder owned by the researcher. I also discussed the consent form, answered their questions before the interview, and validated the participant's decision to participate and that they were comfortable with the process. Before the interview began, I informed participants that I would start recording, and all participants agreed to begin the interview. At the

beginning of the telephone audio-recorded interview, I asked the participants if they consented to participate in the study, to which all answered, "I accept."

All the participants answered the demographic questionnaire (Appendix C) before initiating the interview to collect demographic data. The demographic information collected was age, educational level, marital status, town of residence, and where they received prenatal care. The participants who requested telephone interviews answered the demographic questionnaire via telephone on the interview date. Table 1 presents the dates on which participants responded to the flyer, the date on which their eligibility was confirmed, and the dates of their interviews.

I conducted all interviews in Spanish, the participants' first language, and my native language. I collected data using the Spanish interview guide (Appendix D). I developed the interview guide through a literature review of the articles collected for the study by identifying concepts, considering the purpose of the study, and the research question. I also reviewed studies on GWG using the HPM to identify concepts from the theory for developing interview questions. I asked each participant the interview questions in the same order described in the guide and used probing questions to explore further and understand the participants' experiences. In addition, I asked participants to provide clarification, or I repeated questions if their answers appeared short or did not appear to answer the interview question. The participants had no problem answering the questions and freely and voluntarily provided data about their experiences. I did not encounter variations or unusual circumstances during data collection. I protected the participants' confidentiality by using pseudonyms instead of their names to protect their

privacy. The face-to-face interview setting was an office at the public prenatal clinic or private OB/GYN office with a private entrance. The office was comfortable and quiet, with a door I could lock for privacy, and no one could overhear the interview. The office was in an area familiar to the participants, where they received their health care services. The environment was comfortable for the participants, providing a sense of trust. None of the participants seemed stressed during the interviews. The telephone interview setting was a private area in their homes, free of distractions and interruptions. All participants were in their homes, and I was in my home office during the interviews to provide privacy and lessen distractions and interruptions on my side. Upon conclusion of the interview, I answered participants' questions, thanked them for participating in the study, and provided a \$20 gift card incentive.

Table 1*Participants' Response, Eligibility, And Interview Dates*

Participant	Date Responded	Date Eligibility Criteria Confirmed	Date of Interview	Interview Type
P1	10/1/2024	10/1/2024	10/11/2024	Face-to-face
P2	10/28/2024	10/28/2024	11/4/2024	Face-to-face
P3	11/4/2024	11/4/2024	11/8/2024	Face-to-face
P4	11/6/2024	11/6/2024	01/15/2025	Face-to-face
P5	3/3/2025	3/3/2025	3/12/2025	Telephone
P6	6/3/2025	6/3/2025	6/3/2025	Telephone
P7	6/3/2025	6/3/2025	6/5/2025	Telephone

Interview Process

I felt comfortable conducting the interviews because I had previously conducted interviews with the interview guide in a previous course. However, being my first face-to-face interview for my research, I was nervous. Participant 1 answered all the questions during the interview, providing important data to answer the research question. I took notes during the interview and documented the participant's verbal and non-verbal language. I felt more comfortable in the second interview and observed the repetition of answers. The participants in the face-to-face interviews were cooperative and answered the questions, providing important data.

For this research, I conducted three telephone interviews; it was my first experience conducting telephone interviews. I was nervous at the beginning of the first

telephone interview with participant five due to the fear of interruptions in the telephone connection. Also, unlike face-to-face interviews, I cannot observe the participant's nonverbal language. Therefore, I had to be aware of changes in tone of voice and long silences during the phone call. No differences were provided in the responses between the face-to-face and telephone interviews.

Data Analysis

I used content analysis to analyze the data collected. Data collection and analysis continued until saturation was reached. Saturation is reached when the researcher does not obtain new data from interviews; there is enough information to replicate the study, and further coding is not possible (Doyle et al., 2020). In the present study, saturation was reached with seven participants. I interviewed seven participants with minimal differences concerning GWG. The seven participants provided similar information. These participants agreed that food costs are expensive, GWG is seen as normal and allowed during pregnancy. They are encouraged to eat and gain weight by their support systems, as their weight gain is related to their baby's weight gain, and the foods consumed in the Puerto Rican diet affect their weight gain. This data led to the formation of patterns and the development of categories and themes. The transcriptions and a table with quotations taken from the coding were sent and discussed with my chairperson, and we confirmed that I had reached the saturation point. However, since I had already conducted interviews six and seven, they were analyzed and coded, and no new or additional codes emerged, so I had reached the saturation point.

All interviews were conducted and started and ended in Spanish. I also conducted the interviews as I am a native Spanish speaker and fluent in English. The audio-recorded interviews were transcribed verbatim in Spanish using the Rev.com transcription service. The Rev.com transcription services used artificial intelligence to transcribe the Spanish interview recordings verbatim. The transcriptions in Spanish resulted in various grammatical errors, including using the wrong words in sentences. Also, native words and phrases were interpreted and transcribed with words different from what the participants commented, changing the meaning of what they wanted to say about their experiences, making transcription time-consuming.

I listened to the audio recordings while reading the transcripts multiple times, making corrections on the transcripts to ensure that the data was correct and no data was omitted. Once the transcriptions in Spanish were complete, I reread them with the recordings multiple times to ensure they were correct, and no data was omitted. The transcripts were then translated into English using the Rev.com transcription service. I then reread the transcripts with the recordings and Spanish transcriptions multiple times to ensure no omissions in the translations due to the risk of loss of meaning and differences in language, which can affect the understanding and interpretation of the data. According to Yunus et al (2022), if the researcher is bilingual, they can compare the translation of the data themselves. Also, being Puerto Rican and living on the island helps me to understand the sociocultural context of the data because I share the same cultural background as the participants (Yunus et al, 2022). Reviewing the translated transcripts helps to identify mistranslated text and look for more suitable words to avoid losing the

meaning of what the participants meant. As a researcher and translator, I considered translating the text from Spanish to English while preserving the meaning and richness of the data (Yunus et al, 2022). This process includes being attentive to grammatical errors and using the wrong words in translated quotes and phrases to maintain and not lose the meaning of what the participants want to express (Yunus et al, 2022).

Furthermore, some words and phrases that are not used in English or do not have an English translation could influence the transcription and analysis of the collected data. I looked for suitable words or defined these words or phrases in parentheses in the transcript to ensure that the meaning and message of what the participant meant to say were maintained (Yunus et al, 2022). Therefore, once the transcripts were translated into English, I read and compared them with the original transcripts, my notes, and recordings to ensure that the participant's message and meaning were not lost.

Once I had revised the translated transcripts, I downloaded the transcripts into a Microsoft Excel transcription template used in a previous research course to transcribe and analyze data. The coding process began with me reading the interview transcripts and notes to familiarize myself with the data and get a sense of the whole (Elo & Kyngäs, 2008; Hernández Sampieri & Mendoza, 2018; Saldaña, 2016). After reading the interview transcripts and notes, I began the open coding process by rereading each transcript, coding each sentence for significant words or phrases, and noting these in the second column of each transcript (Elo & Kyngäs, 2008). I then reread the transcripts for second-cycle coding using axial coding to identify patterns (Hernández Sampieri & Mendoza, 2018; Polit & Beck, 2017; Saldaña, 2016). I joined and color-coded significant

units into categories in the third column to identify similar content. The second cycle coding resulted in 26 categories. I then analyzed the categories to identify themes with color codes in the fourth column, resulting in 7 themes. I will discuss the seven themes that emerged from the data analysis in the results section of this chapter. The themes that emerged from the data analysis were (a) nutrition (color green), (b) beliefs (color blue), (c) knowledge (color light turquoise), (d) support systems (color light orange), (e) healthcare provider (pink), (f) effect of weight gain (light blue), (g) generational change (dark teal). I did not have discrepant cases. Table 2 illustrates the themes and categories.

Table 2*Categories and Themes*

Theme	Category
Nutrition	Cost of food Lack of autonomy to make food choices Unhealthy diet Barriers to diet change Puerto Rican Diet
Beliefs	No limits to eating Eating for two Mothers' weight gain is related to baby's weight gain Cravings Cravings are related to baby (Because the baby wants it)
Knowledge	Previous Knowledge Sources of Knowledge Support Knowledge
Support systems	Encouraging eating Positive influence Negative Influence Contradictory advice Weight gain is normal and allowed
Healthcare provider	Lack of advice, guidance, or orientation Advice provided Not follow advice Would have liked to receive advice
Effect of weight gain	Fear Emotional/Psychological Self-esteem
Generational Change	Change in perspective

Evidence of Trustworthiness

Credibility

In the study, I maintained credibility by providing an in-depth description of the study phenomenon to help convey the situations investigated and the context surrounding them. I provided a rich description of the research process, including data sources, sampling and recruitment strategies, data collection procedures, instrumentation, and data analysis plan. The semistructured interviews were audio-recorded, transcribed verbatim, and read several times with the recordings to ensure no omitted data and veracity.

I constantly reflected on my assumptions or biases about the factors that contribute to excessive weight gain during pregnancy and prevented my beliefs and opinions from affecting the clarity of the interpretations of the data (Hernández Sampieri & Mendoza, 2018). I created an audit trail in which I documented a detailed description of the research process, coding, and interpretations. I also discussed my experiences, findings, and interpretations with my research advisor to confirm that they were truthful, accurate, and consistent with the reality expressed by the participants.

I conducted all interviews, which started and ended in Spanish. As a bilingual researcher, I compared the translation of the data. I considered translating the text from Spanish to English while preserving the meaning and richness of the data (Yunus et al, 2022). I reviewed the translated transcripts to identify mistranslated text and looked for more suitable words to avoid losing the meaning of what the participants meant. I was also attentive to grammatical errors and use of the wrong words in translated quotes and phrases to maintain and not lose the meaning of what the participants wanted to express

(Yunus et al, 2022). I looked for suitable words or defined these words or phrases in parentheses in the transcript to ensure that the meaning and message of what the participant meant to say were maintained (Yunnus et al, 2022). I did not have discrepant cases in my research.

Transferability

I maintained transferability by providing a rich and in-depth description of the research process, including participants, context, data collection methods, and findings, to enable readers to assess that the findings are transferable (Ravitch & Carl, 2017). I requested and received IRB approval for two new organizations during recruitment. I used purposeful and snowball sampling to identify participants who met the inclusion criteria to ensure answering the research question. I collected rich data through semistructured interviews to generate deep and rich content. I continued to collect data until saturation was achieved, indicating sufficient data collection.

Dependability

I used an audit trail in which I documented a detailed description of the research process, including my role as a researcher within the context of the study, decisions, and activities within the research process, sampling, participant recruitment, data collection, recordings, transcription, and data analysis (Holloway & Galvin, 2017). I reviewed transcripts for errors and omissions (Hernández Sampieri & Medoza, 2018). I documented changes or decisions made during the research process.

Confirmability

To ensure confirmability, I used reflexivity. I kept a reflective journal to document my reflections during the research process, which included my beliefs, biases, assumptions during the research process, data collection, analysis, and interpretation, and how they were handled to ensure that the study results were reliable. The Committee Chair, an experienced qualitative researcher, reviewed the transcripts.

Results

Healthy GWG is a priority in obstetric care to support fetal growth and the prevention of maternal and fetal complications (Fletcher et al., 2018; Walker et al., 2019). Excessive weight gain contributes adversely to maternal-fetal outcomes, increasing the risks of maternal and fetal complications during pregnancy, delivery, and postpartum, in addition to increasing the risk of late onset of childhood obesity, metabolic syndrome, and chronic disease risks.(Champion et al., 2020; Goldstein et al., 2021; Melby et al., 2019; O'Brien et al., 2018; Vanstone et al., 2017; Walker et al., 2019). Recent studies have explored the social, demographic, and cultural factors that influence GWG and how women care for themselves during pregnancy (Champlin et al., 2021; Kuhnath et al., 2019; Lindsay et al., 2018; O'Brien et al., 2018; Walker et al., 2019). According to several studies, socioeconomic and cultural factors influence attitudes, knowledge, beliefs, perceptions, and health behaviors related to GWG (Lindsay et al., 2019). Several themes identified in the data collected were congruent with the factors influencing WG WG in the literature. The themes that emerged from the data analysis were: (a) nutrition, (b) beliefs, (c) knowledge, (d) support systems, (e) healthcare provider, (f)

effect of weight gain, and (g) generational change. Table 3 displays participants' comments on the themes that emerged from the data collected.

Table 3

Themes Reflected In Participants' Responses

Participant	Nutrition	Beliefs	Knowledge	Support systems	Healthcare providers	Effects of weight gain	Generational Change
P1	X	X	X	X	X	X	X
P2	X	X	X	X	X	X	
P3	X	X	X	X	X	X	X
P4	X	X	X	X	X	X	
P5		X	X	X	X	X	
P6	X	X	X	X	X	X	X
P7	X	X	X	X	X	X	X

Theme: Nutrition

The theme of nutrition emerged within the data collected. Nutrition is an important factor related to EGWG. Various social, cultural, and economic factors may influence a pregnant woman's diet and dietary choices in their GWG. In this theme, six categories were identified: cost of food, lack of autonomy to make food choices, unhealthy diet, dislike of healthy diet (food), barriers to diet change, and Puerto Rican diet.

Category: Cost of food

Six of the seven participants in this study considered the cost of food an influential factor in their nutrition. The cost of food in Puerto Rico is onerous and has increased in recent years. The six participants commented that, in addition to the high prices of the basic food basket in the Puerto Rican diet, the costs of fruits, salads,

vegetables, and organic foods, considered part of a healthy diet, are high, limiting their ability to acquire and consume them. One participant commented that, in addition to the costs, organic foods are challenging to find due to the limited amount of organic food available in stores. This participant also added that, besides the costs, she has to consider that she is pregnant and must save money.

P2 *"Fruit is very expensive right now."*

P3 *"Organic food obviously costs a lot more,"*

P3 *"So, obviously, the cost if you're pregnant, you have to save, you have to spend here, you have to modify things."*

P4 *"Salad is very expensive."*

P6 *"Healthy foods are much, much more expensive than what we regularly eat."*

P6 *"The so-called organic products they are more expensive than other products we regularly buy."*

P6 *"Everything is expensive in terms of food."*

P7 *"Food is expensive, and healthy food is much, much more expensive."*

P7 *"If we look in a supermarket for things that are perhaps more organic, we see that the prices are much higher than for things that are not organic."*

Two of the seven participants also commented that food costs make it challenging to eat healthy, and they do not consider it because they can only afford to buy rice, beans, and meat. Due to high food costs, they are inhibited from buying healthy food and pay less for food.

P4 *"It's not within my reach. So, I really rule it out. Maybe, if I like it, I mean everything, all that eating well and the portions and all that, but many times, what you can buy is only the rice and the meat."*

P6 *"Because of the high costs, people are inhibited from buying things and prefer to pay less for them."*

In addition, two of the seven participants commented that eating out or buying ready-made food is cheaper than buying healthy food.

P4 *"Because it is expensive, it's cheaper to order from the Chinese."*

P7 *"The cost is much higher to eat healthy than to buy something on the street that's not healthy at all."*

Category: Lack Of Autonomy to Make Food Choices

This category is based on comments made by two participants regarding their autonomy in deciding what foods to eat. It is related to the lack of autonomy due to personal characteristics of each participant, because other people (mother, mother-in-law, relative) are the ones who prepare the food. This loss of autonomy occurs because the pregnant woman lives with relatives or consumes her meals at a relative's house, where they are served large portions of food, thus limiting her autonomy to say what food to prepare or consume.

P1 *"If there's a birthday party, "give me a little cake", no, they serve you the biggest one."*

P3 *"Since the lady who takes care of _____ cooks, I eat the food that she leaves prepared." (participant asked me not to identify the individuals)*

P3 *"That's where they cook for you, you're not cooking, but they're the ones cooking."*

P3 *"Like what happens to me or with family members, exactly. I mean, you're at home, this is what there is to eat."*

P3 *"Because I am really exhausted from work and in addition, I am taking my, this time it was, two classes a semester and it is exhausting, because I have to be on the computer, reading, this, well, what do I do, well, they serve me and I eat (laughs).is to eat, and this is what, this is what there is."*

P3 *"Because, well, that's where they (family)cook for you, you're (participant) not cooking, but they're (family) the ones cooking."*

P4 *"But that's complicated. Because I ate a small portion at home, but I go to mom's house and it's a big portion."*

P7 *"They're (family, husbands' family) the same ones who sometimes offer me food or cook for me."*

Three of the seven participants commented about being served large food portions, even though they asked for smaller portions. One participant talked about attending a family activity and being served more food than she requested. P1 *"If there's a birthday party, "give me a little cake", no, they serve you the biggest one."* Another participant commented, P2, *"For example, if I want, uh, a combo of nuggets, he's going to order the biggest combo of nuggets there is. You know, for him it's not like I think that with twelve you're full, no. They have to be the 20 ones. "It's just that I don't eat that much." "So, leave them there, at some point you're going to get hungry and you keep*

eating them." A third participant commented, P6, *"When we go to her house, they serve me a lot, in excess".*

Another factor that limits the autonomy of the pregnant woman, as commented by one participant, is the time factor or the time limit established when she meets her partner, restricting her from deciding to consume healthy foods, as commented by a participant, and leading to the consumption of unhealthy foods such as fast food.

P3 *"Or maybe they tell me, Carter, when we went to such a place, I don't, better, because sometimes you get the craving to eat things, fruits, and he (partner), "no, there's no time," we're always short of time. "No, we have to stop at a fast food," you know, and continue to where we're going."*

P3 *"The little time we've been together, well, like I told you, "There's no time" or "what do you want to eat?"*

Category: Unhealthy Diet

Five of the seven participants mentioned that their diets during pregnancy were unhealthy. They noted the difficulty in consuming healthy foods despite attempting to eat healthily. Two of the participants commented:

P2 *"It's like I don't take care of myself so much by eating healthy, but I try not to overeat or overindulge."*

P2 *"I peck too much and that's it. I love to eat cookies, some kind of chips, or something like that. (laughs)."*

P2 *"For me, eating healthy, which I've never done. I think it's like, for example eh, eating things, salads, or eating vegetables, eating vegetables, um, less fat, and all those things."*

P3 *"During pregnancy, it's horrible, no. No, it's very difficult for me to eat healthily."*

P7 *"That everything you want to eat is basically unhealthy"*.

The difficulty in consuming healthy foods, as mentioned by two participants, stems from cravings and indulging in tastes, which tend to be for unhealthy foods. The participants commented that during pregnancy, cravings are mostly for sweets, pastries, chips, fast food, tostones (fried plantains), mofongo (smashed plantains), pizzas, bread, and other foods high in calories, carbohydrates, and fats. One participant commented on the ease of obtaining or acquiring fast food compared to going through the work to eat healthy. It is easier to buy pre-prepared or junk food than to go through the work and time of purchasing and preparing healthy foods. One of the seven participants commented on the quality of food served for lunch at her workplace as a reason for not eating healthy.

P2 *"I've also been craving apple juice."*

P2 *"I craved some almejas (clam cakes or guayaba cakes, Puerto Rican pastry), which are sugary sweets."*

P2 *"Crackers with butter, cheese."*

P2 *"Strawberry Arizona"*

P3 *"I also really craved burritos, tacos, and burritos."*

P3 *"French fries and pregnancy? I stop at a fast food, and it can only be French fries."*

P3 *"The food they give me in the cafeteria, which in part is a privilege because I don't have to buy food outside because lunch is very expensive. Uh, but there the food isn't healthy for those kids either, that's rice, beans, meat, and sometimes the meats are canned, that have tons of sodium, or the fruits, those fruits are canned. So, you come to see in a certain way it's so-called healthy. They paint it as healthy on the table, on the plate that the health and education departments promote, but it's not that healthy at all. Well, but then, therefore, I don't eat properly, do you understand?"*

P4 *"You give me a pound of bread and I'll eat it."*

P6 *"What we like is mostly fast food and not going through the trouble of eating healthily."*

P6 *"We get carried away by our preferences (by the things we like)".*

P7 *"A pizza at 11 at night isn't healthy at all"*

P7 *"It's difficult because cravings for me aren't usually healthy at all",*

Two of the seven participants commented on their distaste for healthy foods. The two participants commented on their dislike of nutritious foods and that they did not consume them before becoming pregnant. The two participants consumed unhealthy foods such as sweets, soft drinks, bread, and sugary juices. In addition, they did not consume fruits or vegetables.

P2 *"Because I don't like healthy food."*

One participant ate limited meat products and did not eat grains, eggs, or milk. This participant commented that she ate nothing from the healthy plate and is a picky eater. The participant received the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) benefits but did not consume most of the foods provided by WIC, such as eggs, grains, cheese, milk, and cereals. The participant added that the information provided about food substitutes at WIC is about foods she does not consume.

P4 *"I'm still malamañosa (means bad eater, picky eater)."*

P4 *"I literally don't eat anything from that plate (healthy plate) because I don't eat grains, I don't drink milk, I don't eat anything (laughs)."*

P4 *"But no. Not vegetables, nor grains either. I don't eat any kind of grains... I don't eat cheese, or milk, or anything that.... And well, no seafood, no grains, no cheese, no milk, no ham, not anything. White rice and chicken"*

P4 *"I don't eat eggs. I get nine half gallons of milk in the WIC, I don't drink milk. They give me beans in the WIC, I don't eat beans. I get so many cornflakes, I don't eat cornflakes."*

P4 *"So, I really get a pound of cheese at WIC, I don't eat cheese. So, of all those benefits that they give me in the WIC, I can say that I eat the fruit.....So, it's really complicated for me because I don't eat many things. And it's not like they're telling me, look, you can substitute this for this. But yes, the usual thing if you don't eat meat, then eat beans, but I don't eat beans, and on the days that I am disgusted by meat, neither meat, nor beans, nor protein."*

Although the participants were aware and educated about nutrition and its possible effects on their pregnancies and babies, they tried to consume healthy foods without achieving greater consumption.

Category: Barriers to Diet Change

Six of the seven participants mentioned barriers to changing their diet. Although they want to maintain a healthy diet and consume more nutritious foods, they face obstacles to achieving this goal. One participant mentioned difficulty giving up the foods they like, P6, *"Because you can't stop eating the things you like."* Two of the seven participants commented on the difficulty in changing their diet due to being offered foods they want to avoid or cannot eat by their partners or family. The offer of these foods leads them to consume them because they do not refuse them. Participant Three also mentioned the difficulty of finding healthy foods.

P3 *"Because it's also difficult to find healthy foods here."*

P3 *"So, I mean, it's like that. I tell mom, "No, mom, give me salad, more salad with broccoli and meat." "No, no, no, no, no, no, no, no, no, you have to eat rice."*

P3 *Well, what we have in the house is rice, beans, you know, fried things.*

P4 *"It's difficult, because I'm trying to, you know, maintain (hold, lower) the flour, maintain (hold, lower) the salts, but you (husband) offer me something that you (husband) know I can't eat, and you know I'm going to say yes."*

P4 *"It's hard because then, if I'm trying, having willpower not to eat fries, and I ask you (husband) for fries as I did, and you (husband) fulfill it, and every time I saw that you fulfilled it this time, you will continue to fulfill it."*

P4 *"You (husband) know I can't eat much bread because it has flour in it because, but you're (husband) offering me bread."*

P4 *"Well, you want to eat at 10 p.m. Yes. And we literally went out, I didn't want to eat, since I had eaten at about three in the afternoon. I didn't want to eat anything else. Um, I'm fine with that dinner. And he offered me ribs at nine o'clock at night, with french fries from _____ (she mentions the name of the restaurant) and I said yes (laughs). And you see me asleep because I was almost asleep already, eating my ribs with french fries of _____ (she mentions the name of the restaurant, laughs with a mischievous face)."*

Another barrier mentioned by four of the seven participants was the encouragement they received from their family to eat and the serving of large portions of food. One participant noted that constant encouragement can lead to feeling that eating in excess is not bad, leading to weight gain problems. Participant two commented on her experience when she visits the grandparents and how the grandfather offers her a variety of food and serves a "banquet" when she visits, stating she is served and provided food because they do not see she has gained weight.

P1 *"He tells me, but eat it, and I don't. Do you want soda? No, water. It's complicated."*

P1 *"My mom tells me, help yourself a little more, that's nothing."*

P2 *"Whatever I want to eat, well, he gives it to me and everything exaggerated."*

P2 *"The grandfather, on the contrary, I sit at the table and he brings me apples, he brings me strawberries, he brings donuts. He tells me do you want a soft drink;*

I brought you water first. Then I'm going to bring you some lemon juice, and if you want a soda, let me know. He comes out with a full banquet on the table, because for him, I'm not gaining weight at all."

P3 *"And well, since pregnancy is once in a lifetime, they don't see it (eating without limits, eating everything) so bad, (sighs) it's difficult."*

P7 *"Well, hearing it so many times (That I have to eat for two, that I have to eat so the baby gains weight) might affect when you eat and not feel that it's something bad, and then abuse a little bit more than normal, and then that's where the problem with weight."*

Category: Puerto Rican Diet

The Puerto Rican diet is a high-carbohydrate diet composed of a high intake of rice and sweets (Riseberg et al, 2021). The diet also includes the intake of starches and sweetened beverages and a low consumption of fruits and vegetables (Riseberg et al, 2021). One participant commented that eating rice, beans, and meat daily is part of Puerto Rican culture.

P3 *"She "eat" and it's that, like, our culture here is rice, beans, and meat."*

Four of the seven participants mentioned eating rice daily and rice with some meat, with or without beans. One of the seven participants commented on the amount of food served on their plates. The participant commented that family members serve her large amounts of food, especially rice, on her plate.

P1 *"Eat, eat your rice, your beans, your chicken."*

P2 *"I'm going to make you rice, I'll make you some chops."*

P3 *"No, I have rice. No, give me rice and fried plantains*

P3 *"Then they serve you a big plate of rice."*

P4 *"If I can eat, at four o'clock dinner, rice, uh, pork chop, that's the most you eat here."*

Three participants commented on eating plantains in the form of tostones (fried plantains) or mofongo (smashed plantains), as well as viands, which are typical Puerto Rican food.

P3 *"I've got a craving for tostones (fried plantains), (sighs) breadfruit tostones (fried breadfruit).*

P3 *"You know, like, well, if I want to eat something from a restaurant, what am I going to order, I'm going to order the tostones (fried plantains) (laughs). I mean, I'll ask for mofongo (smashed plantains), I order this or that."*

P4 *"I'll ask for mofongo (smashed plantains)."*

P6 *"I eat viandas (Viandas, tropical tubers (yautías, yucas (casava) or ñames (yam)) considered a staple food in Puerto Rican culture)"*

Theme Beliefs

This theme provides data on the beliefs of participants and their families about weight gain during pregnancy and how these beliefs or traditions influence how women care for themselves and gain weight during pregnancy. Five categories were identified under this theme: no limits to eating, eating for two, mothers' weight gain related to baby's weight gain, indulging cravings or cravings, and cravings related to baby (because

the baby wants it), all of which influence decisions about how a woman eats and cares for herself during pregnancy.

Category: No Limits to Eating

This category refers to the belief that pregnancy is a time to eat whatever they want, without limits. Pregnancy is seen as a time in a woman's life where she can consume all the foods she wants, regardless of the quantity. Six of the seven participants commented that they are encouraged to eat whatever they want, without limits. This insistence on eating comes from family members (mothers, grandmothers, mothers-in-law) and colleagues and is part of the traditions or beliefs related to pregnancy. Participant two commented that eating without limits is part of her mother's traditions, in which, when a woman is pregnant, she can eat whatever and as much as she wants.

P1 *"Eat, eat, it's fine, you're pregnant."*

P2 *"Whatever you want. For her (mother), that was like everything was acceptable."*

P2 *"My mom (laughs). In her traditions, like in the old days, it was like you can eat whatever you want when you're pregnant, whatever and however much."*

P2 *"When you get pregnant, you have the authorization to eat whatever you want."*

P2 *"My family, as I said, my family has no reservations. My family is like everything is allowed."*

P4 *"Here they are telling me to eat a lot, no matter the quantities, or the times I ate."*

P6 *My mother-in-law tells me to eat, eat, eat."*

P7 *"Eat whatever you want."*

One participant commented that when a woman is pregnant, she can eat whatever she wants, and everything is accepted. One of the seven participants commented, P3 *"You feel like you have the green light,"* and P3 *"There are no limits, there will be no limits."* Another comment, P6, is, *"That I have to eat and continue eating."*

Category: Eating for Two

Five of the seven participants commented on the belief in eating for two. This belief is mentioned by the family (mother, mother-in-law, father, partner, spouse, colleagues). The statement is based on the belief that pregnant women must eat for themselves and their baby. Two participants commented that women are seen as two people, meaning they have two mouths to feed. Therefore, they are served twice as much food, one for themselves and one for the baby.

P1 *"People are like my mother-in-law, eat for two."*

P2 *"They (family) see me for two".*

P2 *"That is for his baby, oh look, this is for you (her father).*

P2 *"He (her father) brings me two; he doesn't bring me one because it has to be one for the baby and one for me".*

P6 *"My mother-in-law tells me that I have to eat for two."*

One participant commented that eating for two includes the authorization to eat whatever you want: P2 *"You have that authorization to eat whatever you want, because it's for two".*

Three of the seven participants also commented on the belief that eating for two is necessary because what the mother eats feeds the baby, and the belief that if the mother doesn't eat, the baby doesn't eat, and the baby must be fed.

P5 *"The baby has to eat."*

P5 *"Well, they are watching, like, have you eaten, have you given the baby food?"*

P5 *"I sometimes wake up and they ask me, 'Did you have breakfast?' 'No, I haven't had breakfast.' 'Baby has to eat.'"*

P7 *"That basically, because having a, well, life inside you, well, you have to eat for yourself and leave something extra (laughs) for the baby (laughs)."*

Category: Mother's Weight Gain Related to Baby's Weight Gain

The mother's weight gain is associated with the baby's weight gain. The seven participants mentioned the belief that their weight is related to the baby's weight gain, leading to a chubby baby. One participant commented: P2 *"The more I eat, the more the baby is going to be fed, chubby."* Three participants commented that the mother's weight gain was indicative of how chubby the baby was born, or if the baby was born thin, they expressed concern about their baby's weight gain.

P2 *"I lost so much weight that I thought the baby is going to be so skinny."*

P2 *"I don't eat, the baby will be really skinny when it's born."*

P3 *"In a certain way, I give the baby more food, and I give the baby, I don't know, more pounds, and then the baby can be born fatter and not come out as they say, a "lagartijito" (means a thin, skinny baby)."*

P5 *"I feel, I don't know, maybe they worry or something, like remember that if I don't eat, the baby doesn't consume anything."*

P6 *"That I have to eat well, so that the baby isn't affected."*

Three of the seven participants received comments from family encouraging them to eat and gain weight, as three of the seven participants commented.

P2 *"Put on a little more weight so the baby comes out chubby."*

P3 *"Go on, so that you give food to that baby so that it grows."*

P4 *"The baby needs to gain weight."*

In addition, the belief commented by one participant, P3, *"The fatter the baby is, the healthier it is,"* relates the baby's health to the mother's weight gain. Therefore, the more the mother eats, the fatter and healthier the baby.

P1 *"I said the amount of food I eat has nothing to do with the amount of food the baby eats."*

P7 *"I have to eat so the baby gains weight."*

Category: Cravings

Six of the seven participants mentioned cravings. Cravings are seen as part of pregnancy, are not limited, and are indulged by family, friends, and colleagues. Two participants commented that it is not seen as wrong for women to eat what they crave and that they are encouraged to eat what they want.

P1 *"It's something like eat, it's fine, you're pregnant, a little craving is nothing."*

P2 *"You have a craving, eat it, he'll be fine, forget about it, it's nothing."*

Four of the seven participants commented that whenever they mentioned a craving, their partner, spouse, family, and colleagues or co-workers fulfilled it the same day or days after the participant mentioned the craving.

P2 *"I have a craving, or I think about eating something, that's there."*

P2 *"Sometimes I sit down and say, oh, I would eat some rice, it's not a craving, it's just that I felt like eating rice. I'll make it for you. I'll come now. I'm going to make you rice, I'll make you some chops. I'll make you this and that, and I'm, oh, but if it's not a craving, it's like they run."*

P3 *"If you say that you want something, they spoil you."*

P3 *"Out of nowhere, I say, "Ohh, I would like to eat such a thing," and someone comes out from the hallway, "Ohh, don't say that because I'm going to have to prepare it for you." I mean, I'm not even asking them for it. And during the week, they(colleagues) bring me the things that I have mentioned."*

P3 *"The belief that if the pregnant woman wants it, you have to give it to her."*

P4 *"And my friends, now that we started at college and since I was pregnant the other semester, it was, 'What do you have a craving for?' (She says it is imitating classmates). We left the lab. "Okay, the one who decides what we're going to eat and where we're going to eat is you because you're pregnant, that's it."*

P4 *"They give it to me (fulfill them), eh, they scold me, but they fulfill them (laughs).*

They have always, they have fulfilled them. One was fries (french fries) with stewed chicken."

P4 *"When I have a craving, whatever it is, they (family) fulfill it."*

P5 *"My family always pleases me with my cravings, the cravings I have had."*

Four of the seven participants mentioned that these cravings are not limited due to the belief that if they do not fulfill them, something will happen to the baby or the person who denies the craving. The consequences mentioned by two participants for not indulging the craving are "that the baby's mouth will open, that the bile comes out," and "the baby will be born with weaker bones". The consequence commented by the participants to the person for not fulfilling the pregnant woman's craving: they would develop a stye.

P1 *"If I don't eat, the baby comes out with his mouth open, that the bile comes out."*

P3 *They (family, friends, colleagues) do not limit your cravings because they say that you may get a stye."*

P4 *"If you don't satisfy the pregnant woman's craving, you'll get a stye."*

P4 *"Because if you don't satisfy my craving, uh, something is going to happen. Which I think is a stye in the eye (touches, points to eye) the stye."*

P4 *"That if you don't satisfy the pregnant woman's craving, you'll get a stye and things like that."*

P7 *" Well, the reality is that they (family) go and get it quickly because they (family) don't want to get a stye."*

Cravings Related to Baby (Because the Baby Wants It)

Three of the seven participants commented that family (spouse, partner, father, mother, mother-in-law) fulfilled cravings because cravings are related to the baby or because the baby is the one who wants or asks for what she craves. The two participants commented

P1 *"Of course, rice is a must, because this guy likes rice, and I didn't eat rice."*

P2 *"It's the baby, you have to eat it."*

P2 *"I'll get it for you because it's the baby, because the baby wants this."*

P3 *"And if the baby wants it, so if the pregnant woman feels that she needs it, then it has to be given to her."*

P3 *"The baby asks for it."*

Therefore, the mother's cravings are fulfilled because if the mother feels the need to eat a specific food, it is because the baby wants it or asks for it.

Theme Knowledge

This theme provides data on participants' and their support networks' knowledge about GWG and the resources they used to search for or obtain information about GWG. Three categories were identified under this theme: previous knowledge, sources of knowledge, and support knowledge, influencing decisions about nutrition and care during pregnancy.

Category: Previous Knowledge

This category refers to the participants' prior knowledge about recommended weight gain during pregnancy. Prior knowledge about recommended weight gain is a

factor that can influence a patient's health decisions regarding weight gain and how she takes care of herself to manage her weight or avoid gaining excess weight during pregnancy. The seven participants commented that they were aware of the recommended pregnancy weight gain amounts, providing different amounts ranging from 15 to 30 pounds of weight gain. Two of the six participants said they had been informed but did not remember the recommended pregnancy weight gain amount, or were unsure of the information.

P1 *"I don't remember how much. I think the normal is 15 pounds."*

P2 *"The accepted weight for gaining weight during pregnancy is 30 pounds."*

P3 *"I understand that it was approximately 20 to 25 pounds."*

P4 *"I know that I was informed there, but I don't remember anymore."*

P5 *"Well, at the time, um, the gynecologist told me, um, not to exceed 20 pounds."*

P6 *"The most that is recommended or regularly, to gain are 25 to 30 pounds."*

P7 *"I'm not entirely sure about that information."*

An important observation is that no participant mentioned that weight gain depended on their weight before they became pregnant. One participant commented that she did not know that if she was overweight when she became pregnant, there was a weight gain limit during pregnancy.

P1 *"I didn't know that if you're overweight, you had a weight limit. I know it was 15 to 20 pounds, but the weight didn't matter."*

One of the seven participants said she knew that excessive weight gain could have consequences for her and the baby.

P3 *"Well, because I know that I can have preeclampsia, and that can cause harm to the baby or to me."*

Category: Sources of Knowledge

This category relates to the resources participants use to obtain information about weight gain during pregnancy. There are several resources pregnant women can use today to educate themselves about GWG. Six participants commented on using resources to seek information about GWG or other pregnancy-related topics. The participants used varied resources: health professionals, the internet (Google), internet pages, pregnancy applications, and body mass estimation applications. Five of the seven participants commented that their knowledge resources consisted of WIC program resources, such as nutritionists, nurses, and brochures, from which they received information on nutrition and GWG.

P1 *"I have a nutritionist from the health insurance who tells me to eat the bars that have 70 calories when I have a craving for chocolate or an Oreo."*

P3 *"The nutritionist, exactly, she did guide me correctly. And she told me the steps, the follow-up."*

P5 *"I have a nurse... she talked to me about nutrition."*

P5 *"I have a nutritionistadvise me on what I have to eat and all that."*

P6 *"Well, I let myself be guided by what they had already given me in the classes that were with the WIC nutritionist."*

P7 *"Well, at WIC they gave me a class, where they taught me that the most, the most, the most that is recommended or regularly, to gain are 25 to 30 pounds."*

P7 *"When I went to WIC for the first time, they gave me some brochures. But the truth is, they didn't talk to me much about the topic either."*

However, one participant commented that the WIC program did not talk to her or educate her about the topic of GWG. She commented that she was provided brochures by the program, but had not read them or searched for information on the subject.

P7 *"When I went to WIC for the first time, they gave me some brochures. But the truth is, they didn't talk to me much about the topic either."*

P7 *"And to be honest, no, I haven't read them (brochures)."*

P7 *"I don't look for anything on weight gain."*

Three of the seven participants commented on using the internet and digital applications to seek information on nutrition, pregnancy-related topics, and body mass index assessments.

P1 *"Google... No, you look for it like this, um, like fruits to reduce swelling during pregnancy, and they give you a list. Let me see what else, um, healthy food during pregnancy."*

P3 *"I have an app called Pregnancy. That's where I read the most pregnancy news. And there they talk about nutrition. They talk about pain. You look for different topics there and you find them."*

P4 *"Well, when I do the body mass index assessments, Google."*

Three participants commented that they had not searched for information on GWG or used any resources to search for information.

P2 *"I hadn't looked for any information."*

P6 *"I never asked the doctor or anything."*

P7 *"No, I haven't really sought out resources like that."*

Category: Support Knowledge

This category refers to the participants' support systems' knowledge about GWG. Five of the seven participants commented on their support systems' knowledge of GWG. The knowledge of support systems has both a social and cultural influence. One participant commented on the lack of knowledge of conditions related to EGWG.

P3 *"They (family) have zero knowledge of the conditions and so on."*

P3 *"They don't see any conditions, nothing at all. They see that it's healthy that I have to eat."*

Three participants commented on family knowledge based on the belief that pregnant women need to eat for two and that the baby will be small if the mother does not eat or does not eat for two.

P1 *"Well, my mother-in-law says eat for two."*

P1 *"Honey, I don't want a small baby," (husband)"*

P2 *"The more you eat, the better because you're pregnant." (Family)*

P4 *"You have to give him food. You have to give him food, food, food, food. That no, it is not necessarily that I eat, but that I eat well. And sometimes they don't think much about it either."*

P4 *"Because they think that the fatter the better."*

P6 *"They think, well, that the baby needs more from me, and they think that, that I have to eat well, so that the baby isn't affected."*

Two of the seven participants commented on having nurses as family members, but the advice received by each participant differed, even though both are healthcare professionals.

P3 *"Well, my mom, my mom is a nurse (laughs). And she also worked in labor and delivery. But, well, I don't know, it seems like she forgets. I don't know, and well, she's "eat".*

P4 *"My mother-in-law is, uh, nurse, retired. She was a supervisor, and she's the one who scolds me with food because she knows that when legs swell, this happens, and it's because of this and that. So, at least she does keep me in that you have to eat, but you have to eat this much less, more, and that.*

Theme Support Systems

This theme provides data on participants' support systems, how they view weight gain, and how they influence the participants' weight gain, healthcare decisions, and behaviors. Under this theme, five categories were identified: encouraging eating, positive influence, negative influence, contradictory advice, and weight gain is normal and allowed.

Category: Encouraging Eating

This category refers to the insistence of the support systems to encourage pregnant women to eat. Six of the seven participants commented that their family encouraged them to eat in one way or another. This encouragement to eat came mainly from the participants' family (husbands, partners, mothers, and mothers-in-law) and co-

workers. Four of these participants commented that they are continually encouraged to eat what they want, the more they eat, the better, to focus on eating, and to eat more.

P1 *"Eat, eat, it's fine, you're pregnant (family)."*

P2 *"You have to eat a lot."*

P2 *"You focus on eating, the more you eat, the better."*

P3 *"Well, keep going, keep going, and we're almost there."*

P4 *"Family, they are telling me all the time to eat."*

P6 *"With them (family) constantly on top of me, like one says, 'eat, eat, eat, you have to eat this, eat that.'"*

Three of the seven participants commented that their family is more aware of whether or not they eat and continuously asks them if they have eaten.

P1 *"They're (mother, mother-in-law, husband, friends) more like more aware. What you eat or don't eat."*

P4 *"They (family) kind of put one more eye on you."*

P4 *"All day long they (family) are asking me if I want to eat."*

P5 *"Well, they are watching, like, have you eaten."*

One participant commented on a situation with a family member who wanted to give her any food found in the refrigerator, and that when she visits a family member, he goes out and serves a full banquet at the table because she is pregnant.

P2 *"My father is crazy about giving me any food he finds in the fridge."*

P2 *"He (grandfather) comes out with a full banquet on the table."*

One of the seven participants also commented that the portions of food served are large.

P1 *"She (mother-in-law) brings, she (mother-in-law) served me lasagna like this" (Gesture with her hands a large portion), and I look, give me a smaller piece, and she says, but eat it, and I nooo."*

While one participant commented that the only support she has received is to continue gaining weight, since no one has restricted her.

P3 *"No, it's just that nobody has restricted me."*

P3 *"The only support is that I keep gaining weight."*

Category: Positive Influence

Support systems can positively or negatively influence the health behaviors and decisions of the pregnant woman. This category refers to the positive influences that support systems exert on pregnant women. Six of the seven participants commented that their support network, mainly their family and colleagues, in one way or another, has been a source of positive support. Five of the seven participants commented that their family and partners or spouses have been a source of positive support and that they feel supported.

P1 *"He (husband) supports me in everything, thank God."*

P1 *"I brought a little bit of ground beef with cream cheese and ground cheese." and they're taking it too, oh, I'm going to bring that tomorrow, you know. That kind of influences, look, you're doing very well, you're eating well."*

P2 *"Try to give up the sodas, the chips, and the honey buns, and let's eat a little more food and give up the sweets. And as for support, I think theirs (colleagues) is super good."*

P4 *"My husband has been a great source of support."*

P5 *"I have a spectacular family that is always attentive and has helped me."*

P6 *"I feel calm and grateful to them for their support."*

One of the seven participants commented that the support of the family is important and that they have been the ones who have supported her in the pregnancy process without judging her, and that is why she feels supported by them.

P7 *"I feel that the support of my family has been the most important."*

P7 *"They (family) have been my support and have not judged me."*

P7 *"They (family) have been the people who have supported me the most and who have not judged me."*

P7 *"I haven't felt judged by them but rather supported by them."*

Two of the seven participants commented that their support systems are positive, as they advise them on what they can or cannot do.

P2 *"And when I buy it at work, they kind of forbid me from it. No, it has a lot of sugar. You can't eat that. Have a little glass, no, and they try to hide it from me."*

P2 *"Like Janine, that's not going to happen anymore. You have to stop drinking juice if you don't want to gain weight."*

P7 *"If I ask them (family) for something, they go and buy it, or they advise me."*

P7 *"But yes, that (family, family advice) has a positive influence."*

P7 *"Sometimes my mother would go to the supermarket and tell me, "What do you think of this and this for a snack? Do you think that you can, and we'll try it, and if not, then we'll look for something else".*

P7 *"And hearing that you shouldn't do this, you shouldn't do that. Well, it's good to hear it from family because we know they do it in a loving way, not in a hurtful way"*

One participant commented that she tries to follow her relative's advice by changing behaviors, such as buying less junk food.

P2 *"I try not to buy so much junk like mom says."*

Category: Negative Influence

Support systems can positively or negatively influence the health behaviors and decisions of the pregnant woman. This category refers to the negative influences that support systems exert on pregnant women. The seven participants commented on factors related to negative support from family and colleagues. A participant commented that she has not received positive support because P3 *"They do not have healthy lifestyles,"* and that is why P3 *"If I stick with the family factor, etc., well, not very good"*, because her family consumes canned foods, processed food, eats rice, and leads an unhealthy lifestyle.

According to comments of four of the seven participants, the negative support comes from the encouragement to eat, the serving of large portions of food, and the belief

that everything is allowed during pregnancy or that they are allowed to eat whatever they want.

P1 *"Eat, eat, eat,"*

P1 *"You (participant) have to eat a lot,"*

P2 *"My family, as I said, my family has no reservations. My family is like everything is allowed."*

P4 *"They serve me a lot of food."*

P6 *"They serve me a little and then offer me more if I want more."*

One of the seven participants commented that her family tells her she is fine with the weight she has gained.

P6 *"My family and everyone tell me no, that I am fine like this".*

Two of the seven participants commented on how family members and colleagues spoil them and provide them with foods they like or indulge their cravings. They mention that the foods they like and crave are often unhealthy foods that can lead to EWGW.

P2 *"Sometimes they give me honeybuns because I love honeybuns. So, they buy them for me too."*

P3 *"Well, at work and at home they have spoiled me in a horrible way.... They've brought me everything (indulged in her cravings and things she wants to eat)."*

Two of the seven participants commented that the support they receive from family, friends, and colleagues encourages them to continue eating, they should think about the baby and eat, and their weight is fine.

P3 *"Because I haven't had support like that, I mean, like no, Avery, you have to stop, no, eat less. No, nothing, everything has been very pleasant. Well, keep going, keep going, and we're almost there (laughs). And I'm Oh, God."*

P6 *"Well, honestly, well, no support because for them, well, even though I see weight gain, my family and everyone tell me no, that I am fine like this. That what I have to think about is the baby. In other words, they don't see what I see."*

Category: Contradictory Advice

Pregnant women receive advice from their support systems, family, friends, or work colleagues. The advice received can be positive, negative, or contradictory. Four of the seven participants commented that they received conflicting advice. While participants are advised to eat without limits, eat for two, and gain weight from their support systems, these same systems, on the other hand, provide conflicting advice. All four participants were advised not to gain weight after being advised to eat and gain weight. The advice or comments came from family and acquaintances. One participant commented that after her family insisted that she eat and gain weight, but later they told her that they did not want to see her fat and not to gain weight.

P1 *"They (mother, mother-in-law) don't want me to gain weight."*

P1 *"They (mother, mother-in-law) don't want me to look fat"*

P1 *"Don't get too fat."*

One participant said the family told her to cut back on what she ate, but at the same time, they tell her to keep eating, P2 *"Reduce. But keep eating"* (Family). One of the seven participants commented that a family member told her P4, *"If you don't take care*

of yourself, you're going to be chubby", advising her to take care of herself after advising her to eat. While one participant commented that people wanting to advise without being asked told her P7, *"Stop your mouth (meaning "you're eating too much, stop eating so much"). That I have to stop eating so much"*.

Category: *Weight Gain is Normal and Allowed*

The seven participants commented that their support systems viewed weight gain during pregnancy as normal and permissible. Because of this, they are encouraged to eat and gain weight. Four of the seven participants commented that weight gain during pregnancy is viewed as normal. Two of the seven participants commented that they were told they would change and gain weight. One participant commented that her family thought that the more weight she gained, the better.

P 1 *"Well, they (family) say it's normal."*

P2 *"You haven't gained that much."*

P3 *"It is normal during pregnancy that a pregnant woman eats and swells."*

P4 *"You're going to change, you're going to get fatter."*

P4 *"They (family) think that the fatter the better."*

P5 *"I understand that it's (weight gain) normal."*

P6 *"It's (weight gain) normal."*

P7 *"You know you're going to gain weight."*

Theme: Healthcare Providers

This theme provides data on participants' comments about the health providers' advice on GWG. The counseling or education provided by healthcare providers and how

they give the advice or education affect how women care for themselves and their health decisions. It also affects how satisfied women feel with the care and service provided and their comfort and confidence with the healthcare provider. Five categories were identified under this theme: lack of advice, orientation, guidance, advice provided, not follow advice, and would have liked to receive advice.

Category: Lack of Advice, Guidance, or Orientation

Four of the seven participants reported receiving no advice on recommended weight gain, nor the maximum or minimum amount of weight gain recommended per week during pregnancy.

P2 *"He's (obstetrician) never talked to me about that."*

P4 *"I don't remember being told by the gynecologist or the WIC nutritionist that you (the participant) have to gain a minimum of so much or a maximum of so much per week."*

P4 *"And, she wasn't the one to tell me, look, you have to lower the salt. You have to lower it, because I see that your feet are swollen. And I also communicated it. Look, my feet are swollen, but very swollen."*

P6 *"No, she hasn't told me anything."*

P6 *"But as far as the amount of weight that I had to gain or an approximate amount, he (the obstetrician) never told me anything about that."*

P7 *"Well, she's (obstetrician) never told me specifically what the recommended amount is."*

One participant commented that she did not receive advice or education on recommended weight gain, but did receive information about increased weight gain when her healthcare provider called her attention to gaining six pounds in one week. She commented on being surprised when her obstetrician called her attention after she gained six pounds in one week, even though the healthcare provider did not mention or talk about weight gain or nutrition during her pregnancy.

P2 "Nothing, nothing. But that was why I was so shocked, he called my attention that it was like hmmm, there's something weird here, when he (Obstetrician) told me, like you're gaining, you gained six pounds in a week."

P2 "He (obstetrician) didn't say anything to me. He (obstetrician) just said, " Hmm, you gained six pounds in a week."

P2 "No, (laughs) the only information the doctor gave me was the weight gain I had."

P2 "Well, he didn't tell me anything about the recommended amount, or about the weight as such, well, it was like, he looked at me very serious, like, mmm, six pounds in a week is too much and I took it as if it's not right that I have to start cutting back on what I eat."

P2 "But it was something, it shocked me because he had never told me anything about my weight, and everyone always fights about my weight because I have never gained so much."

P2 *"I think that's it, but giving me information, sitting me down, and telling me you have to do this, eat this, and this, no, he didn't prohibit me anything. He didn't tell me to reduce anything, not sweets, not salty foods, not anything."*

One of the seven participants also commented on her experience during prenatal visits. The participant commented that she changed obstetricians due to previous experience with another obstetrician involving quick visits and little opportunity to ask questions and clarify her doubts. She stated that the visits were short, during which they took her vital signs and weight, asked if she had prenatal vitamins, and asked how she was doing. However, she could not ask questions and clarify doubts about various topics such as reflux, weight gain, the size and position of the belly, and breastfeeding, indicating that not having the opportunity to ask questions because the healthcare provider was fast or in a hurry caused her stress.

P4 *"Because, okay, I weigh you and sit down, or I'll take your temperature and sit down. Basically, the only thing they do there is "Do you have prenatal pills, or not? How have you been feeling?" If you tell him "well", then fine, but I don't get a chance to tell her that I've had a lot of reflux."*

P4 *"I can't ask you if the weight is right or not. Eh, if it's normal for the belly to start from here. If it's normal for it to grow from here, to grow from there. With breastfeeding and what is normal, and what is not normal, and to what extent is normal. This is the thing with not being able to ask and not receive an answer. Because I changed gynecologists for that very reason. So, I changed gynecologist, she seems to be very good, I don't know."*

P4 *"And it's stressful, the fact that I can't ask you why you're going like this (snaps his fingers quickly in a hurry, he's going fast)."*

Category: Advice Provided

The seven participants reported receiving advice or education from health providers such as their obstetrician, WIC nurse, nutritionist, and WIC nutritionist. Two of the seven participants reported receiving advice on the weight gain recommended by their obstetricians.

P1 *"They (HCP obstetrician) told me that it was normal, you know, 15-20 pounds."*

P5 *"Gynecologist told me, um, not to exceed 20 pounds."*

P5 *"The gynecologist told me, um, not to exceed 20 pounds because of the risk of preeclampsia in childbirth."*

One participant commented that she only received advice when her healthcare provider called her attention to having gained six pounds in one week.

P2 *"He (obstetrician) just said, "You (participant) gained six pounds. I hope you (participant) don't come back next Monday with six more pounds."*

Six of the seven participants commented on having received advice from their obstetricians regarding complications such as preeclampsia and gestational diabetes, diet, and the consequences of excessive weight gain. Three participants commented on receiving dietary advice about the size of food portions, foods to eliminate from their diets, and heartburn. Two of the seven participants commented that their obstetricians

referred them to the nutritionists for nutritional education and prevention of complications due to EGWG, such as preeclampsia and gestational diabetes.

P1 *"Eliminate sweets and juices (Obstetrician).*

P 1 *"Eat, eat your rice, your beans, your chicken. And me, rice, beans, and chicken every day? And me, every day? He says, well, but you can vary, but yes, but, you know, a certain amount. I'm going to refer you to the nutritionist."*

P2 *"He just told me to try not to eat so heavy at night, but it's because of the heartburn I was having, not because of my weight."*

P3 *"Because here they (obstetrician) talk to me, the professionals (obstetrician) talk about the complications in the literature, the conditions, and so on."*

P3 *"Well, he told me that, from the beginning, he told me that the ideal was to go to the nutritionist and that I should stay with the nutritionist because there could be complications during and after pregnancy, and he mentioned to me about preeclampsia, gestational diabetes, etc. He told me to visit a nutritionist, well, in order to avoid that,*

P3 *"They (HCP) guide (orient, counsel) me."*

P4 *"They (HCP) told me that if I wasn't going to eat a lot, I should eat many times in smaller portions."*

P5 *"She (obstetrician) explained to me the consequences of everything."*

P 6 *"The only thing she (obstetrician) told me was that I had to watch my diet, but, in terms of the amount of weight I had or could gain or, even, well, an approximate, none of that."*

Three of the seven participants also received counseling from a nutritionist and nurse from the WIC program. Participants mentioned that during the counseling, they received advice on how much weight they should gain during the first four months of pregnancy, nutrition, and what they should or could eat.

P4 *"In the WIC, the nutritionist told me that, in the first four months, you (the participant) have to gain four pounds, in those four months or in those three months."*

P5 *"I have a nurse ... and she (nurse) has been with me during the whole pregnancy process,-and she (nurse) talked to me about nutrition."*

P5 *"I have the WIC nutritionist, who advises me on what I should consume and at what times I have to eat and all that."*

Category: Not Follow Advice

Three of the seven participants commented that they do not follow the advice provided by their healthcare providers. One participant, who did not receive advice from her obstetrician and does not like healthy foods, commented that if the obstetrician had provided advice on healthy eating, such as vegetables and salads, she would have felt guilty because she knew she would not follow the provider's recommendations. Two participants commented that they do not pay attention to their healthcare providers. One participant commented that she does not pay attention to her healthcare providers, but it is not due to a lack of knowledge.

P3 *"They (Healthcare providers) don't influence me at all (laughs). I don't pay attention."*

P3 *"But well, I don't pay attention ("lo paso por ficha"), I don't pay attention ("lo paso por ficha.")"*

P4 *"As a _____ (mentions what she is studying) student I am aware, but I don't pay attention to him (obstetrician), but I'm aware. So, there are a lot of things that I know."*

Five of the seven participants commented on how their obstetricians touched the GWG subject and how they felt when their obstetricians touched the subject. One participant commented that the obstetrician did not touch the subject in a rough way and indicated to her the need to take care of her to have a positive birth experience and pregnancy outcome. Although the obstetrician touched the subject respectfully, she mentioned feeling bad when he touched the subject. Participant three commented that her obstetrician touched the GWG subject in a friendly manner, he was clear when talking about the subject, and she felt that everything went well. Participant five commented that her obstetrician was respectful when talking about GWG; she commented that she took the conversation about the subject well and has no complaints about how the obstetrician touched the subject. Participant two mentioned that she felt shocked when her obstetrician touched the subject of GWG because he never talked about the subject before during her pregnancy. Still, she didn't take the conversation about weight gain the wrong way. Participant six mentioned that she didn't feel bad about the little information she received from her obstetrician about GWG because she obtained information from the WIC classes.

P1 *“Not in a rough way. No, he tells me, look, you can't gain too much weight or else you'll go to the Medical Center. And me, really? But you can admit it. Yes, but not you. You know. We have to take care of mom; we have to take care of the baby. A good, beautiful birth, without complications.”*

P1 *“One feels bad, and I said I am 11 to 12. I am not that fat, I said.”*

P2 *“Funny, I didn't take it the wrong way (laughs). But it was something, it shocked me because he had never told me anything about my weight, and everyone always fights about my weight because I had never gained so much.”*

P3 *“Everything went very well. It was very clear, eh, they even made the nurse made me an appointment with the nutritionist, and I had the appointment that same day. Everything went really well.”*

P3 *“He mentioned it in a very friendly way.”*

P5 *“Well, I took it very well because she was really, very respectful, she explained to me the consequences of everything. She was really, very respectful, and I have no complaints whatsoever.”*

P6 *“Honestly, well, I don't feel bad or good because, well, as I told you when I went to the WIC class and all that, they explained it to me.”*

One of the participants talked about a negative experience she had in an appointment with her obstetrician that left her frustrated, sad, crying, dissatisfied with her appointment, and the way her obstetrician touched and managed the subject of her weight gain during pregnancy. The participant commented that she felt the obstetrician was too honest and cruel, and did not touch this subject in the best manner. She mentioned that

the obstetrician had told her that her belly was not all baby and that she should stop eating. Even though she was frustrated with the appointment she also stated that even though her obstetrician's honesty hurts and the obstetrician said things that she did not want to hear or did not like to hear she felt that it was for her and her baby's good and that led her to make changes in her diet but still states that the words used by her obstetrician did not make her happy and made her sad.

P7 *“But yes, there was one appointment where I left a little frustrated because she was very honest with me. And well, that honesty sometimes hurts, and we don't like it. But it's for the good, right, for my good and for the good of the baby. And she told me that the belly I had wasn't all baby. That the baby was down below, and that everything else, that was what I was eating, that I had to “parar la boca” (stop eating, eat less).”*

P7 *“A little too honest about my belly, because I thought it was just growing, “because the baby was bigger. Well, she (obstetrician) was so honest in telling me, “No, that's not all, baby. That's not a complete baby belly. The baby is down here,” she was lower down and everything. Like, that's not the belly. That's not baby. And that (what the obstetrician said) was a little cruel of her (obstetrician), but it (what the obstetrician said) worked (laughs). Like it or not.”*

P7 *“I don't think it was the best way.”*

P7 *“No, it wasn't that I left very, very satisfied with the, with the, with the appointment. I was sad, I cried, I got frustrated because those aren't words I want to hear, but no, no, no, no, no, it did not make me happy, it made me sad.”*

Category: Would Have Liked to Receive Advice

Four of the seven participants commented that they would have liked to receive advice on GWG. One participant commented

P2 *"Yes and no. Yes, because one would be a little more, uh, informed. But no, because I don't eat so many things."*

Three of the seven participants commented that they would have liked to receive advice on what is and isn't normal, how many pounds they should gain during pregnancy, and the consequences and complications that being overweight during pregnancy can cause. One participant commented that as a new mother, she doesn't know much about weight gain during pregnancy and that women need more knowledge on the subject. She stated that gaining knowledge about GWG would help her feel more guided, supported, and confident, and she would not need to look elsewhere for information. Participant seven also commented that, given the rush to attend to them due to the number of patients waiting, they do not receive the education or advice they need. This participant also stated that GWG is not a topic that is talked about by healthcare professionals, and the need pregnant women have to know about the subject, and not from what they hear from others.

P4 *"I think they (HCP, gynecologist, obstetrician) should talk to me about, 'Look, this is normal, and this is not normal.'"*

P6 *"It is always good, right, to have the exact knowledge of what one (the participant, pregnant women) has or may have to gain during pregnancy."*

P6 *"And it is always good to be clear about the consequences and the complications that being overweight can cause during pregnancy."*

P7 *"Yes. Absolutely necessary. Sometimes, though, I know they attend us a bit hastily because of time. There are many waiting; we're (pregnant women) not given that guidance because, in my case, I'm a first-time mother. I'm completely unfamiliar with this (information about the correct amount of weight gain during pregnancy)."*

P7 *"Because by not knowing everything, all of this because, well, it's my first-time pregnancy, I would feel more guided, more supported. I'm going to feel more confident, knowing more about the topic and not having to look for other methods to guide me."*

P7 *"We need more information on this (about the correct amount of weight gain during pregnancy). As you can see, I don't have much information myself. And the reality is that this is a topic that isn't talked about by many professionals and is heard a lot in the hallways, but we don't know what the reality is, what we should do."*

Theme: Effects of Weight Gain

This theme provides data on the comments about the effects of weight gain during pregnancy. Three categories were identified under this theme: fear, emotional/psychological, and self-esteem.

Category: Fear

Four of the seven participants commented on their fears about the possible complications that their weight gain could cause them, their babies, or that complications could arise during childbirth. Two of the participants commented on their concern about developing preeclampsia during pregnancy. Two of the seven participants commented on their weight after pregnancy, and how it would affect them if they retained the weight gained during pregnancy. Participants commented on their concerns about complications during labor or that the baby would be affected.

P1 *"I feel worried, because my blood pressure might go up during pregnancy or I might get preeclampsia."*

P2 *"I'm worried about staying at that weight, being very obese, and then it (weight gain) being a problem."*

P3 *"It means that I'm closer to maybe having a condition like preeclampsia or something like that during childbirth."*

P3 *"My biggest concern is that this weight gain will affect me after pregnancy. Or that it (weight gain) will have some consequences during my delivery, right? Sometimes, complications do happen."*

P6 *"I was worried that the baby would be affected."*

Category: Emotional Psychological

This category addresses the emotional or psychological effects of weight gain. The seven participants commented on some emotional or psychological effects as a result of weight gain during pregnancy. Among the emotional and psychological effects

mentioned by the participants, one of the seven participants commented that she felt bad about her weight gain. P1 *"One (participant) feels bad, and I said I am 11 to 12. I am not that fat, I said."*

P1 *"But I felt a little bit bad. It's true, I am chubby."*

Three of the seven participants said they felt shocked by their weight gain. The participants mentioned that their shock was due to the healthcare provider calling attention to her weight gain and to gaining 26 pounds in a short period. One of the seven participants said that, in addition to being shocked, she was also traumatized by comments made by people about her weight gain.

P2 *"It (The obstetrician calling her attention about her weight gain) was a little bit shocking when they (obstetricians) called my attention (about her weight gain)."*

P4 *"I didn't know that the weight was going to shock me so much. I thought, mentally, I didn't think, well, I knew I had to gain weight, but mentally, no."*

P4 *"Seeing that number of 26 pounds more in less than anything (so little time). Well, it's (pounds gained) kind of shocking."*

P7 *"And for me, it's (weight gain) been shocking and a bit traumatic. It's the reality, because hearing people say it (telling her she is round, that she has gained a lot of pounds) all the time isn't the nicest thing in the world. "*

One of the seven participants commented that the weight gain was painful because she didn't have time to process the pregnancy or lose weight before getting pregnant. The participant had shared how she was in the process of losing weight before

getting pregnant. However, she became pregnant without managing to lose all the weight she wanted to lose before getting pregnant. This participant also commented that she didn't know how to handle the weight gain because at the beginning of the pregnancy, she had lost a lot of weight due to nausea and vomiting, but as these subsided, she gained weight throughout the pregnancy. Therefore, she doesn't know whether to view the weight gain positively for the baby or negatively for herself.

P2 *"Painful (weight gain) So, I didn't have time to assimilate it, or to lose weight, or anything. I had lost about 10 pounds; I think it was."*

P2 *"I don't know how to take it (weight gain), (laughs). I really don't know how to take it (weight gain) yet."*

P2 *"I don't know if I should take it on the positive side for the baby and the negative side for myself."*

One participant commented that weight gain during pregnancy gives her a guilty conscience because she knows that she has not gained the correct amount of weight.

P3 *"So, but eh, eh, how do I explain it (feelings about weight gain), I know it's (weight gained) not right. Do you understand? It (weight gained) gives me a guilty conscience."*

One of the seven participants commented that pregnancy and weight gain cause her stress. According to the participant, this stress is a consequence of weight gain, which led to an increase in clothing size from extra small to medium, and she considers this a radical change for her.

P4 *"The pregnancy gave me a lot of stress, and even more stress that I went from an extra small to almost a medium."*

P4 *"Well, it (weight gained) means that I went out of the extra small line, to be a small or a medium. That small, is not bad at all (Laughs). But I, uh, the, the stress has been so much, from that radical change that I don't like it (the change)."*

One participant commented that she does not like seeing the changes caused by weight gain when she looks in the mirror because the changes are not limited to her abdomen but also affect other body parts.

P7 *"Well, it (weight gained) means seeing myself, those changes reflected in the mirror, which I don't like very much either, because it's not just my belly. Maybe my legs and arms feel a little bigger."*

Two of the seven participants reported feeling good about their weight gain.

P5 *"I am calm, enjoying my pregnancy, I feel good."*

P6 *"I don't feel bad (about the weight gain). I don't feel bad. Honestly, I don't feel bad, but I know that, as soon as I get out of pregnancy, I have to go back to what I was doing."*

Category: Self-esteem

This category addresses how weight gain during pregnancy affects participants' self-esteem. Three of the seven participants commented on the effect of weight gain during pregnancy on their self-esteem. The effects on their self-esteem are related to pregnancy-related bodily changes and weight gain, as well as comments made by others about their weight gain.

One participant commented that although she knew that weight gain occurs during pregnancy, it affected her physical and emotional self-esteem. Knowing that she has gained more weight than expected makes her feel bad about herself, affecting her self-esteem.

P3 "And well, obviously physically, eh, emotionally, my self-esteem, do you understand me? I mean, you (participant) already know that you're (participant) going to change. But knowing that I'm gaining more than expected, well, obviously, you (participant) don't feel comfortable, self-esteem."

Two participants commented that they do not feel good seeing the changes reflected in the mirror. One participant commented that seeing herself in the mirror and a change in her clothing size to medium or large affects her because it indicates that she is chubby. Furthermore, if she takes a picture, it is not because she feels pretty, but to show the baby's development or pregnancy, not because she feels good about the weight gain.

P4 "When you (participant) look in the mirror, and you (participant) see the change, ha, (opens her eyes), well, no."

P4 "You (participant) see yourself in the mirror, and from double 0 you became medium or large."

P4 "It (weight gain) means that I'm chubby."

P4 "Maybe taking a picture of me, if it's not saying I'm so many weeks pregnant. Not because I'm pretty, but to uh, show the baby's development."

P4 *"When you (participant) see the photos well, okay, you say okay if it's only because I'm showing off the pregnancy, not because I'm bragging (showing) that I feel good about it (weight gain)."*

P7 *"Well, it (weight gain) means seeing myself, those changes reflected in the mirror, which I don't like very much either."*

One of the participants commented that comments made about her weight gain and appearance have affected her. The participant receives comments such as *"you're round," "you've gained a lot of weight," "you're eating too much, stop eating so much,"* which she does not like to hear. She does not like seeing herself in the mirror nor feel good about herself.

Theme: Generational Change

This theme provides data on participants' comments indicating a change in perspective or view on GWG. This theme emerged during the interviews, and I explored the differences in participants' views or perspectives on pregnancy and GWG. I identified one category under this theme: change in perspective.

Category: Change in Perspective

The seven participants discussed changes in their perspectives on GWG. One participant commented on her conversation with her mother and grandmother about their pregnancies.

P3 *"Mom's examples. You (participant) sit down with her to talk about pregnancy. "No, I asked your father for tembleque (Puerto Rican dessert) every day."*

P3 *"Oh, grandma, I sat down to talk with her, and she told me, "Oh, I was eating hot dogs the whole pregnancy, and the doctor finally scolded me. I stopped eating hot dogs, but I still eat hot dogs."*

One of the seven participants commented that times have changed. Another participant commented that there have been changes in perspective, since today's generation is more aware that there is more knowledge today than before, and that healthcare professionals now provide more information.

P1 *"People are wrong, people are very wrong, because obviously, times have changed."*

P3 *"Because before (when my mom gave birth), there was not so much knowledge. Now the professionals are giving me more, eh, more knowledge about preeclampsia, salt, um, and I don't know. I understand that yes*

P3 *"There has been a change in the perspective of the generations. I think this generation is a little more aware (conscious)."*

Two of the seven participants commented on beliefs such as "eating for two" and cravings. One participant commented that cravings are superstitions, but does not believe them. One participant commented that she does not believe the saying "eating for two" since one cannot overeat, so she did not see any changes in weight gain.

P6 *"Cravings are superstitions of people from the past, that it's the baby, and they have to be fulfilled because otherwise you get a stye."*

P7 *"I've heard a lot (laughs) about eating for two (laughs), but no, I haven't believed it (eating for two) completely because, well, you know that you can't overdo it and then not see those (weight gain) significant changes."*

One of the seven participants commented that these beliefs are passed on from generation to generation. Still, they are not medically proven data since today's science is more advanced, and the things said before having been proven false.

P7 *"The information that there was before, well, it's been updated. Science is more advanced. There's much more technology. And things that were perhaps said before have now been proven to be untrue. Like eating for two (she says it jokingly and laughs)."*

P7 *"Well, not all of that information is true. That, before passing on the information, because I feel it's somewhat repetitive, the saying, "Eat for two, eat whatever you want". Well, it's something that's passed down from generation to generation, but it's not necessarily information certified by a doctor."*

Summary

In this study I explored the sociocultural factors that influenced EGWG for pregnant women living in Puerto Rico. This study provided insight into mothers' experiences with GWG and the sociocultural factors that influence GWG in Puerto Rican women. The overarching themes that emerged from the collected data were: (a) nutrition, (b) beliefs, (c) knowledge, (d) support systems, (e) healthcare provider, (f) effect of weight gain, and (g) generational change. The results of this study show that several social and cultural factors influence GWG in Puerto Rican women. Many of these factors

are intertwined and affect the decisions and lives of the participants. The factors identified influence how participants view themselves, view pregnancy, and view GWG, as well as their diet, health, and health care decisions. These factors can have adverse effects on pregnancy outcomes, the mother, fetus, and the woman's emotional or psychological health. The issues identified in this study can be used to develop education for health professionals and interventions, as well as education for pregnant women and their families, according to the specific needs of this population. In Chapter 5, I will discuss the results of this study in more detail and how the findings can be used to develop education for health professionals and interventions and education for managing GWG for pregnant women and their families.

Chapter 5: Discussion, Conclusions, and Recommendations

I explored the sociocultural factors influencing EGWG in Puerto Rican women. Researchers in various countries have investigated GWG and EGWG, along with the sociocultural factors that contribute to EGWG, using qualitative and quantitative methodologies. However, there are limited studies on EGWG in Puerto Rico. Studies have been conducted with Puerto Rican women in the United States in which acculturation influences their beliefs, decisions, health decisions, access to health services, and nutrition. Furthermore, these studies often include Puerto Rican women within broader groups of Hispanic women from other countries, treating Hispanic and Caribbean women as a homogeneous population despite differences in culture, health beliefs, and practices, even if they share similar roots. Therefore, this study seeks to answer the following research question: What sociocultural factors influence EGWG for pregnant women living in Puerto Rico? This study is important because it provides insight into the experiences of Puerto Rican women with GWG and the factors that influence EGWG during pregnancy. Using content analysis, seven overarching themes emerged from the data analysis: (a) nutrition, (b) beliefs, (c) knowledge, (d) support systems, (e) healthcare providers, (f) effects of weight gain, and (g) generational change.

In Chapter 5, I provides a summary and interpretation of the study's findings. I also discuss the study's limitations, recommendations, and implications for social change.

Summary of Findings

Adequate weight gain during pregnancy is necessary to achieve positive pregnancy outcomes. This study highlights participants' experiences, challenges, and

concerns about GWG during pregnancy. The results indicate that social and cultural factors are intricately interwoven throughout various aspects of their lives, with each exerting mutual influence, making it difficult to analyze them independently. This study determines the impact of these sociocultural factors on participants' GWG. The social factors are also influenced by the participants' culture and beliefs, impacting the participants' nutrition, weight gain, self-care, healthcare decisions, and emotional state.

Interpretation of Findings

Adequate weight gain during pregnancy is necessary and a priority in the care of pregnant women for healthy fetal growth and development and prevention of short- and long-term maternal and infant complications (Fletcher et al., 2017). Among the factors associated with EGWG are sociocultural factors. According to the literature, socioeconomic and cultural factors influence women's attitudes, knowledge, beliefs, perceptions, and health behaviors related to GWG (Lindsay et al., 2019). There is little literature in Puerto Rico on the sociocultural factors that influence EGWG in Puerto Rican women.

The results of this study suggest that several sociocultural factors influence EGWG in Puerto Rican women. These findings support those of studies conducted by Lindsay et al. (2019) and Fletcher et al. (2018) on Latina women in the United States. Among the social factors affecting the participants' nutrition and food choices, including their weight gain, are the costs of healthy and organic foods and the limited availability of organic foods. This finding is consistent with several studies that found that various social and cultural factors can influence nutrition during pregnancy, acting as facilitators

or barriers to a healthy pregnancy. The literature mentions the multifactorial influence on the nutrition of pregnant women, such as socioeconomic status, income, limited access to nutritious foods, and food security, identifying them as barriers to healthy nutrition and adequate GWG (Fathnezhad-Kazemi & Hajian, 2019; Fletcher et al., 2018; Hashmi et al., 2018; McDowell et al., 2018; Ramírez-Martínez & Restrepo-Mesa, 2021; Vanstone, 2020; White & Davis, 2021).

This study findings demonstrate that several sociocultural factors influence EGWG gain in Puerto Rican women; these factors cannot be analyzed separately because they are closely intertwined. In this study, the participants' support systems (family, colleagues, or partners) have a facilitating influence or are barriers to adequate GWG. The cultural beliefs that view GWG as normal, eating for two, and eating without limits influence the women's support systems. Lindsay et al (2019) mention the belief that the family of Latina women in the United States and support groups reinforced the belief in the freedom to eat and the social and cultural belief of pampering women with food during pregnancy. These findings are also similar to those of the study by Hashmi et al (2018) in which migrant women at the Myanmar-Thailand border believed that during pregnancy, they are free to eat what they pleased.

The study findings also reveal a social and cultural belief in serving large food portions, as mentioned in Chapter 4 under the themes Nutrition, Beliefs, and Support Systems. Also, the preparation of the foods they consume by others creates their dependence, the offer of unhealthy food or that they want to avoid during pregnancy influences the woman's diet and decisions regarding her diet, leading to EGWG. This

finding is similar to the study conducted by Higgibottom et al. (2018) with pregnant Chinese women in Canada, in which they found that family support affects the ability of pregnant women to make decisions related to their diet and to implement nutritional or health practices and the food consumed. These findings are similar to the studies conducted by Goodarzi-Khoigani et al (2018) with Iranian women, in which they found that family, support, sociocultural norms, and context influence the health behaviors of pregnant women (McDonald et al, 2020; White & Davis et al, 2020).

The mother's weight gain is also related to the baby's weight gain, so the more weight the mother gains, the healthier the baby. Therefore, the support groups influenced the mothers' food intake by pressuring them to eat so that the baby would gain weight. There is social and cultural acceptance of weight gain during pregnancy: the more the woman gains, the healthier the baby will be (Arnedillo-Sanchez et al, 2022; Lindsay et al, 2019). Fletcher et al. (2019) in their study with Latina women in the United States found that social support from the family can be a barrier or facilitator in health decisions during pregnancy.

In a study conducted by Hashmi et al. (2018) with pregnant migrant women at the Myanmar-Thailand border, migrant women related cravings to the baby. Like Latin women, they consume what they want because "the baby wants it." The results of the study by Hashmi et al. (2018) agree with the findings of this study, in which the women's support systems associated cravings with the baby. In addition, similar to the studies carried out by Fletcher et al. (2018) and Lindsay et al. (2019) with Latina women in the

United States, support systems encourage women to eat, and cravings are indulged, these being unhealthy foods, for fear that something negative would happen.

The Puerto Rican diet is a high-carbohydrate diet composed of an intake of rice and sweets in addition to an intake of starches and sweetened beverages, and a low consumption of fruits and vegetables (Riseberg et al., 2021). In this study, participants consumed foods high in carbohydrates and starches, such as rice, plantains, mofongo, breadfruit, fried foods, viands, bread, sweets, and sugary juices. These foods are high in carbohydrates that, if not consumed moderately, can affect weight gain during pregnancy. Although the literature review does not mention findings in the literature on the effect of Puerto Rican nutrition or diet, this finding contrasts with the results of the study conducted by Guilloty et al. (2015), in which researchers concluded that the cause of EGWG was due to the high consumption of sugary juices. Therefore, these results indicate the need for future research on Puerto Rican nutrition and diet and their influence on GWG in Puerto Rican women.

The findings of this study showed that women had varying or minimal knowledge about the recommended weight gain during pregnancy, or did not remember the recommended amount of weight gain mentioned by their health care providers. Vanstone et al. (2017) identified the lack of knowledge about the recommendations for adequate GWG and the maternal and fetal risks of EGWG as a barrier to adequate weight gain during pregnancy. In addition, they used minimal resources such as the internet, WIC resources, and apps to obtain information about GWG and pregnancy-related topics. According to Fletcher et al. (2018), the internet and the family can influence pregnant

women's health decisions. In addition, the lack of accessibility to reliable sources of information is a barrier to adequate GWG (White & Davis et al., 2021). The participants presented knowledge about maternal complications related to EGWG. Still, they did not mention possible complications that the baby may have, although they did express fear and concern about what could happen to the baby. These findings are consistent with those of the cross-sectional study conducted by Rafat et al, (2022) in India and the qualitative research by Di Stefano et al (2021) with health providers and pregnant women in Canada in which women had some knowledge about the maternal complications associated with EGWG but little knowledge about the complications that EGWG can cause in the infant.

In addition, the participants' support systems' knowledge about GWG was based on cultural beliefs, which had both cultural and social influence on the support and advice provided, weight gain, and participants' decisions. In previous studies, family members and friends reinforced the perception or beliefs of eating without limits, pampering women with food, and cravings, as well as cultural and social acceptance of weight gain during pregnancy to have a healthy fetus (Arnedillo-Sanchez et al, 2022; Lindsay et al, 2019). These aspects influence the health, nutrition, or feeding decisions of pregnant women, which can lead to unhealthy weight gain during pregnancy, increasing maternal and fetal risks related to EGWG. Therefore, as mentioned and recommended by Lindsay et al. (2019), it is necessary to develop prenatal care, interventions, and education to alter the modifiable risks associated with EGWG.

Women's education and advice from health providers can be a facilitator or barrier to an adequate GWG. The findings of this study show that several participants did not receive advice or education on nutrition and adequate GWG during pregnancy, or they only received education in an insensitive manner when the healthcare provider observed excessive weight gain. The providers also did not provide time to ask questions during their prenatal visits due to several factors, including a lack of time. This finding is similar to those presented in the study conducted in the United States by Deputy et al. (2018) and, Nikolopoulos et al. (2018) with Spanish and Portuguese speaking Latinas in Canada in which women expressed receiving little or no education about GWG from their health providers (Deputy et al., 2018; Nikolopoulos et al; 2018) and that despite being weighed at each antenatal visit, there was poor communication with the health provider, leading women to have doubts about whether weight control during pregnancy was important to their health provider leading to EGWG (Nikolopoulos et al., 2018).

According to a study by Di Stefano et al. (2021), a lack of time due to other priorities is a barrier to educating pregnant women during their prenatal visits. A study conducted by Nikolopoulos et al. (2018) found that providers only brought up the topic of weight gain when the woman had gained weight outside of established guidelines, and they did so in a negative manner. The results of the prospective cohort study by Feng et al. (2021), in which the researchers found that the lack of education and support from the health provider is a factor associated with EGWG, also support these findings.

The findings of this study are also consistent with the findings of the Nikolopoulos et al. (2018) and Di Stefano et al (2021) studies, in that pregnant women

want to receive education about GWG, nutrition, and other pregnancy-related topics from the start of their prenatal care to be informed and avoid EGWG. In addition, they want the guidance, advice, or education received to be nonjudgmental, empathetic, respectful, and sensitive. This issue influences the woman both emotionally and psychologically, but also their GWG due to the lack of knowledge about the appropriate GWG during pregnancy (Nikolopoulos et al., 2018). This finding indicates the need for health care providers to educate women in a respectful, empathetic, nonjudgmental, and individualized manner according to the woman's needs about appropriate GWG during pregnancy, and EGWG maternal and fetal risks and complications.

The research findings also indicate that EGWG has an emotional, psychological, and self-esteem effect on the pregnant woman due to changes in body image caused by weight gain. According to Champlin et al. (2021), cultural acceptance of weight gain influences body image. Self-esteem and body image were also affected by insensitive comments from family members and health care providers, influencing how women felt about themselves and feeling judged about changes related to weight gain. These findings are similar to what was mentioned by Champlin et al (2021), that although family members and support systems pressure women to eat without limits and gain weight, on the other hand, they pressure them to watch over their weight gain and not become fat or chubby, affecting their self-esteem and self-image.

A finding of this study not found in the reviewed literature was the change in participants' perspectives regarding GWGs and cultural beliefs about eating without limits, cravings, and eating for two, passed down from generation to generation, but not

proven by science. The participants mentioned that women today are more educated and do not get carried away by these beliefs. Future studies in Puerto Rico and other countries should explore this finding to examine how advances in medicine, technology, and evidence-based education change perspectives and approaches to the care of pregnant women regarding GWG.

Application of the Theoretical Framework

This study used Nola Pender's HPM concepts to collect data and identify the sociocultural factors influencing the EGWG in pregnant women in Puerto Rico. The theory concepts used in this study were: individual characteristics and experiences, personal factors, and interpersonal factors.

Women's experiences with GWG and cultural factors influence GWG and their health practices and decisions related to GWG. The results of this study showed that there are several cultural factors, such as beliefs about eating for two, without limits, cultural acceptance of GWG, the belief that they cannot control weight gain, that the more weight gain during pregnancy, the healthier the baby, and cravings, that influenced the participants' GWG. These cultural beliefs, coupled with the social influence of family members encouraging them to eat, are influenced by the culture and social factors of serving large portions of food, which increases the influence of eating unhealthy and excessive amounts of food. In addition to the cultural factor of the Puerto Rican diet, being rich in carbohydrates, starch and low intake of fruits and vegetables, eating an unhealthy diet before pregnancy influences the participants' decisions and weight gain. These findings in the literature mention that previous health experiences, culture, and

behaviors have an influence on individuals' health decisions and can be facilitators or barriers to individuals' health decisions and behaviors (Alligood, 2018; Hashmi et al., 2018; Lindsay et al., 2019; Pender et al, 2002, 2011, 2019).

Several personal and situational factors in this study influenced the participants' GWG. According to the literature, personal and situational factors are part of the woman's context that influence their health behaviors and health decisions and behaviors (Googdarzi Khoigani et al, 2018). In this study, participants perceived their weight gain as excessive and used minimal resources to obtain information. They had some knowledge about healthy eating, but poor knowledge about the recommended amount of GWG. Vanstone et al. (2017) state that the lack of knowledge about recommended weight gain is a barrier to adequate GWG, influencing pregnant women's attitudes, beliefs, and health behaviors. Also, there was an emotional or psychological effect as some of the participants' self-esteem was affected due to their weight gain during pregnancy. Sociocultural factors and beliefs about body image and weight gain can influence GWG (Arnedillo-Sánchez, 2022).

Lack of time and living with family members also influenced their health status. This finding is similar to the findings of several studies, in which they identify a lack of time during the day and preparing healthy food and dependence on family members as barriers to adequate GWG (Champlin et al., 2021; Vanstone et al., 2020). Some mentioned that the lifestyles and diets of their families are unhealthy, influencing their diet and nutrition decisions. According to Higginbottom et al. (2018), the family can influence the women's health decisions and their ability to make decisions related to their

health and implement a healthy diet. This finding also indicates the need to educate the pregnant woman and her family about a balanced diet and weight gain during pregnancy. Also, to provide women with reliable resources on weight gain during pregnancy. In addition, economic factors also play a role, as food is expensive, especially healthy and organic foods, including fruits. This finding is similar to other studies in which the researchers identified low motivation to eat healthy food, income and socioeconomic status, little or lack of access and cost of healthy foods as barriers to gaining a healthy weight during pregnancy, (Fathnezhad-Kazemi & Hajian, 2019; McDowell et al, 2018; Vanstone, 2020; White & Davis, 2021).

Support systems may have a positive or negative influence or may be facilitators or barriers to adequate GWG. In this study, several participants received facilitating support from their support systems and health providers. In contrast, another group of participants received no education, and the support received from family members were barriers to adequate GWG. According to the literature, family support or support systems are part of a woman's context that can influence her health behaviors and decisions regarding GWG. These influence whether a woman follows a healthy diet and nutrition and can effectively ensure optimal weight gain during pregnancy.

Limitations of the Study

This study had several limitations. Qualitative studies or qualitative methodologies are flexible and holistic, where the researcher is an instrument of data collection and uses small samples. The goal of qualitative studies is to explore and understand the experiences of individuals. This qualitative study had several limitations.

This qualitative study used a sample of seven participants who met the study criteria. Data saturation was achieved when no new themes or findings resulted from the interviews. Not all centers were accessible for the study, which limits the transferability of the results to the rest of the island, Hispanic subgroups, and other countries.

In qualitative studies, there is a risk of researcher bias due to the researcher bringing their previous knowledge and experiences to the study, so the role of the researcher as a data collection instrument within the study can influence the validity and credibility of the study. As a Puerto Rican woman with experience working with pregnant women, an educator, and my own experience with GWG, I had to be careful with prejudices, assumptions, and the interpretation of data. Therefore, I developed an interview guide that I used with each participant, and I asked the questions in the same order to avoid bias and respect the interests of this research. I also used a reflective journal to reflect on my experiences during the research process to maintain the credibility and validity of the study.

Because GWG is considered a sensitive topic, I took steps to reduce the participants' discomfort. I assured them that their participation in the study was voluntary and that they could withdraw at any time. Also, I would protect their privacy and confidentiality at all times, informing them that I would not use their names in the study report and I would use pseudonyms in the transcripts.

Participants in this study self-reported their gestational weight, which can lead to an erroneous provision of the actual amount of weight gained by participants. Also, the interviews for this study were conducted in Spanish; therefore, the transcripts were

translated into English. Although the translated transcripts were read to ensure that there were no omissions in the translations, there is always a risk of loss of meaning and differences in language that can affect the understanding and interpretation of the data, compromising the study's trustworthiness (Yunus et al, 2022). Finally, there was the limitation that one of the organizations did not agree to participate in the study, in addition to the closure of some prenatal clinics. I had to explore and request authorization to use two new centers for the study.

Recommendations

Health professionals have an important role in caring for pregnant women during pregnancy and in managing and providing individualized counseling education to pregnant women about GWG (Vanstone et al, 2020). There is limited literature on the sociocultural factors that influence EGWG in Puerto Rican pregnant women living in Puerto Rico. The results of this study provided knowledge and understanding about the sociocultural factors that influence EGWG during pregnancy in this population. Because the results of this study are not transferable due to the small sample, I recommend future replication of this study using a larger sample and covering one more area of Puerto Rico.

In addition, I recommend future studies on the facilitators and barriers of adequate GWG gain in Puerto Rican women living in Puerto Rico. It is also important to consider the perception of health providers regarding GWG, which is why I suggest future studies related to the perception and knowledge of health professionals about the factors that influence EGWG in Puerto Rican women living in Puerto Rico and research that

examines strategies and interventions based on the needs and sociocultural background of Puerto Rican women.

Although the purpose of this study was to explore the sociocultural factors that influence GWG in women living in Puerto Rico, the literature review conducted for this study found several studies that recommend exploring anthropometric differences in women and whether the current guidelines established on GWG would be adequate and not lead to misclassification of women's weight gain pregnant Deniz et al (2018) Garmendia et al, (2018). According to the reviewed literature, current GWG guidelines were created for women in the United States. Still, they were not designed for use in populations in which women are smaller and thinner (Rasmussen, 2009). Therefore, they do not provide specific guidelines for shorter women and women from other ethnic or racial groups Rasmussen, 2009.

According to the results of a systematic review and meta-analysis by Deniz et al. (2018), using IOM GWG guidelines and WHO and BMI categories may lead to misclassifying pregnancy risks in Asian women because Asian women's genetic profile and anthropometric differences differ from those of Caucasian women, recommending the need for culturally diverse guidelines. The results of the study by Garmendia et al. (2018) showed that the IOM GWG guidelines are based on the Caucasian population, and ethnic factors can influence GWG, recommending adopting GWG guidelines based on the characteristics of the Chilean population to obtain better short and long-term results in pregnant women. Another study conducted in Japan by Melby et al. (2019) concluded that the GWG guidelines that represent the Caucasian-American population as a

reference lead to GWG recommendations that do not represent ethnically diverse women and may obscure other factors that influence maternal and infant health and pregnancy outcomes. Therefore, I recommend future studies to explore anthropometric differences related to ethnicity-race in Puerto Rican women and whether current established guidelines on GWG would be adequate for the management of GWG in this population.

Implications

The results of this study demonstrate the potential for positive social change in the lives of Puerto Rican pregnant women concerning GWG, showing the need for education and awareness of the sociocultural factors that influence GWG in Puerto Rican women. The results of this study also demonstrate the need to educate health professionals about the sociocultural factors that influence EGWG to create prenatal weight management strategies and interventions, as well as education programs according to the specific needs of the Puerto Rican pregnant population. Also, the need to improve the support, care, and education services provided to Puerto Rican women can improve their health decisions related to GWG, their quality of life, the results of their pregnancies, and ensure that the family is included in education. These actions will contribute to a better understanding on the part of the family about the importance of adequate nutrition and GWG.

This study will also contribute to social change by increasing the knowledge of nursing and health professionals, contributing to research on the human-environment relationship that influences GWG in Puerto Rican women. Therefore, this study will have a positive social impact by improving the health of mothers, infants, families, and

communities, improving their quality of life, and reducing health care costs related to EGWG maternal and infant complications.

I will disseminate the results of this study among healthcare professionals through professional publications or academic conferences. Sharing my study results can motivate Puerto Rican health professionals to be more aware and learn how sociocultural factors influence GWG and quality of life for Puerto Rican women.

Conclusion

I explored the sociocultural factors influencing EGWG in pregnant women and women living in Puerto Rico I conducted the study to learn about the sociocultural factors influencing EGWG in Puerto Rican women and inform health professionals about them. The results of this study provide knowledge and understanding about the sociocultural factors that influence EGWG during pregnancy in this population, as well as provide insight into the experiences of Puerto Rican women with GWG and the factors that influence it, highlighting the experiences, challenges, and concerns of the participants about GWG during pregnancy. The results indicate that social and cultural factors are intertwined in various aspects of their lives, and each exerts a mutual influence by facilitating or being barriers to healthy GWG. It also shows the impact of these sociocultural factors on the GWG and the emotional and psychological aspects of the participants. Social factors are also influenced by participants' culture and beliefs, impacting their nutrition, weight gain, self-care, health care decisions, and emotional state.

The results of this study can be used to provide care and education to pregnant women and families that meet the specific needs of this population. Providers and health care professionals must be aware of these factors and how they influence women's lives and decisions regarding pregnancy, their care, and GWG to provide care and education based on the individual needs of pregnant women. Sociocultural factors influence pregnant women's GWG, and pregnant women want to receive nonjudgmental, respectful, empathetic education and advice about GWG.

The study also includes research exploring sociocultural factors among populations in the United States, Asia, Latin America, and Canada, which shows that sociocultural factors are similar to those of Puerto Rican women. However, given the limited research on the subject in Puerto Rico, I believe it is necessary to continue researching the facilitators and barriers to adequate GWG in pregnant Puerto Rican women living in Puerto Rico, as well as strategies and interventions based on the needs and cultural background of Puerto Rican women.

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Interview study seeks pregnant women.

There is a new study about the experiences of pregnant Puerto Rican women gaining excess weight during pregnancy that could help care providers like nurses and doctors better understand the factors that influence weight gain and help their patients. For this study, you are invited to describe your experiences related to gaining excess weight during pregnancy. This interview is part of Sonia Rosello's doctoral study.

About the study:

- One 60-minute face-to-face or phone interview that will be audio recorded (no video recording).
- Participants will receive a \$20 gift card once they complete the interview as a thank you.
- To protect your privacy, the published study will not share any names or details that identify you.

Volunteers must meet these requirements:

- Pregnant women 21 years or older.
- Be Puerto Rican . Born in and living on the island of Puerto Rico or born in the United States to at least one parent born in Puerto Rico and living on the island.
- Currently living on the island.
- Lived all or most of your life in Puerto Rico.
- Receive prenatal care in a public prenatal clinic or private OB/GYN practice.
- Speak Spanish or English.

- Pregnant women with a single fetus pregnancy over 22 weeks gestation.
- Pregnant women without preexisting conditions or pregnancy-related conditions or complications.
- Gained 25 pounds or more during pregnancy.

This interview is part of the doctoral study for Sonia Roselló Aponte, a Ph.D. student at Walden University. Interviews will take place during _____.

**To confidentially volunteer, contact the
researcher:
Sonia Roselló Aponte**

Estudio de entrevistas busca mujeres embarazadas

Existe un nuevo estudio sobre las experiencias de las mujeres puertorriqueñas embarazadas que ganan exceso de peso durante el embarazo que podría ayudar a los profesionales de salud como enfermeras, médicos a comprender mejor los factores que influyen en el aumento de peso y ayudar a sus pacientes. Para este estudio, se le invita a describir sus experiencias relacionadas con el aumento excesivo de peso durante el embarazo.

Sobre el estudio:

- Una entrevista presencial o telefónica de 60 minutos que será grabada en audio (no en vídeo).
- Todos los participantes recibirán una tarjeta regalo de 20 \$ una vez finalizada la entrevista como agradecimiento.
- Para proteger su privacidad, el estudio publicado no compartirá ningún nombre o detalle que le identifique.

Los voluntarios deben cumplir estos requisitos:

- Mujeres embarazadas de 21 años o más.
- Ser puertorriqueña. Haber nacido y residir en la isla de Puerto Rico o haber nacido en Estados Unidos de al menos un progenitor nacido en Puerto Rico y ser residente en la isla.
- Residir actualmente en la isla.
- Haber vivido toda o casi su vida en Puerto Rico.

- Recibir atención prenatal en una clínica prenatal pública o en un consultorio privado de obstetricia y ginecología.
- Hablar español o inglés.
- Mujeres embarazadas con un solo feto de más de 22 semanas de gestación.
- Mujeres embarazadas sin condiciones preexistentes o condiciones o complicaciones relacionadas al embarazo.
- Aumento de 25 libras o más durante el embarazo.

Esta entrevista forma parte del estudio doctoral de Sonia Roselló Aponte, estudiante de doctorado en Walden University.

**Para ofrecerse como voluntario de forma
confidencial, póngase en contacto con la
investigadora:
Sonia Roselló**

Appendix B: Screening Questionnaire

Screening Questionnaire English

Question	Yes	No
1. Are you a pregnant woman who is at least 21 years old?		
2. Are you Puerto Rican either born in and living on the island of Puerto Rico or born in the United States to at least one parent born in Puerto Rico and living on the island?		
3. Have you lived all or most of your life in Puerto Rico?		
4. Are you receiving prenatal care in a public prenatal clinic or private OB/GYN offices?		
5. Are you at least 22 weeks pregnant and with only one fetus?		
6. Did you have any medical conditions before pregnancy or have developed conditions or complications related to pregnancy during this pregnancy.		
7. Have you gained 25 pounds or more during pregnancy?		

Screening Questionnaire Spanish

Pregunta	Si	No
1. ¿Es usted una mujer embarazada mayor de 21 años?		
2. ¿Es usted puertorriqueña, nacida y residente en la isla de Puerto Rico o nacida en los Estados Unidos de al menos un progenitor nacido en Puerto Rico y residente en la isla?		
3. ¿Ha vivido toda o la mayor parte de su vida en Puerto Rico?		
4. ¿Está recibiendo servicios de cuidado prenatal en una clínica prenatal pública o en consultorios privados de obstetricia y ginecología?		
5. Tiene al menos 22 semanas de embarazo y con un solo feto?		
7. ¿Tenía alguna condición médica antes del embarazo o ha desarrollado condiciones o complicaciones relacionadas con el embarazo durante este embarazo?		
8. ¿Ha aumentado 25 libras o más durante el embarazo?		

Appendix C: Demographic Questionnaire

1. Age _____
 - a. Educational level
 - b. Elementary
 - c. Intermediate
 - d. Highschool
 - e. College
 - f. Postgraduate
2. Marital status:
 - a. Single
 - b. Married
 - c. Divorced
 - d. Widowed
 - e. Cohabiting
3. Town of residence: _____
4. Where do you receive prenatal care?
 - a. Public prenatal care clinic
 - b. Private prenatal clinic
 - c. Ob/Gyn private practice

Demographic Questionnaire Spanish

1. Edad _____
2. Nivel educativo
 - a. Primaria
 - b. Intermedio
 - c. Secundaria
 - d. Universidad
 - e. Postgrado
3. Estado civil
 - a. Soltero
 - b. Casado
 - c. Divorciado
 - d. Viudo
 - e. Cohabitante
4. Pueblo de residencia _____
5. ¿Dónde recibe atención prenatal?
 - a. Clínica pública de atención prenatal
 - b. Clínica prenatal privada
 - c. Consulta privada de obstetricia y ginecología

Appendix D: Interview Guide

Opening Statement

Thank you for accepting my invitation to discuss your experience with gestational weight gain. My name is Sonia Roselló Aponte. I am a Ph.D. student in nursing at Walden University. In my dissertation, I aim to explore the sociocultural factors influencing excessive gestational weight gain for pregnant women living in Puerto Rico. Before we begin the interview, I want to share some things with you. I will not use your personal information or name during the interview to maintain confidentiality and anonymity. I will use a pseudonym to protect your information and name in the interview, and any study findings reports. The interview consists of 10 questions and will take 60 minutes. There are no right or wrong answers to the questions. The important thing here is to capture your experience with weight gain during pregnancy. I hope you feel comfortable telling me about your experience. I will be recording the interview because I do not want to lose anything you tell me about your experiences. I will provide you with my email and phone number if you want or need to contact me after the interview. Do you have any questions?

1. Tell me about your pregnancy.
2. What beliefs or traditions, if any, do you, your family/ community have about pregnancy and weight gain? Can you give me a specific example?
3. How do you think these beliefs or traditions influence how you care for yourself during pregnancy and your weight?

4. How do you think these beliefs and practices differ from information received from your healthcare provider?

5. Tell me about the amount of weight you have gained in this pregnancy.

What does this amount of weight gain mean to you?

How do you feel about the weight you have gained during pregnancy?

6. What information, if any, do you have about the amount of weight you are recommended to gain during pregnancy?

What resources, if any, do you use or have used to obtain information about weight gain during pregnancy? Can you give me an example of the resources used?

7. How did your eating or diet change when you became pregnant? Can you give me specific examples?

How do family or others (peers, friends, healthcare providers) influence your eating habits?

8. What does eating healthy mean to you? Can you give me specific examples?

What makes it easy or hard to do?

9. Tell me about the support received, if any, related to weight gain during your pregnancy.

How did the support received influence how you care for yourself during pregnancy and your weight?

How did the advice received from family and friends differ from information received from your healthcare provider?

10. What has your healthcare provider told you, if anything, about your weight gain and the recommended amount of weight? Can you give me a specific example?

How do you feel about how your healthcare provider managed or presented the subject of weight gain during your pregnancy?

Closing Statement

This covers the things I want to ask. Is there anything you want to add or that I should have asked? I thank you for taking from your valuable time to do this interview I will provide you with my email and phone number if you want or need to contact me after the interview.

Interview Guide Spanish

Gracias por aceptar mi invitación para hablar de su experiencia con el aumento de peso gestacional. Mi nombre es Sonia Roselló Aponte. Soy estudiante de doctorado en enfermería en la Walden University. En mi disertación, mi objetivo es explorar los factores socioculturales que influyen en el aumento excesivo de peso gestacional de las mujeres embarazadas que viven en Puerto Rico. Antes de comenzar la entrevista, quiero compartir algunas cosas con usted. No utilizaré su información personal ni su nombre durante la entrevista para mantener la confidencialidad y el anonimato. Utilizaré un seudónimo para proteger su información y nombre en la entrevista y en cualquier informe de resultados del estudio. La entrevista consta de 10 preguntas y durará 60 minutos. No hay respuestas correctas o incorrectas a las preguntas. Lo importante aquí es captar su experiencia con el aumento de peso durante el embarazo. Espero que se sienta cómoda contándome su experiencia. Grabaré la entrevista porque no quiero perderme nada de lo que me cuentes sobre tu experiencia. Te facilitaré mi correo electrónico y mi número de teléfono por si quieres o necesitas ponerte en contacto conmigo después de la entrevista.

¿Tiene alguna pregunta?

1. Háblame de tu embarazo.
2. ¿Qué creencias o tradiciones, si las hay, tienen usted, su familia o su comunidad sobre el embarazo y el aumento de peso? ¿Puede darme ejemplos específicos?
3. ¿Cómo crees que estas creencias o tradiciones influyen en cómo te cuidas durante el embarazo y en tu peso?
4. ¿En qué crees que difieren estas creencias y prácticas de la información que recibes de

- tu profesional sanitario?
5. Hábleme de la cantidad de peso que ha ganado en este embarazo.
- ¿Qué significa para usted este aumento de peso?
 - ¿Cómo se siente respecto al peso que ha ganado durante el embarazo?
6. ¿Qué información tiene sobre la cantidad de peso que es recomendada ganar durante el embarazo?
- ¿Qué recursos utiliza o ha utilizado para obtener información sobre el aumento de peso durante el embarazo? ¿Puede darme un ejemplo de los recursos utilizados?
7. ¿Cómo cambió su alimentación o su dieta cuando se quedó embarazada? ¿Puede darme ejemplos específicos?
- ¿Cómo influyen su familia u otras personas (compañeros, amigos, profesionales sanitarios) en sus hábitos alimentarios?
8. ¿Qué significa para ti comer sano? ¿Puede darme ejemplos específicos?
- ¿Qué hace que sea fácil o difícil hacerlo?
9. Hábleme del apoyo recibido, si lo hubo, en relación con el aumento de peso durante su embarazo
- ¿Cómo influyó el apoyo recibido en su forma de cuidarse durante el embarazo y en su peso?
 - ¿En qué se diferenciaron los consejos recibidos de familiares y amigos de la información recibida de su profesional sanitario?
10. ¿Qué le ha dicho su profesional sanitario, si es que le ha dicho algo, sobre su aumento

de peso y la cantidad de peso recomendada? ¿Puede darme un ejemplo concreto?

¿Cómo se siente con la manera en que su proveedor de salud manejó o presentó el tema del aumento de peso durante su embarazo?

Declaración final

Esto cubre las cosas que quiero preguntar. ¿Hay algo que quiera añadir o que debería haber preguntado? Le agradezco que haya dedicado su valioso tiempo a esta entrevista. Le facilitaré mi correo electrónico y mi número de teléfono por si desea o necesita ponerse en contacto conmigo después de la entrevista.

Appendix E: Question Classification

Appendix: Question Classification	Classification
1. Tell me about your pregnancy	Individual characteristics and experiences
2. What beliefs or traditions, if any, do you, your family/ community have about pregnancy and weight gain? Can you give me a specific example?	Individual characteristics and experiences
3. How do you think these beliefs or traditions influence how you care for yourself during pregnancy and your weight?	Individual characteristics and experiences
4. How do you think these beliefs and practices differ from information received from your healthcare provider?	Individual characteristics and experiences
5. Tell me about the weight you gained during this pregnancy. What does this amount of weight gain mean to you? How do you feel about the weight you have gained during pregnancy?	Personal factors
6. What information, if any, do you have about the amount of weight you are recommended to gain during pregnancy? What resources, if any, do you use or have used to obtain information about weight gain during pregnancy? Can you give me an example of the resources used?	Personal factors

<p>7. How did your eating or diet change when you became pregnant?</p> <p>Can you give me specific examples?</p> <p>How do family or others (peers, friends, healthcare providers) influence your eating habits?</p>	<p>Personal factors</p>
<p>8. What does eating healthy mean to you? Can you give me specific examples?</p> <p>What makes it easy or hard to do?</p>	<p>Personal factors</p>
<p>9. Tell me about the support received, if any, related to weight gain during your pregnancy</p> <p>How did the support received influence how you care for yourself during pregnancy and your weight?</p> <p>How did the advice received from family and friends differ from information received from your healthcare provider?</p>	<p>Interpersonal factors</p>
<p>10. What has your healthcare provider told you, if anything, about your weight gain and the recommended amount of weight?</p> <p>Can you give me a specific example?</p> <p>How do you feel about how your healthcare provider managed or presented the subject of weight gain during your pregnancy?</p>	<p>Interpersonal factors</p>

The concept of individual characteristics and experiences will collect data on the women's experiences with GWG and the cultural factors that influence their health practices and decisions related to GWG.

The concept of personal factors refers to the biological, psychosocial, and sociocultural factors that influence the participants' health behaviors. These questions will explore their experiences with GWG, perceptions, knowledge, and resources used to obtain information regarding dietary habits and the factors influencing them.

The concept of interpersonal factors will explore family support from peers and health professionals, and social support that may influence health decisions and determine the predisposition to adopt health-promoting behaviors influencing their GWG.

Question Classification Spanish

Question Classification Spanish	Clasificación
1. Háblame de tu embarazo.	Características y experiencias individuales
2. ¿Qué creencias o tradiciones, si las hay, tienen usted, su familia o su comunidad sobre el embarazo y el aumento de peso? ¿Puede darme ejemplos específicos?	Características y experiencias individuales
3. ¿Cómo crees que estas creencias o tradiciones influyen en cómo te cuidas durante el embarazo y en tu peso?	Características y experiencias individuales
4. ¿En qué crees que difieren estas creencias y prácticas de la información que recibes de tu profesional sanitario?	Características y experiencias individuales
5. Hábleme de la cantidad de peso que ha ganado en este embarazo. ¿Qué significa para usted este aumento de peso? ¿Cómo se siente respecto al peso que ha ganado durante el embarazo?	Factores personales
6. ¿Qué información tiene sobre la cantidad de peso que es recomendada ganar durante el embarazo? ¿Qué recursos utiliza o ha utilizado para obtener información sobre el aumento de peso durante el embarazo? ¿Puede darme un ejemplo de los recursos utilizados?	Factores personales

<p>7. ¿Cómo cambió su alimentación o su dieta cuando se quedó embarazada?</p> <p>¿Puede darme ejemplos específicos?</p> <p>¿Cómo influyen su familia u otras personas (compañeros, amigos, profesionales sanitarios) en sus hábitos alimentarios?</p>	Factores personales
<p>8. ¿Qué significa para ti comer sano?</p> <p>¿Puede darme ejemplos específicos?</p> <p>¿Qué hace que sea fácil o difícil hacerlo?</p>	Factores personales
<p>9. Hábleme del apoyo recibido, si lo hubo, en relación con el aumento de peso durante su embarazo.</p> <p>¿Cómo influyó el apoyo recibido en su forma de cuidarse durante el embarazo y en su peso?</p> <p>¿En qué se diferenciaron los consejos recibidos de familiares y amigos de la información recibida de su profesional sanitario?</p>	Factores interpersonales
<p>10. Qué le ha dicho su profesional sanitario, si es que le ha dicho algo, sobre su aumento de peso y la cantidad de peso recomendada?</p> <p>¿Puede darme un ejemplo concreto?</p> <p>¿Cómo se siente con la manera en que su proveedor de salud manejó o presentó el tema del aumento de peso durante su embarazo?</p>	Factores interpersonales

El concepto de características y experiencias individuales recogerá datos sobre las experiencias de las mujeres con la GWG y los factores culturales que influyen en sus prácticas y decisiones sanitarias relacionadas con la GWG.

El concepto de factores personales se refiere a los factores biológicos, psicosociales y socioculturales que influyen en los comportamientos de salud de los participantes. Estas preguntas explorarán sus experiencias con la GWG, las percepciones, los conocimientos y los recursos utilizados para obtener información sobre los hábitos alimentarios y los factores que influyen en ellos.

El concepto de factores interpersonales explorará el apoyo familiar, de pares y profesionales de la salud y el apoyo social que pueden influir en las decisiones de salud y determinar la predisposición a adoptar conductas promotoras de la salud que influyan en su GWG.

Appendix F: Request to Distribute Flyers

Date

Organization

RE: Permission to display flyers to recruit Participants

Dear,

My name is Sonia Roselló; I am a student in the Ph. D. in Nursing program at Walden University and am currently completing my dissertation. I am sending you this letter to request permission to post flyers at your institution, to recruit participants for my research study. The study is titled "Sociocultural factors influencing excess gestational weight gain in Pregnant Puerto Rican Women." I request that you allow me to display flyers in your organization to recruit participants who may voluntarily agree to participate in the study.

Due to the nature of the study, I hope to recruit pregnant women 21 years older who receive prenatal care services. Those interested in participating will receive an informed consent form that they will return to the investigator at the beginning of the study.

Interviews will be scheduled on dates agreed upon by the participant and the researcher. I request a room or office to provide privacy for the interviews. The interviews should last approximately one hour, and the data collected will be kept confidential. There will be no cost incurred in the study by the organization or the participants. The study is considered low-risk for the participants. However, some participants may be emotionally affected by the interviews. Therefore, if they experience discomfort, the Mental Health and Addiction Services Administration's toll-free Psychosocial First Aid Hotline (PAS) will be available at 1-800-981-0023.

It would be a privilege for me to have your institution provide me with the opportunity to carry out this study to gain knowledge about the sociocultural factors that

influence excessive gestational weight gain in Puerto Rican women. The study's results will help educate healthcare professionals and create pregnancy weight management strategies, education, and care tailored to the needs of Puerto Rican women.

Thank you for the opportunity you can give me to conduct this study. I am available to clarify any questions you may have. You can contact me through my email address sonia.roselloaponte@waldenu.edu.

Please sign the attached Letter of Cooperation and return it to me if you approve.

Sincerely,

Sonia Roselló Aponte

Request to Distribute Flyers Spanish

Fecha

Organización

RE: Permiso para exhibir folletos para reclutar Participantes

Estimado/a,

Mi nombre es Sonia Roselló; soy estudiante del programa de Doctorado en Enfermería de Walden University y actualmente estoy terminando mi disertación doctoral. Le envío esta carta para solicitar su autorización para distribuir y publicar hojas informativas en su institución, con el fin de reclutar participantes para mi estudio de investigación. El estudio cualitativo se titula "Factores socioculturales que influyen en el aumento excesivo de peso gestacional en mujeres puertorriqueñas embarazadas". Le solicito que me permita exhibir hojas informativas en su organización para reclutar participantes que voluntariamente acepten participar en el estudio. Debido a la naturaleza del estudio, espero reclutar a mujeres embarazadas mayores de 21 años que reciban servicios de cuidado prenatal. Las interesadas en participar recibirán un formulario de consentimiento informado que devolverán a la investigadora al inicio del estudio.

Las entrevistas se programarán en fechas acordadas entre el participante y la investigadora por lo que solicito una habitación u oficina que proporcione privacidad para las entrevistas. Las entrevistas durarán aproximadamente una hora y los datos recogidos serán confidenciales. El estudio no supondrá ningún coste para la organización ni para las participantes. El estudio se considera de bajo riesgo para los participantes. Sin embargo,

algunas participantes pueden verse afectados emocionalmente por las entrevistas. Por lo tanto, si alguna participante se viese afectada emocionalmente tendrá a sus disposición la línea telefónica gratuita de Primeros Auxilios Psicosociales (PAS) de la Administración de Salud Mental y Servicios contra las Adicciones en el 1-800-981-0023.

Sería un privilegio para mí que su institución me brindara la oportunidad de llevar a cabo este estudio para adquirir conocimientos sobre los factores socioculturales que influyen en el aumento excesivo de peso gestacional en las mujeres puertorriqueñas. Los resultados del estudio ayudarán a educar a los profesionales de la salud y a crear estrategias de control del peso durante el embarazo, educación y cuidados adaptados a las necesidades de las mujeres puertorriqueñas.

Le agradezco la oportunidad que me brinda de realizar este estudio. Estoy a su disposición para aclarar cualquier duda que pueda tener. Puede ponerse en contacto conmigo a través de mi dirección de correo electrónico sonia.roselloaponte@waldenu.edu.

Por favor, firme la Carta de Cooperación adjunta y me la envíe si la aprueba.

Atentamente,

Sonia Roselló Aponte

Appendix G: Webpage and Social Media Invitation



There is a new study about the experiences of pregnant Puerto Rican women gaining excess weight during pregnancy that could help care providers like nurses and doctors better understand the factors that influence weight gain and help their patients. For this study, you are invited to describe your experiences related to gaining excess weight during pregnancy.

About the study:

- One 60-minute face-to-face or phone interview that will be audio-recorded (no videorecording)
- After the interview, you would receive a \$20 Visa gift card as a thank-you.
- To protect your privacy, the published study will not share any names or details that identify you.

Volunteers must meet these requirements:

- Pregnant women 21 years or older.
- Be Puerto Rican and currently living on the island.
- Lived all your in Puerto Rico.
- Receive prenatal care in a public prenatal clinic or private OB/GYN practice.
- Speak Spanish or English.
- Pregnant women with a single fetus pregnancy over 22 weeks gestation.
- Pregnant women without preexisting conditions or pregnancy-related conditions or complications.

This interview is part of the doctoral study for Sonai Roselló Aponte, a Ph.D. student at Walden University. Interviews will take place during _____. Please message Sonia Roselló Aponte _____ or _____ privately to let them know of your interest.

Webpage and Social Media Invitation Spanish



Existe un nuevo estudio sobre las experiencias de las mujeres puertorriqueñas embarazadas que ganan exceso de peso durante el embarazo que podría ayudar a los profesionales de salud como enfermeras, médicos a comprender mejor los factores que influyen en el aumento de peso y ayudar a sus pacientes. Para este estudio, se le invita a describir sus experiencias relacionadas con el aumento excesivo de peso durante el embarazo.

Sobre el estudio:

- Una entrevista presencial o telefónica de 60 minutos que será grabada en audio (no en vídeo).
- Tras la entrevista, recibirá una tarjeta regalo Visa de \$20 como agradecimiento.
- Para proteger su privacidad, el estudio publicado no compartirá ningún nombre o detalle que le identifique.

Los voluntarios deben cumplir estos requisitos:

- Mujeres embarazadas de 21 años o más.
- Ser puertorriqueña según se define en el estudio.
- Haber vivido toda su vida en Puerto Rico.
- Recibir atención prenatal en una clínica prenatal pública o en un consultorio privado de obstetricia y ginecología.
- Hablar español o inglés.
- Mujeres embarazadas con un solo feto de más de 22 semanas de gestación.
- Mujeres embarazadas sin condiciones preexistentes o condiciones o complicaciones relacionadas al embarazo.

Esta entrevista forma parte del estudio doctoral de Sonia Roselló Aponte, estudiante de doctorado en Walden University. Por favor envíe un mensaje privado a Sonia Roselló Aponte _____ o _____ para informarle de su interés.

Appendix H: Collaboration Agreement

Dear Ms. Rosello,

I allow you to display flyers on the bulletin boards at the ___ facilities, webpage, and social media to recruit participants for the study entitled; "Sociocultural factors influencing excess gestational weight gain in pregnant Puerto Rican women."

Participation in this study is voluntary. Pregnant women over 21 years of age will be recruited for the study. We acknowledge that our organization's responsibility includes allowing the flyer to be displayed in our organization, our webpage, and social media to recruit participants and providing an office to conduct interviews.

We approve you to use our clinic as a location to conduct interviews and acknowledge that our organization will provide a room or office that provides privacy for the interviews. We also acknowledge that the study is considered low-risk for the participants. However, participants emotionally will have the Mental Health and Addiction Services Administration's toll-free Psychosocial First Aid Hotline (PAS) available at 1-800-981-0023.

I am authorized to approve the display of flyers for research in this setting and that it complies with the organization's policies. I understand that the data collected will remain completely confidential and will not be provided to anyone outside of the student's dissertation committee without permission from the Walden University IRB.

Sincerely,

Authorizing Officer

Contact Informatio

Collaboration Agreement Spanish

Estimada Sra.

Le permito exhibir hojas informativas en los tableros de anuncios de las instalaciones, página web y medios sociales para reclutar participantes para el estudio titulado; "Factores socioculturales que influyen en el aumento excesivo de peso gestacional en mujeres puertorriqueñas embarazadas." La participación en este estudio es voluntaria. Se reclutará para el estudio a mujeres embarazadas mayores de 21 años. Reconocemos que la responsabilidad de nuestra organización incluye permitir la exhibición de folletos en nuestra organización, página web y medios sociales para reclutar participantes y proporcionar una oficina para realizar entrevistas

Le autorizamos a utilizar nuestra clínica como lugar para realizar las entrevistas y reconocemos que nuestra organización pondrá a su disposición una oficina o habitación que ofrezca privacidad para las entrevistas. También reconocemos que el estudio se considera de bajo riesgo para las participantes. Sin embargo, las participantes afectadas emocionalmente por las entrevistas tendrán a su disposición la línea telefónica gratuita de Primeros Auxilios Psicosociales (PAS) de la Administración de Salud Mental y Servicios contra las Adicciones en el 1-800-981-0023.

Estoy autorizado a aprobar la exhibición de hojas informativas para la investigación en esta institución y que cumple con las políticas de la organización. Entiendo que los datos recolectados permanecerán completamente confidenciales y no serán proporcionados a nadie fuera del comité de disertación del estudiante sin el permiso del IRB de Walden University.

Atentamente,

Responsable de autorización

Información de contacto

Appendix I: Coded Data by Theme

Theme Nutrition	
P1	<ol style="list-style-type: none"> 1. "If there's a birthday party, "give me a little cake", no, they serve you the biggest one." 2. "He tells me but eat it, and I don't. Do you want soda? No, water. It's complicated." 3. "My mom tells me, help yourself a little more, that's nothing." 4. "Eat, eat your rice, your beans, your chicken." 5. "It's something like eat, it's fine, you're pregnant, a little craving is nothing." 6. "If I don't eat, the baby comes out with his mouth open, that the bile comes out."
P2	<ol style="list-style-type: none"> 1. "Fruit is very expensive right now." 2. "For example, if I want, uh, a combo of nuggets, he's going to order the biggest combo of nuggets there is. You know, for him it's not like I think that with twelve you're full, no. They have to be the 20 ones. "It's just that I don't eat that much." "So, leave them there, at some point you're going to get hungry and you keep eating them." 3. "It's like I don't take care of myself so much by eating healthy, but I try not to overeat or overindulge." 4. "I peck too much and that's it. I love to eat cookies, some kind of chips, or something like that. (laughs)" 5. "For me, eating healthy, which I've never done. I think it's like, for example, eh, eating things, salads, or eating vegetables, eating vegetables, um, less fat, and all those things." 6. "I've also been craving apple juice." 7. "I craved some almejas (clam cakes or guayaba cakes, a Puerto Rican pastry), which are sugary sweets." 8. "Crackers with butter, cheese." 9. "Strawberry Arizona" 10. "Because I don't like healthy food." 11. "I'm going to make you rice, I'll make you some chops." 12. "You have a craving, eat it, he'll be fine, forget about it, it's nothing."
P3	<ol style="list-style-type: none"> 1. "Organic food obviously costs a lot more."

2. "So, obviously, the cost, if you're pregnant, you have to save, you have to spend here, you have to modify things."
3. "Since the lady who takes care of grandmother cooks, I eat the food that she leaves prepared." (participant asked me not to identify the individuals)
4. "That's where they cook for you, you're not cooking, but they're the ones cooking."
5. "Like what happens to me or with family members, exactly. I mean, you're at home, this is what there is to eat."
6. "Because I am really exhausted from work and in addition, I am taking my, this time it was, two classes a semester and it is exhausting, because I have to be on the computer, reading, this, well, what do I do, well, they serve me and I eat (laughs).is to eat, and this is what, this is what there is."
7. "Because, well, that's where they (family)cook for you, you're (participant) not cooking, but they're (family) the ones cooking."
8. "Or maybe they tell me, Carter, when we went to such a place, I don't, better, because sometimes you get the craving to eat things, fruits, and he (partner), "no, there's no time," we're always short of time. "No, we have to stop at a fast food," you know, and continue to where we're going."
9. "The little time we've been together, well, like I told you, "There's no time" or "what do you want to eat?"
10. "French fries and pregnancy? I stop at a fast food, and it can only be French fries."
11. "The food they give me in the cafeteria, which in part is a privilege because I don't have to buy food outside because lunch is very expensive. Uh, but there the food isn't healthy for those kids either, that's rice, beans, meat, and sometimes the meats are canned, that have tons of sodium, or the fruits, those fruits are canned. So, you come to see in a certain way it's so-called healthy. They paint it as healthy on the table, on the plate that the health and education departments promote, but it's not that healthy at all. Well, but then, therefore, I don't eat properly, do you understand?"
12. "Because it's also difficult to find healthy foods here."
13. "So, I mean, it's like that. I tell mom, "No, mom, give me salad, more salad with broccoli and meat." "No, no, no, no, no, no, you have to eat rice."
14. "Well, what we have in the house is rice, beans, you know, fried things."
15. "And well, since pregnancy is once in a lifetime, they don't see it (eating without limits, eating everything) so bad, (sighs) it's difficult."
16. "She "eat" and it's that, like, our culture here is rice, beans, and meat."
17. "No, I have rice. No, give me rice and fried plantains
18. "Then they serve you a big plate of rice."

19. "I've got a craving for tostones (fried plantains), (sighs) breadfruit tostones (fried breadfruit).
20. "You know, like, well, if I want to eat something from a restaurant, what am I going to order, I'm going to order the tostones (fried plantains) (laughs). I mean, I'll ask for mofongo (smashed plantains), I order this or that."

P4

1. "Salad is very expensive."
2. "It's not within my reach. So, I really rule it out. Maybe, if I like it, I mean everything, all that eating well and the portions and all that, but many times, what you can buy is only the rice and the meat."
3. "Because it is expensive, it's cheaper to order from the Chinese."
4. "But that's complicated. Because I ate a small portion at home, but I go to mom's house and it's a big portion."
5. "During pregnancy, it's horrible, no. No, it's very difficult for me to eat healthily."
6. "I also really craved burritos, tacos, and burritos."
7. "You give me a pound of bread and I'll eat it."
8. "I'm still malamañosa (means bad eater, picky eater)."
9. "I literally don't eat anything from that plate (healthy plate) because I don't eat grains, I don't drink milk, I don't eat anything (laughs)."
10. "But no. Not vegetables, nor grains either. I don't eat any kind of grains... I don't eat cheese, or milk, or anything that.... And well, no seafood, no grains, no cheese, no milk, no ham, not anything. White rice and chicken"
11. "I don't eat eggs. I get nine half gallons of milk in the WIC, I don't drink milk. They give me beans in the WIC, I don't eat beans. I get so many cornflakes, I don't eat cornflakes."
12. "So, I really get a pound of cheese at WIC, I don't eat cheese. So, of all those benefits that they give me in the WIC, I can say that I eat the fruit.....So, it's really complicated for me because I don't eat many things. And it's not like they're telling me, look, you can substitute this for this. But yes, the usual thing if you don't eat meat, then eat beans, but I don't eat beans, and on the days that I am disgusted by meat, neither meat, nor beans, nor protein."
13. "It's difficult, because I'm trying to, you know, maintain (hold, lower) the flour, maintain (hold, lower) the salts, but you (husband) offer me something that you (husband) know I can't eat, and you know I'm going to say yes."
14. "It's hard because then, if I'm trying, having willpower not to eat fries, and I ask you (husband) for fries as I did, and you (husband) fulfill it, and every time I saw that you fulfilled it this time, you will continue to fulfill it."

15. "You (husband) know I can't eat much bread because it has flour in it because, but you're (husband) offering me bread."
16. "Well, you want to eat at 10 p.m. Yes. And we literally went out, I didn't want to eat, since I had eaten at about three in the afternoon. I didn't want to eat anything else. Um, I'm fine with that dinner. And he offered me ribs at nine o'clock at night, with french fries from _____ (she mentions the name of the restaurant) and I said yes (laughs). And you see me asleep because I was almost asleep already, eating my ribs with french fries of _____ (she mentions the name of the restaurant, laughs with a mischievous face).
17. "If I can eat, at four o'clock dinner, rice, uh, pork chop, that's the most you eat here."
18. "I'll ask for mofongo (smashed plantains)."

P5

1. "That I have everything accessible, I really don't, I have not been in need thanks to God. Um, that I have everything at hand."

P6

1. "Healthy foods are much, much more expensive than what we regularly eat."
2. "The so-called organic products they are more expensive than other products we regularly buy."
3. "Everything is expensive in terms of food."
4. "Because of the high costs, people are inhibited from buying things and prefer to pay less for them."
5. "When we go to her house, they serve me a lot, in excess".
6. "We get carried away by our preferences (by the things we like)".
7. "Because you can't stop eating the things you like."
8. "I eat viandas (Viandas, tropical tubers (yautías, yucas (casava) or ñames (yam)) considered a staple food in Puerto Rican culture)"

P7

1. "Food is expensive, and healthy food is much, much more expensive."
2. "If we look in a supermarket for things that are perhaps more organic, we see that the prices are much higher than for things that are not organic."
3. "The cost is much higher to eat healthy than to buy something on the street that's not healthy at all."

4. "They're (family, husbands' family) the same ones who sometimes offer me food or cook for me."
5. "That everything you want to eat is basically unhealthy".
6. A pizza at 11 at night isn't healthy at all
7. "It's difficult because cravings for me aren't usually healthy at all."
8. "Well, hearing it so many times (That I have to eat for two, that I have to eat so the baby gains weight) might affect when you eat and not feel that it's something bad, and then abuse a little bit more than normal, and then that's where the problem with weight."

Theme Beliefs

P1

1. "Eat, eat, it's fine, you're pregnant."
2. "People are like my mother-in-law, eat for two."
3. "I said the amount of food I eat has nothing to do with the amount of food the baby eats."
4. "It's something like eat, it's fine, you're pregnant, a little craving is nothing."
5. "If I don't eat, the baby comes out with his mouth open, that the bile comes out."
6. "Of course, rice is a must, because this guy likes rice, and I didn't eat rice."

P2

1. Whatever you want. For her (mother), that was like everything was acceptable."
2. "My mom (laughs). In her traditions, like in the old days, it was like you can eat whatever you want when you're pregnant, whatever and however much."
3. "When you get pregnant, you have the authorization to eat whatever you want."
4. "My family, as I said, my family has no reservations. My family is like everything is allowed."
5. "They (family) see me for two".
6. "That is for his baby, oh look, this is for you (her father).
7. "He (her father) brings me two; he doesn't bring me one because it has to be one for the baby and one for me".
8. "You have that authorization to eat whatever you want, because it's for two".
9. "The more I eat, the more the baby is going to be fed, chubby."
10. "I lost so much weight that I thought the baby is going to be so skinny."
11. "I don't eat, the baby will be really skinny when it's born."
12. "Put on a little more weight so the baby comes out chubby."

13. I have a craving, or I think about eating something, that's there."
14. "Sometimes I sit down and say, oh, I would eat some rice, it's not a craving, it's just that I felt like eating rice. I'll make it for you. I'll come now. I'm going to make you rice, I'll make you some chops. I'll make you this and that, and I'm, oh, but if it's not a craving, it's like they run.
15. They (family, friends, colleagues) do not limit your cravings because they say that you may get a stye."
16. "It's the baby, you have to eat it
17. "I'll get it for you because it's the baby, because the baby wants this

P3

1. "You feel like you have the green light."
2. "There are no limits, there will be no limits."
3. "In a certain way, I give the baby more food, and I give the baby, I don't know, more pounds, and then the baby can be born fatter and not come out as they say, a "lagartijito" (means a thin, skinny baby)."
4. "Go on, so that you give food to that baby so that it grows."
5. "If you say that you want something, they spoil you."
6. "Out of nowhere, I say," Ohh, I would like to eat such a thing," and someone comes out from the hallway, "Ohh, don't say that because I'm going to have to prepare it for you." I mean, I'm not even asking them for it. And during the week, they(colleagues) bring me the things that I have mentioned."
7. "The belief that if the pregnant woman wants it, you have to give it to her."
8. "And if the baby wants it, so if the pregnant woman feels that she needs it, then it has to be given to her."
9. "The baby asks for it."

P4

1. "Here they are telling me to eat a lot, no matter the quantities, or the times I eat."
2. "The baby needs to gain weight."
3. "And my friends, now that we started at college and since I was pregnant the other semester, it was, "What do you have a craving for?" (She says it is imitating classmates). We left the lab. "Okay, the one who decides what we're going to eat and where we're going to eat is you because you're pregnant, that's it."
4. "They give it to me (fulfill them), eh, they scold me, but they fulfill them (laughs).

They have always, they have fulfilled them. One was fries (french fries) with stewed chicken."

5. "When I have a craving, whatever it is, they (family) fulfill it."
6. "If you don't satisfy the pregnant woman's craving, you'll get a stye."
7. "Because if you don't satisfy my craving, uh, something is going to happen. Which I think is a stye in the eye (touches, points to eye) the stye."
8. "That if you don't satisfy the pregnant woman's craving, you'll get a stye and things like that."

P5

1. "The baby has to eat."
2. "Well, they are watching, like, have you eaten, have you given the baby food?"
3. "I sometimes wake up and they ask me, 'Did you have breakfast?'" "No, I haven't had breakfast." "Baby has to eat."
4. "I feel, I don't know, maybe they worry or something, like remember that if I don't eat, the baby doesn't consume anything."
5. "My family always please me with my cravings, the cravings I have had."

P6

1. "My mother-in-law tells me to eat, eat, eat."
2. "That I have to eat and continue eating."
3. "My mother-in-law tell me that I have to eat for"
4. "That I have to eat well, so that the baby isn't affected."

P7

1. "Eat whatever you want."
2. "That basically, because having a, well, life inside you, well, you have to eat for yourself and leave something extra (laughs) for the baby (laughs)."
3. "I have to eat so the baby gains weight."
4. " Well, the reality is that they (family) go and get it quickly because they (family) don't want to get a stye."

Theme Knowledge

P1

1. "I don't remember how much. I think the normal is 15 pounds."

2. "I didn't know that if you're overweight, you had a weight limit. I know it was 15 to 20 pounds, but the weight didn't matter."
3. "I have a nutritionist from the health insurance who tells me to eat the bars that have 70 calories when I have a craving for chocolate or an Oreo."
4. "Google... No, you look for it like this, um, like fruits to reduce swelling during pregnancy, and they give you a list. Let me see what else, um, healthy food during pregnancy."
5. " Well, my mother-in-law says eat for two."
6. " Honey, I don't want a small baby," (husband)"

P2

1. "The accepted weight for gaining weight during pregnancy is 30 pounds."
2. "I hadn't looked for any information."
3. "The more you eat, the better because you're pregnant." (Family)

P3

1. "I understand that it was approximately 20 to 25 pounds."
2. "Well, because I know that I can have preeclampsia, and that can cause harm to the baby or to me."
3. "The nutritionist, exactly, she did guide me correctly. And she told me the steps, the follow-up."
4. "I have an app called Pregnancy. That's where I read the most pregnancy news. And there they talk about nutrition. They talk about pain. You look for different topics there and you find them."
5. "They (family) have zero knowledge of the conditions and so on."
6. "They don't see any conditions, nothing at all. They see that it's healthy that I have to eat."
7. "Well, my mom, my mom is a nurse (laughs). And she also worked in labor and delivery. But, well, I don't know, it seems like she forgets. I don't know, and well, she's "eat".

P4

1. "I know that I was informed there, but I don't remember anymore."
2. "Well, when I do the body mass index assessments, Google."
3. "You have to give him food. You have to give him food, food, food, food. That no, it is not necessarily that I eat, but that I eat well. And sometimes they don't think much about it either."
4. P4 "Because they think that the fatter the better."

5. "My mother-in-law is, uh, nurse, retired. She was a supervisor, and she's the one who scolds me with food because she knows that when legs swell, this happens, and it's because of this and that. So, at least she does keep me in that you have to eat, but you have to eat this much less, more, and that."

P5

1. "Well, at the time, um, the gynecologist told me, um, not to exceed 20 pounds."
2. I have a nurse... she talked to me about nutrition."
3. "I have a nutritionistadvise me on what I have to eat and all that."

P6

1. "The most that is recommended or regularly, to gain are 25 to 30 pounds."
2. "Well, I let myself be guided by what they had already given me in the classes that were with the WIC nutritionist."
3. "I never asked the doctor or anything."
4. "They think, well, that the baby needs more from me, and they think that, that I have to eat well, so that the baby isn't affected."

P7

1. "I'm not entirely sure about that information."
2. "Well, at WIC they gave me a class, where they taught me that the most, the most, the most that is recommended or regularly, to gain are 25 to 30 pounds."
3. "When I went to WIC for the first time, they gave me some brochures. But the truth is, they didn't talk to me much about the topic either."
4. "When I went to WIC for the first time, they gave me some brochures. But the truth is, they didn't talk to me much about the topic either."
5. "And to be honest, no, I haven't read them (brochures)."
6. "I don't look for anything on weight gain."
7. "No, I haven't really sought out resources like that."

Theme Support Systems

P1

1. "Eat, eat, it's fine, you're pregnant (family)."
2. "They're (mother, mother-in-law, husband, friends) more like more aware. What you eat or don't eat."

3. "She (mother-in-law) brings, she (mother-in-law) served me lasagna like this " (Gesture with her hands a large portion), and I look, give me a smaller piece, and she says, but eat it, and I nooo."
4. "He (husband) supports me in everything thank God."
5. "I brought a little bit of ground beef with cream cheese and ground cheese, and they're taking it too, "oh, I'm going to bring that tomorrow", you know. That kind of influences, look, you're doing very well, you're eating well."
6. "Eat, eat, eat,"
7. "You (participant) have to eat a lot."
8. "They (mother, mother-in-law) don't want me to gain weight."
9. "They (mother, mother-in-law) don't want me to look fat."
10. "Don't get too fat."
11. "Well, they (family) say it's normal."

P2

1. "You have to eat a lot."
2. "You focus on eating, the more you eat, the better."
3. "My father is crazy about giving me any food he finds in the fridge."
4. " He (grandfather) comes out with a full banquet on the table."
5. "Try to give up the sodas, the chips, and the honey buns, and let's eat a little more food and give up the sweets. And as for support, I think theirs (colleagues) is super good."
6. "And when I buy it at work, they kind of forbid me from it. No, it has a lot of sugar. You can't eat that. Have a little glass, no, and they try to hide it from me."
7. "Like Janine, that's not going to happen anymore. You have to stop drinking juice if you don't want to gain weight."
8. "I try not to buy so much junk like mom says."
9. "My family, as I said, my family has no reservations. My family is like everything is allowed."
10. "Sometimes they give me honeybuns because I love honeybuns. So, they buy them for me too."
11. "Reduce. But keep eating" (Family).
12. "You haven't gained that much."

P3

1. "Well, keep going, keep going, and we're almost there."
2. "No, it's just that nobody has restricted me."
3. "The only support is that I keep gaining weight."

4. "They do not have healthy lifestyles."
5. "If I stick with the family factor, etc., well, not very good."
6. "Well, at work and at home they have spoiled me in a horrible way.... They've brought me everything (indulged in her cravings and things she wants to eat)."
7. "Because I haven't had support like that, I mean, like no, Avery, you have to stop, no, eat less. No, nothing, everything has been very pleasant. Well, keep going, keep going, and we're almost there (laughs). And I'm Oh, God."
8. "It is normal during pregnancy that a pregnant woman eats and swells."

P4

1. "Family, they are telling me all the time to eat."
2. "They (family) kind of put one more eye on you."
3. "All day long they (family) are asking me if I want to eat."
4. "My husband has been a great source of support."
5. "They serve me a lot of food."
6. "If you don't take care of yourself, you're going to be chubby."
7. "You're going to change, you're going to get fatter."
8. "They (family) think that the fatter the better."

P5

1. "Well, they are watching, like, have you eaten."
2. "I have a spectacular family that is always attentive and has helped me."
3. "I understand that it's (weight gain) normal."

P6

1. "With them (family) constantly on top of me, like one says, 'eat, eat, eat, you have to eat this, eat that.'"
2. "I feel calm and grateful to them for their support."
3. "They serve me a little and then offer me more if I want more."
4. "My family and everyone tell me no, that I am fine like this".
5. "Well, honestly, well, no support because for them, well, even though I see weight gain, my family and everyone tell me no, that I am fine like this. That what I have to think about is the baby. In other words, they don't see what I see."
6. "It's (weight gain) normal."

P7

1. "I feel that the support of my family has been the most important."
2. "They (family) have been my support and have not judged me."

3. "They (family) have been the people who have supported me the most and who have not judged me."
4. "I haven't felt judged by them but rather supported by them."
5. "If I ask them (family) for something, they go and buy it, or they advise me."
6. "But yes, that (family, family advice) has a positive influence"
7. "Sometimes my mother would go to the supermarket and tell me, "What do you of this and this and this for a snack? Do you think that you can...and we'll try it, and if not, then we'll look for something else".
8. "And hearing that you shouldn't do this, you shouldn't do that. Well, it's good to hear it from family because we know they do it in a loving way, not in a hurtful way."
9. "Stop your mouth (meaning "you're eating too much, stop eating so much"). That I have to stop eating so much".
10. "You know you're going to gain weight."

Theme Healthcare provider

P1

1. "They (HCP obstetrician) told me that it was normal, you know, 15-20 pounds."
2. "Eliminate sweets and juices (Obstetrician).
3. "Eat, eat your rice, your beans, your chicken. And me, rice, beans, and chicken every day? And me, every day? He says, well, but you can vary, but yes, but, you know, a certain amount. I'm going to refer you to the nutritionist."
4. "Not in a rough way. No, he tells me, look, you can't gain too much weight or else you'll go to the Medical Center. And me, really? But you can admit it. Yes, but not you. You know. We have to take care of mom; we have to take care of baby. A good, beautiful birth, without complications."
5. "One feels bad, and I said I am 11 to 12. I am not that fat, I said."

P2

1. "He's (obstetrician) never talked to me about that."
2. "Nothing, nothing. But that was why I was so shocked, he called my attention that it was like Hmmm, there's something weird here, when he (Obstetrician) told me, like you're gaining, you gained six pounds in a week."
3. " He (obstetrician) didn't say anything to me. He (obstetrician) just said, " Hmm, you gained six pounds in a week."
4. "No, (laughs) the only information the doctor gave me was the weight gain I had."
5. "Well, he didn't tell me anything about the recommended amount, or about the weight as such, well, it was like, he looked at me very serious like, mmm, six

pounds in a week is too much and I took it as if it's not right that I have to start cutting back on what I eat.”

6. “But it was something, it shocked me because he had never told me anything about my weight, and everyone always fights about my weight because I had never gained so much.”
7. “I think that's it, but giving me information, sitting me down and telling me you have to do this, eat this and this, no, he didn't prohibit me anything. He didn't tell me to reduce anything, not sweets, not salty foods, not anything.”
8. "He (obstetrician) just said, "You (participant) gained six pounds. I hope you (participant) don't come back next Monday with six more pounds."
9. “He just told me to try not to eat so heavy at night, but it's because of the heartburn I was having, not because of my weight.”
10. "
11. “Funny, I didn't take it the wrong way (laughs). But it was something, it shocked me because he had never told me anything about my weight, and everyone always fights about my weight because I had never gained so much.”
12. P2 "Yes and no. Yes, because one would be a little more, uh, informed. But no,
13. because I don't eat so many things."

P3

1. Because here they (obstetrician) talk to me, the professionals (obstetrician) talk about the complications in the literature, the conditions, and so on."
2. “Well, he told me that, from the beginning, he told me that the ideal was to go to the nutritionist and that I should stay with the nutritionist because there could be complications during and after pregnancy, and he mentioned to me about preeclampsia, gestational diabetes, etc. He told me to visit a nutritionist, well, in order to avoid that,
3. "They (HCP) guide (orient, counsel) me."
4. "They (Healthcare providers) don't influence me at all (laughs). I don't pay attention."
5. "But well, I don't pay attention ("lo paso por ficha"), I don't pay attention ("lo paso por ficha)."
6. “Everything went very well. It was very clear, eh, they even made the nurse made me an appointment with the nutritionist and I had the appointment that same day. Everything went really well.”
7. “He mentioned it in a very friendly way.”

P4

1. "I don't remember being told by the gynecologist or the WIC nutritionist that you (the participant) have to gain a minimum of so much or a maximum of so much per week."
2. "And, she wasn't the one to tell me, look, you have to lower the salt. You have to lower it, because I see that your feet are swollen. And I also communicated it. Look, my feet are swollen, but very swollen."
3. "Because, okay, I weigh you and sit down, or I'll take your temperature and sit down. Basically, the only thing they do there is "do you have prenatal pills, or not, how have you been feeling?" If you tell him "well", then fine, but I don't get a chance to tell her that I've had a lot of reflux."
4. "I can't ask you if the weight is right or not. Eh, if it's normal for the belly to start from here. If it's normal for it to grow from here, to grow from there. With breastfeeding and what is normal, and what is not normal, and to what extent is normal. This is the thing of not being able to ask and not receive an answer. Because I changed gynecologists for that very reason. So, I changed gynecologist, she seems to be very good, I don't know."
5. "And it's stressful, the fact that I can't ask you why you're going like this (snaps his fingers quickly in a hurry, he's going fast)."
6. "They (HCP) told me that if I wasn't going to eat a lot, I should eat many times in smaller portions."
7. "In the WIC, the nutritionist told me that, in the first four months, you (the participant) have to gain four pounds, in those four months or in those three months."
8. "As a _____ (mentions what she is studying) student I am aware, but I don't pay attention to him (obstetrician), but I'm aware. So, there are a lot of things that I know."
9. "I think they (HCP, gynecologist, obstetrician) should talk to me about, ""Look, this is normal, and this is not normal."

P5

1. "Gynecologist told me, um, not to exceed 20 pounds."
2. "The gynecologist told me, um, not to exceed 20 pounds because of the risk of preeclampsia in childbirth."
3. "She (obstetrician) explained to me the consequences of everything."
4. "I have a nurse ... and she (nurse) has been with me during the whole pregnancy process, and she (nurse) talked to me about nutrition."
5. "I have the WIC nutritionist, who advises me on what I should consume and at what times I have to eat and all that."

6. "Well, I took it very well because she was really, very respectful; she explained to me the consequences of everything. She was really, very respectful, and I have no complaints whatsoever."

P6

1. "No, she hasn't told me anything."
2. "But as far as the amount of weight that I had to gain or an approximate amount, he (the obstetrician) never told me anything about that."
3. "The only thing she (obstetrician) told me was that I had to watch my diet, but, in terms of the amount of weight I had or could gain or, even, well, an approximate, none of that."
4. "Honestly, well, I don't feel bad or good because, well, as I told you when I went to the WIC class and all that, they explained it to me."
5. "It is always good, right, to have the exact knowledge of what one (the participant, pregnant women) has or may have to gain during pregnancy."
6. P6 "And it is always good to be clear about the consequences and the complications that being overweight can cause during pregnancy."

P7

1. "Well, she's (obstetrician) never told me specifically what the recommended amount is."
2. But yes, there was one appointment where I left a little frustrated because she was very honest with me. And well, that honesty sometimes hurts, and we don't like it. But it's for the good, right, for my good and for the good of the baby. And she told me that the belly I had wasn't all baby. That the baby was down below, and that everything else, that was what I was eating, that I had to "parar la boca" (stop eating, eat less)."
3. "A little too honest about my belly, because I thought it was just growing " because the baby was bigger. Well, she (obstetrician) was so honest in telling me, "No, that's not all, baby. That's not a complete baby belly. The baby is down here," she was lower down and everything. Like, that's not the belly. That's not baby. And that (what the obstetrician said) was a little cruel of her (obstetrician), but it (what the obstetrician said) worked (laughs). Like it or not."
4. "I don't think it was the best way."
5. "No, it wasn't that I left very, very satisfied with the, with the, with the appointment. I was sad, I cried, I got frustrated because those aren't words I want to hear, but no, no, no, no, no, it did not make me happy, it made me sad."

6. " Yes. Absolutely necessary. Sometimes, though, I know they attend us a bit hastily because of time. There are many waiting; we're (pregnant women) not given that guidance because, in my case, I'm a first-time mother. I'm completely unfamiliar with this (information about the correct amount of weight gain during pregnancy)."
7. "Because by not knowing everything, all of this, because, well, it's my first-time pregnancy, I would feel more guided, more supported. I'm going to feel more confident, knowing more about the topic and not having to look for other methods to guide me."
8. "We need more information on this (about the correct amount of weight gain during pregnancy). As you can see, I don't have much information myself. And the reality is that this is a topic that isn't talked about by many professionals and is heard a lot in the hallways, but we don't know what the reality is, what we should do."

Effects of weight gain

P1

1. "But it's something that you (participant) have to fight, that's against you (participant)."
2. "Because you (participant) don't plan on gaining that amount of weight."
3. "It's true, I am chubby. But nothing you can do."
4. "Sacrifice, because you (participant) don't plan it (weight gain)."
5. "I feel worried, because my blood pressure might go up during pregnancy or I might get preeclampsia."
6. "One (participant) feels bad, and I said I am 11 to 12. I am not that fat, I said."
7. "But I felt a little bit bad. It's true, I am chubby."

P2

1. "I'm worried about staying at that weight, being very obese, and then it (weight gain) being a problem."
2. "It (obstetrician calling her attention about her weight gain) was a little bit shocking when they (obstetricians) called my attention."
3. "Painful (weight gain) So, I didn't have time to assimilate it, or to lose weight, or anything. I had lost about 10 pounds; I think it was."
4. "I don't know how to take it (weight gain), (laughs). I really don't know how to take it (weight gain) yet."
5. "I don't know if I should take it on the positive side for the baby and the negative side for myself."

P3

1. "And, I wish it (weight gain) were better. But no, I don't know, no, it's difficult."
2. "It means that I'm closer to maybe having a condition like preeclampsia or something like that during childbirth."
3. "My biggest concern is that this weight gain will affect me after pregnancy. Or that it (weight gain) will have some consequences during my delivery, right? Sometimes, complications do happen."
4. "So, but eh, eh, how do I explain it (feelings about weight gain), I know it's (weight gained) not right. Do you understand? It (weight gained) gives me a guilty conscience."
5. "And well, obviously physically, eh, emotionally, my self-esteem, do you understand me? I mean, you (participant) already know that you're (participant) going to change. But knowing that I'm gaining more than expected, well, obviously, you (participant) don't feel comfortable, self-esteem."

P4

1. "I didn't know that the weight was going to shock me so much. I thought, mentally I didn't think, well, I knew I had to gain weight, but mentally, no."
2. "Seeing that number of 26 pounds more in less than anything (so little time). Well, it's (pounds gained) kind of shocking. "
3. "The pregnancy gave me a lot of stress, and even more stress that I went from an extra small to almost a medium."
4. "Well, it (weight gained) means that I went out of the extra small line, to be a small or a medium. That small, is not bad at all (Laughs). But I, uh, the, the stress has been so much, from that radical change that I don't like it (the change)."
5. "When you (participant) look in the mirror, and you (participant) see the change, ha, (opens her eyes), well, no."
6. "You (participant) see yourself in the mirror, and from double 0 you became medium or large."
7. "It (weight gain) means that I'm chubby."
8. "Maybe taking a picture of me, if it's not saying I'm so many weeks pregnant. Not because I'm pretty, but to uh, show the baby's development."
9. "When you (participant) see the photos well, okay, you say okay if it's only because I'm showing off the pregnancy, not because I'm bragging (showing) that I feel good about it (weight gain)."

P5

1. "I am calm, enjoying my pregnancy, I feel good."

P6

1. "I was worried that the baby would be affected."
2. "I don't feel bad (about the weight gain). I don't feel bad. Honestly, I don't feel bad, but I know that, as soon as I get out of pregnancy, I have to go back to what I was doing."

P7

1. "And for me, it's (weight gain) been shocking and a bit traumatic. It's the reality, because hearing people say it (telling her she is round, that she has gained a lot of pounds) all the time isn't the nicest thing in the world. "
2. "Well, it (weight gained) means seeing myself, those changes reflected in the mirror, which I don't like very much either, because it's not just my belly. Maybe my legs and arms feel a little bigger."
3. "Well, it (weight gain) means seeing myself, those changes reflected in the mirror, which I don't like very much either."

Generational change

P1

1. "People are wrong, people are very wrong, because obviously, times have changed."
1. "Mom's examples. You (participant) sit down with her to talk about pregnancy. "No, I asked your father for tembleque (Puerto Rican dessert) every day."
 2. "Oh, grandma, I sat down to talk with her, and she told me, "Oh, I was eating hot dogs, the whole pregnancy, and the doctor finally scolded me. I stopped eating hot dogs, but I still eat hot dogs."
 3. "Because before (when my mom gave birth), there was not so much knowledge. Now the professionals are giving me more, eh, more knowledge about preeclampsia, salt, um, and I don't know. I understand that, yes."
 4. "There has been a change in the perspective of the generations. I think this generation is a little more aware (conscious)."

P6

1. "Cravings are superstitions of people from the past, that it's the baby, and they have to be fulfilled because otherwise you get a sty."

P7

1. "I've heard a lot (laughs) about eating for two (laughs), but no, I haven't believed it (eating for two) completely because, well, you know that you can't overdo it and then not see those (weight gain) significant changes."
2. "The information that there was before, well, it's been updated. Science is more advanced. There's much more technology. And things that were perhaps said before have now been proven to be untrue. Like eating for two (she says it jokingly and laughs)."
3. "Well, not all of that information is true. That, before passing on the information, because I feel it's somewhat repetitive, the saying, "Eat for two, eat whatever you want". Well, it's something that's passed down from generation to generation, but it's not necessarily information certified by a doctor."