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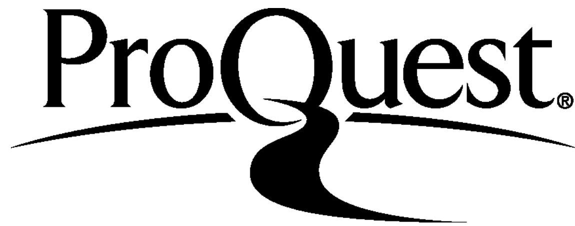

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This is to certify that the doctoral dissertation by

Stephanie Morgan Frye

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2015

Abstract

Pregnant Obese Women and Factors That Impact Their

Social and Physiological Well-Being

by

Stephanie Morgan Frye

MHA, University of Phoenix, 2010

BA, Tennessee State University, 1997

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Services

Walden University

September 2015

Abstract

For more than 50 years, researchers have recognized complications associated with obesity and pregnancy as a problem for mothers and their unborn children. Despite this recognition, the rates of obesity and mortality in pregnant women have continued to rise. Using the health belief model, the transtheoretical model of behavior change, and the social cognitive theory as the theoretical frameworks, this phenomenological study examined barriers that might hinder the health of obese pregnant women and their unborn children. Semi-structured interviews were conducted with 12 women who had a body mass index of 30 to 50, were between the ages of 18-55, and were at 20 to 30 gestational weeks. The data were coded for emergent inductive themes revealing (a) despite obesity and excessive weight gain, pregnant women believed they were healthy (b) labor and delivery decisions are hindered by uncertainty (c) pregnant women are comfortable when communication is not related to obesity, (d) pregnant obese women share the consumption of similar carbohydrates, (e) public rejection or support is influenced by self-concepts, (f) pregnant obese women believe that providers and the public treat them differently, (g) obesity and excessive weight gain is expected during pregnancy, and (h) stress and life circumstances are related. These findings promote implications for positive social change through the awareness that some pregnant obese women do not believe that they are obese, unhealthy, or prone to disease, and they do not view their weight as a health issue. Although further research is needed, these findings may aid providers and clinicians regarding awareness of factors that might hinder weight loss and the overall health and well-being of obese pregnant women and their children.

Pregnant Obese Women and Factors That Impact Their Social and Physiological Well-Being

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Stephanie Morgan Frye

MHA, University of Phoenix, 2010

BA, Tennessee State University, 1997

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Health Services

Walden University

September 2015

Dedication

I would like to take the opportunity to thank Dr. Raymond Thron for sharing his knowledge, assistance, guidance, and expertise in guiding my doctoral research project. Dr. Thron, who was one of my first professors as I began the doctoral program, made an everlasting impression upon me because of his persistent engagement with the students, his knowledge of the subject matter, and his eagerness to share with beginning doctoral students, the level of expected accountability as a scholar. I have never forgotten his level of exceptional wisdom and experience. I am fortunate to have been able to work closely with Dr. Raymond Thron in the completion of my dissertation. In addition, I am also appreciative to Dr. Carla Riemersma and Dr. Madgeline Aagard for agreeing to serve on the committee, for sharing their expertise, and for making contributions to this study. With sincere gratitude, I thank each of you for your dedication to one of the most important milestones in my lifetime. I am eternally grateful to all of you. The journey of a thousand miles began with one single step.

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I would like to acknowledge the faculty members at Walden University for their assistance and guidance in helping me to reach this point in my academic career. The exceptional academic standards and expectations at Walden University demonstrate the highest level of required academic performance, honesty, and integrity, which is an expectation that I hold sincerely as a student of Walden University. A special thanks to the women in this study for your patience, honesty, and willingness to share your experiences. May the health and well-being of pregnant obese women and their children around the world, be understood, embraced, and enhanced by your contributions to this study. I would like to thank my family members and friends for their support and patience during my doctoral studies. I would like to dedicate this study to my late mother who assured me that I have been given the resources necessary to achieve anything possible, and to my father for his enduring support of my academic endeavors throughout my lifetime.

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Chapter 1: Introduction to the Study

Introduction

According to Dodd, Grivell, Crowther, and Robinson (2010), obesity is the sixth risk factor related to poor health and multiple complications such as hypertension, diabetes, and cardiovascular disease. In the 1990s, the prevalence of obesity in pregnant women rose from 10% to 19% in the 2000s, and a body mass index of greater than 30 was expected to be common in pregnant women by 2010 (Khazaezadeh, Pheasant, Bewley, Mohiddin, & Oten-Ntim, 2011). The American College of Obstetrics and Gynecology (2013), concluded that over half of pregnant women in the United States were overweight or obese, which far exceeded the percentage in the early 2000s. These incidences of obesity have had an impact not just the United States, but have been occurring at alarming rates around the world (Schmied, Duff, Dahlen, Mills, & Kolt, 2011). When pregnant women are overweight or obese with a body mass index of 25 to 30, the health of the mother and the unborn child declines (Knight & Wyatt, 2010). Approximately two thirds of women in the United States who are of childbearing age were found to have a body mass index of 25 to 30 (Hillmier et al., 2011).

Obesity is rapidly becoming one of the most common risk factors among pregnant women (deJersey, Ross, Himstedt, McIntyre, & Callaway, 2011; Khazaezadeh et al., 2011; Knight et al., 2010; Ramachenderan, Bradford, & McLean, 2008). According to Khazaezadeh et al. (2011), in 2007 at least 27% of obese pregnant women died during labor and delivery and their deaths were related to complications associated with being obese. Complications increase for obese mothers and their infants during their pregnancies and

after delivery. These may include: macrosomia, which may be a precursor to juvenile diabetes mellitus, mother and infant mortality, difficulty assessing the fetal heart rate, infants likely requiring cardiopulmonary resuscitation, extended hospital stays, the development and continuation of gestational diabetes mellitus, hypertension, and renal failure (Furber & McGowan, 2011). High-risk pregnancies are prevalent among one third of obese pregnant women (deJersey et al., 2010). Due to the prevalence of obesity during pregnancy, providers of obstetric services are required to document interventions used to reduce the risks associated with obesity and pregnancy (McGlone & Davies, 2012). However, despite the need for additional care and treatment, obese mothers continued to receive inadequate education, care, and services. According to a study conducted by Ferrari, Siega-Riz, Evenson, Moos, and Carrier (2013), pregnant women who were overweight or obese, complained that they were either not provided dietary advice, or the advice was not individualized for them. Pregnant women that are not overweight or obese complained that dietary guidelines were not provided, constantly changing, and overwhelming. Participants in the study also complained that they had to request advice about physical exercise or they were not given any advice about physical exercise at all. When parents of infants are obese, those infants are likely to become obese at some point in their lifetime. Serious health problems related to overweight and obesity include sleep apnea, coronary artery disease, Type 2 diabetes, hypertension, hyperlipidemia, respiratory problems, and death (National Heart, Lung, and Blood Institute, 2009). While hypertension and gestational diabetes usually resolves after delivery, obese women are at risk of developing high blood pressure and diabetes in the future (Centers for Disease Control and Prevention [CDC], 2014).

According to Knight and Wyatt (2010), today the notion persists that obesity during pregnancy is an expected norm. According to Hull, Montgomery, Vireday, and Kendall-Tackett (2011), 18% to 38% of American women who were pregnant were also obese, and in 2011, 1 in every 3 women was obese. Contributing factors to high rates of obesity included a sedentary lifestyle, heredity, unhealthy cultural diets, a lack of physical activity, and the consumption of energy dense foods. Among men and women of all age groups, diets high in fats are common in the United States (Bourdeaudhiji, Stevens, Vandelanotte, & Brug, 2007). Women who are considered to have high-risk pregnancies may experience complications related to maternal obesity that can lead to complications later in life for the fetus such as childhood obesity and diabetes (deJersey et al., 2010). A common complication during pregnancy is preeclampsia in obese women and can result in premature labor and delivery.

Communication between providers and obese pregnant women has historically been poor and embarrassing and may pose barriers to effective treatment, related to the sensitivity of the subject and the fact that some providers may have personal issues with being overweight or obese (Schmied et al., 2011). Experiences of obese pregnant women regarding treatment, thoughts, and beliefs are important in understanding the individual needs of this population and effective ways to manage their overall health. Management of the complications associated with obesity and pregnancy are critical to the health and well-being of the mother and the unborn child. Providers should strongly consider developing specific plans of care and treatment options that would tailor the care to each individual. According to Morin and Reilly (2007), providers have a fear of counseling

and educating obese pregnant women related to the sensitivity of the subject and the poor level of understanding and acceptance. Participants of the study concluded that they believed that their provider delivered quality care but failed to address the issue of obesity and the complications associated with it (Morin & Reilly, 2007). The ability to understand clinical education and management guidelines is imperative to positive clinical outcomes. Kumar et al. (2010) concluded in a study in 2003 that below basic literacy affected 90 million Americans and 110 million had poor numeracy skills. A poor understanding of health education by providers and continued unhealthy behaviors will result in poor clinical outcomes. Providers are more likely to experience difficulty in obtaining positive clinical outcomes when the patient fails to understand his or her health complications.

Background

The CDC (2012), concluded that over one third of U.S. adults were obese. Tennessee, along with many other southern states, has the highest rates of populations that were overweight and obese, and African Americans were ranked among the highest of all other groups (Aki & Ahmad, 2011). Contributing factors to obesity rates in Tennessee included diets high in fats, excessive intake of fried foods, smoking, lower educational levels, poverty, and physical inactivity (CDC, 2012). Obesity affects racial and ethnic groups differently. As seen in Table 1, African Americans had the highest rates of obesity at 49.50%, Mexican Americans had an obesity rate of 40.4%, Hispanics had an obesity rate of 34.3%, and European Americans an obesity rate of 34.4% (CDC, 2012). According to MacDorman, Hoyert, and Matthews (2013), the rates of infant

mortality declined between 2005 and 2010 by 20% in four southern states: North Carolina, South Carolina, Louisiana, and Georgia. In comparison, infant mortality rates across the United States have remained higher than most other developed countries in the world (Macdorman, Hoyert, & Matthews, 2013).

Table 1

Obesity Rates for Adults in Tennessee in 2012

Racial/Ethnic group	Percentages
African Americans	49.5
Mexican Americans	40.4
All Hispanics	39.1
Non Hispanic Whites	34.3

Note. Tennessee had a population of 6,456,243 in 2012. Adapted from "Adult obesity facts" by Centers for Disease Control and Prevention, 2012a. Retrieved from http://www.cdc.gov/obesity.data/adult

Some of the rates of infant mortality are related to obesity during pregnancy. According to Nohr, Vilamor, Vaeth, Olsen, and Cnattingius (2102), mothers who gain excessive weight during pregnancy are more likely to have adverse pregnancy outcomes due to excessive fatty tissue. The first 28 days of infant death is known as neonatal mortality. Post neonatal mortality is death that occurred after 28 days of life but before the first birthday, and neonatal death is death that occurred in the first year of life. According to Nohr et al. (2012), the rates of infant mortality are 2.9 per every 1000 births. There were 3,481 infant deaths reported in a study by Nohr et al. (2012), of normal weight mothers, overweight mothers, obese mothers, and extremely obese

mothers. Of the mothers surveyed in the study, 2,215 of the infants died within the first 28 days, while 1266 were post neonatal deaths. All of the deaths occurred before the first year of life. Infant mortality rates increased among obese pregnant women. The rates of neonatal death among normal weight mothers' was 2.6, overweight mothers' 3.3, obese mothers' 3.7, and extremely obese mothers' 5.7 (Nohr et al., 2012). Early neonatal death has been associated consistently with maternal obesity (Ramachenderan et al., 2008). Neonatal death at 28 weeks gestation was 4 times more likely in nulliparous women, than in women of normal pregnancy weight. In addition, infants born to obese mothers were more likely to die within the first year than infants born to mothers of normal weight (Ramachenderan et al., 2008).

Medical costs associated with the treatment of obesity in the United States were $147 billion in 2008 (CDC, 2012). The cost of health care per obese person is $1,429 higher than the cost for persons of normal weight (CDC, 2012). There are no exact numerical figures given to date that would verify the actual dollar amount. However, according to Finkelstein, Trogdon, Cohen, and Dietz (2009), the CDC estimated that the cost to treat obese persons was 42% higher than for persons of normal weight.

As seen in Table 2, the length of stay after delivery for overweight, obese, very obese, and extremely obese women was higher in comparison to normal weight women (Chu et al., 2008). Pregnant women with higher than normal body mass indexes required more services, such as contact with the obstetricians, obstetrical ultrasounds, additional prenatal testing, and prenatal physician visits (Chu et al., 2008). Increased hospital stays in women with higher body mass indexes at the time of delivery were related to cesarean

deliveries and other complications and conditions. The prevalence of obesity increased in all adults regardless of their income and education levels between 1988 to 1994 and 2007 to 2008 (CDC, 2012). As the rates of obesity continue to climb in Tennessee, the rates of obese pregnant women are expected to continue to rise (CDC, 2012). At least 60% of pregnant women were above normal weight, and only 30% of pregnant women gained weight according to the Institute of Medicine guidelines (Chu et al., 2008). Effective management strategies are critical to providing adequate care for obese pregnant women.

Table 2

Increased Hospital Stay for Overweight and Obese Pregnant Women Versus Normal Weight Women

Racial/Ethnic group	Percentages
African-Americans	49.5
Mexican-Americans	40.4
All Hispanics	39.1
Non-Hispanic Whites	34.3

Note. Adapted from "Association between obesity during pregnancy and increased use of health care," by S. Chu, D. Bachman, W. Callaghan, E. Whitlock, P. Dietz, C. Berg, M. Rosetti, F. Bruce, & M. Hornbrook, 2008, *The New England Journal of Medicine, 358*, p. 1444-1453.

Problem Statement

Obese pregnant women have greater risks of health complications, which may extend over their lifetime (Dodd et al., 2010). Multiple social and physiological factors impact their overall health and well-being. Maternal obesity has become increasingly common and contributes to maternal and fetal mortality (Dodd et al., 2010).

Complications such as hypertension, diabetes, kidney disease, and cardiovascular disease are some of the contributing factors to poor maternal and fetal health (Dodd et al., 2010). Physiological complications common in obese pregnant women are sleep apnea, cardiac output increase related to the amount of adipose (fatty) tissue, and increased abdominal pressure, gastric reflux, and hiatus hernia (Morin & Reilly, 2007).

There is a need to address adequate care and disease management of obese pregnant women. Providers fail to effectively manage multiple problems that hinder the health of the mother as well as the unborn child. Such knowledge, awareness, and attention to these issues are important for not only providers, but families, employers, and the public. An understanding of the barriers that hinder the health of obese pregnant women may contribute to the well-being of the mother and the unborn child and help decrease the rates of mortality related to obesity complications. According to Morin and Reilly (2007), overweight and obese women were 40.2% more likely to be overweight or obese prior to pregnancy. According to Sutin and Terraciano (2013), scrutiny, discrimination, and negative reactions to persons who are overweight or obese increase their potential for weight gain. Sutin and Terraciano (2013) found that persons who were overweight or obese were 2 times more likely to gain weight, and obese persons were 3 times more likely to gain weight after being faced with negative attitudes and discrimination. Such experiences have been shown to increase the production of opioid cortisol, a stress hormone in the body that increases the desire for energy dense foods. This cyclic activity is a precursor to obesity (Sutin & Terraciano, 2013). The importance of providers understanding the numerous factors that contribute to overweight and

obesity will be helpful in the elimination of this epidemic. According to Schmied et al. (2011), at least 22% of pregnant women were obese in 2010 in the United States. These figures support the need for increased awareness of the need for additional maternal services involving adequate treatment, education, and knowledge.

There exists a gap in the literature due to the fact that few studies have been conducted related to the social and physiological difficulties faced by obese pregnant women. Such difficulties may hinder their ability to lose weight that is needed to improve the overall health of the mother and the unborn child. Hopefully this research will be used to extend the body of knowledge related to the assumption that there are multiple factors that hinder the overall health and well-being of obese pregnant women. Some of the common experiences faced by obese persons are poor self-esteem, increased susceptibility to depression, physical and verbal harm, weight discrimination, poor personal relationships, disparities in employment, and poor health care delivery (Sutin & Terraciano, 2013).

Purpose

The purpose of this phenomenological qualitative study was to explore the experiences shared by obese pregnant women, their poor health, common co-morbid conditions, social inequalities, negative perceptions, and discrimination. This research was intended to address the gap in past and current research related to the broad range of issues that impede the health and longevity of obese pregnant women. This study is important in understanding their lived experiences and knowledge of the potential complications and consequences associated with being obese, the need for providers to

manage disease, the discomfort associated with providers addressing the impact of their health associated with obesity, the lack of recognition of the social issues that they face, and the need for consistent treatment of their co-morbid conditions. Obese pregnant women are likely to have complications such as hypertension, gestational diabetes mellitus, renal failure, cardiac complications, cancers related to obesity, mental decline, and high infant and maternal mortality rates (Hillemier et al., 2011). Women who are obese during pregnancy have a tendency to have been overweight prior to conception. Additional factors contributing to obesity are a parental history of obesity (heredity), unhealthy dietary management, diabetes, and a lack of physical exercise.

Research Questions

The central research questions were as follows:

RQ1 - What have obese pregnant women experienced regarding their health, pregnancy, and discrimination?

RQ2 - What knowledge do obese pregnant women have regarding poor health implications related to being obese and pregnant?

RQ3 - What views do obese pregnant women have regarding the health of the unborn child?

RQ4 - What advice about obesity and potential fetal and mother complications did providers give obese pregnant women?

RQ5 - What barriers such as embarrassment, shame, or guilt exist and prevent obese pregnant women from openly communicating with providers?

RQ6 - How has obesity and pregnancy impacted the daily routines, relationships, jobs, and public perceptions of obese pregnant women?

RQ7 - Is obesity during pregnancy a normal expectation based upon the experiences of obese pregnant women?

Theoretical Framework

The health belief model was developed by social psychologists in the 1950s to determine why people rarely participate in disease prevention programs (Rimer & Glanz, 2005). The readiness of people to act upon health and disease prevention is based upon the perception of disease susceptibility and individual views about the benefits of avoiding disease and poor health. There are six constructs that influence people's perceptions to act, prevent, screen, and control illness and disease. The constructs are perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cue to action, and self-efficacy (Rimer & Glanz, 2005). The motivation of obese pregnant women is the focal point to improving maternal and fetal health. I have referenced the health belief model to address behaviors that have an impact on the health of obese pregnant women.

The health belief model was used in this study to examine beliefs that obese pregnant women share about obesity, health problems, and maternal and fetal mortality. This model was also used to determine individual awareness of the severity of obesity and complications that may last a lifetime. According to Rimer and Glanz (2005), if obese pregnant women do not feel ill, they may not believe that medical treatment is needed.

According to Sui, Turnbull, and Dodd (2012), adverse health effects are related to being overweight and obese in pregnant women. The psychological mechanisms that hinder healthy habits are unknown. Sui et al. (2012) concluded that 75% of the participants recognized that being overweight or obese is related to pregnancy and childbirth complications. At least 58% of the participants had minimal knowledge of neonatal health needs. The participants stated that barriers to change included limited time to engage in physical exercise and healthy diets. At least 91% of the participants stated they would make behavioral changes if they believed they would feel better, although at least 45% were not sure that they could achieve it.

Simple solutions to achieve weight loss have been consistently stressed over time, such as engaging in physical exercise and maintaining a healthy diet (Sapp & Weng, 2007). In developed countries such as the United States, these suggestions are not easily accomplished. Foods are affordable and meet demand; however, some of the factors that reduce motivation are current conveniences such as powered modes of transportation, the lack of nutritional knowledge, and nutritional retailing and production. Knowledge and participation in healthy food choices enhance healthy nutritional behaviors (Sapp & Weng, 2007). Factors that impact the psychosocial process are food consumption and personal beliefs about foods. According to Sapp and Weng (2007), research using the health belief model, concluded that perception and healthy diets predict dietary quality and beliefs, while using the social cognitive theory, personal dietary expectations and outcomes impacted food choices. Personal perceptions about what is considered a healthy diet determines beliefs about what is healthy, while personal dietary expectations,

such as beliefs that a particular food does not cause weight gain, determines actual outcomes predicts food choices.

This phenomenological inquiry was used in this study to identify the procedures, methods, and philosophical lived experiences of obese pregnant women over an extended period. This research explored meaningful relationships and patterns that are common while avoiding personal biases and experiences (Creswell, 2009). In this epistemological phenomenological study, participants openly shared their experiences and had the opportunity to educate both providers and the public.

The theoretical framework of this phenomenological approach is related to the link between social and physiological factors and obesity. According to Hull et al. (2011), there is a connection between psychosocial symptoms and obesity. Bringing awareness to the experiences of obese pregnant women is an important issue to address with the hope of achieving positive treatment outcomes. Life stressors, discrimination, public scrutiny, shame, and negative perceptions that stimulate opioid release are also associated with the inability to lose weight (Hull et al., 2011).

Operational Definitions

Apgar scores: A quantification of the well-being and medical condition of a newborn. Low Apgar scores indicate neonatal seizures, cerebral palsy, and death (Chen et al., 2010).

Body mass index: The measurement of weight in relationship to height and is calculated using weight in kilograms divided by the square of height in meters (CDC, 2012).

Co-morbidity: Two or more co-existing medical conditions in addition to an initial disease or complication (Sundhi et al., 2011).

Epidemic: A sudden abnormally high number of outbreaks of disease within the population (CDC, 2012).

Gestational diabetes mellitus: Glucose intolerance that is first detected during pregnancy (Buchanan & Xiang, 2005).

Hypertension: A term used to describe high blood pressure; a person is considered to have hypertension when the readings are: systolic (top number) ≥ 140mm, and diastolic is ≥ 90 (Yoon et al., 2012).

Juvenile diabetes mellitus: Diabetes that occurs during childhood (CDC, 2012).

Macrosomia: A birth weight of more than 8 pounds, 13 ounces; an unusually large or oversized infant (Kaneshiro, 2011).

Obesity: A body mass index of 30 to 39.9 (National Heart, Lung, & Blood Institute, 2012).

Overweight: A body mass index of 25.0 to 29.9 (National Heart, Lung, & Blood Institute, 2012).

Preeclampsia: Hypertension that occurs after 20 gestational weeks and is one of the leading causes of morbidity and mortality in mothers and infants (Schlberg et al., 2012).

Risk factors: Conditions that contribute to health complications such as physical inactivity and high blood pressure (CDC, 2012).

Assumptions

There were several assumptions made in this study. Participants in the study were able to understand the scope of the study as outlined in the consent form. An assumption was that the participants had had negative experiences related to being obese and pregnant. This assumption was based upon past and current literature regarding discrimination, public scrutiny, and the continued increasing rates of maternal obesity. Additional assumptions of this study were that the participants had made unsuccessful attempts to lose weight. The participants would be willing to participate in a one-on-one interview with me. The final assumption was that this study would provide a greater awareness of multiple factors that impact the health and well-being of obese pregnant women.

Limitations

There are multiple limitations noted in this study. The demographic location of this study was a limitation as obese pregnant women in other states beyond southern states may experience vastly different cultural, dietary, and social issues that contribute to their overall condition and well-being. Another limitation of this study was that anyone who agreed to participate in this study and who met the criteria would be included. The results of this study relied upon the experiences of obese pregnant women, but they may not reflect all races and ethnicities. Other populations exist and hopefully the results of this study represent many of the common issues that impact all obese pregnant women. Another limitation of this study was purposeful samplings, which I used instead of random sampling. Participants were chosen to participate in the study based upon

information the physician's office provided and if the criteria to participate in the study were met. The experiences of pregnant women who were not obese were not investigated in this study. Post-partum experiences of the participants were not included in the research. Another limitation of this study was the inability to gather all of the views and experiences of the participants due to time limitations. The number of participants for this study was 12. Larger groups provide greater depth of knowledge, experiences, and comparison in the study of this population. How much information the participants were willing to share was a limitation as some of the participants may have been uncomfortable sharing sensitive information.

Scope

This study was limited to one obstetric practice located in Nashville and Franklin, Tennessee, and one high-risk maternal-fetal clinic with one location. These sites were chosen in Nashville and Franklin, Tennessee, because of the ease of participant accessibility and population diversity. Additional detailed requirements for this study are explained in Chapter 3.

Significance of the Study

The practical contribution of this study is to bring awareness and social change to the personal experiences and health care needs of obese pregnant women. As the rates of obesity continue to climb, the need for adequate care and services will also increase. Social change is needed related to the current standards of care, which are critical in reducing the rates of maternal and infant mortality. At least 27% of mothers and their unborn children die each year related to the effects of obesity (Khazaezadeh et al., 2011).

Obese pregnant women are faced with multiple factors that impede their overall health and longevity such as negative public assumptions, discrimination, views of being lazy and irresponsible, and feelings of shame and guilt (Sutin & Terraciano, 2013). Such social issues play a significant role in binge eating, which stimulates the release of the opioid cortisol, a stress hormone that increases the desire for palatable foods, then palatable energy dense foods stimulate the release of cortisol, resulting in a cyclic pattern that increases weight gain (Sutin & Terraciano, 2013).

According to Rogers (2004), people know what they need and what they need to do. In obese persons, doing what they know they need to do is not easily achieved due to multiple factors that impede their progress (Sutin & Terraciano, 2013). A psychosocial approach and open communication, in addition to the management of diseases and conditions, are critical factors necessary in the care and treatment of obesity. Conducive to safe hospital deliveries is the need for competent staff in adequate numbers, fetal straps (which monitor fetal heart tones) large enough to fit the abdominal girth of the mother, larger delivery beds, larger hospital gowns, and weight scales large enough to accommodate the weight capacity of obese pregnant women (Schmied et al., 2011).

According to Schmied et al. (2011), the most common concept in the method of delivery for obese women is by cesarean section. Some providers believe that there is a greater risk of maternal and fetal complications when obese women are allowed to attempt vaginal births due to the poor progression time. Some providers have reported that they are scrutinized by their colleagues when they attempt to allow their patients the option of a vaginal delivery (Schmied et al., 2011). This research contributes to the body

of knowledge of obese pregnant women and brings heightened awareness to multiple factors that impact their overall health and quality of life, in addition to personal knowledge and participation in desired delivery choices. Another intention of the results of this study was to increase provider awareness that weight loss in obese pregnant women is a complex issue that hinges upon multiple social and physiological factors.

Summary

The risk of obstetrical complications increases as the rates of obese pregnant women increases (Chu et al., 2008). There are more obese women who are becoming pregnant while there are fewer providers to care for them (Schmied et al., 2011). According to Schmied et al. (2011), providers have stated that nearly all of their patients have a BMI of 30 or greater and require an increased level of care and support. According to Mamun et al. (2011), approximately 4.00 days is the average length of stay for a normal vaginal delivery. However, providers stated that they were not able to provide the level of care that so many obese pregnant women require. There are multiple negative factors that impede the health and well-being of obese pregnant women as well as the ability of providers to care for them. Holistic care that includes treating multiple complications and the recognition of contributing factors is critical for effective management of obese pregnant women. Addressing weight reduction is critical to preventing obesity and related complications in future pregnancies. Provider awareness is necessary to address multilayered issues that require attention in an effort to begin healthy pregnancy measures. The purpose of this study was to effect social change through awareness, management of diseases, foster open communication between

providers and patients, decrease the rates of infant and maternal mortality, and bring recognition to the shame, public scrutiny, social stigmas, and the impact that such social and physiological issues have on their overall well-being. This research will hopefully be of value to the current and future research this study has been built upon.

Chapter 1 presented the background of the study, the problem statement and the purpose, the research questions used to conduct this study, the theoretical framework and reviewed the assumptions, limitations, scope, and significance of the study. Chapter 2 will outline the theoretical framework for this study and examine issues faced by obese pregnant women and the limited understanding and knowledge that exist related to their needs. Chapter 3 will present the qualitative research design, examine the criteria for participants, selection, sample size, sites where the study was conducted, research questions discussed as in Chapter 1, and the research methodology.

Chapter 2: Literature Review

Organization of the Review

The intent of this literature review is to build upon the knowledge of past and current research. This literature review is an inquiry of previous relevant studies related to the experiences of obese pregnant women. Chapter 2 is divided into multiple sections: the prevalence of obesity, common experiences faced, the development of trust between the patient and the provider, the lack of knowledge and awareness of the potential complications, inadequate care and services, denied choices, higher cost, obesity prior to conception, the percentage of overweight and obese pregnant women and their partners, negative experiences and outcomes, choosing midwives, low Apgar scores and obesity, weight loss prior to conception, and maternal complications.

Methodology of the Literature Review

The basis for this study included a plethora of research data related to the experiences of obese pregnant women both past and current. The majority of the research data were obtained through Walden University Library. The database references included the following: CINAHL Plus with Full Text, Medline with Full Text, Nursing and Allied Health Source, Google Search, CINAHL, Science Direct, LexisNexis, Thoreau, and Medline Simultaneous. For a listing of peer-reviewed journals, see Appendix B. Additional professional sources of reference included the following: The National Heart, Lung, and Blood Institute, The National Assessment of Adult Literacy, The Institute of Medicine, American College of Obstetrics and Gynecology, Nursing Times, Academic Pediatrics, Maternal Health, BMC Public Health, Midwifery,

Obstetrics and Gynecology Nutrition and Dietetics, The Society of Behavioral Medicine, The Obesity Society, and Proceedings of the Nutrition Society.

Search Terms

The search terms used to conduct this literature review included *obesity, pregnancy, obesity and pregnancy, prevalence of obesity, body mass index, disease, provider communication, midwives, acceptable pregnancy weight, rates of obesity during pregnancy, health habits, Apgar scores and the correlation to obesity, nutrition, social views, public scrutiny, gestational diabetes, and fetal distress*.

Introduction

Rapidly becoming one of the most common risk factors among pregnant women is obesity (Khazaerzadeh et al., 2011). The health of obese pregnant women is jeopardized as women who are of child-bearing age are becoming increasingly obese (Hillemier et al., 2011). The body mass index, is a calculation obtained by dividing the body weight in kilograms by the height in meters squared (Knight &Wyatt, 2010). Multiple complications will have an overall impact on the health of obese pregnant women in relationship to their well-being, such as kidney disease, renal failure, cardiovascular disease, some forms of cancers related to obesity, and diabetes mellitus (Hillemier et al., 2011). Other complications include cognitive decline, dementia, and mental illness, which are most likely to occur and resulting in adverse health outcomes when weight changes or fluctuates in midlife, such as from normal weight to overweight or obesity. According to Hillemier et al. (2011), other co-morbid conditions such as hypertension and gestational diabetes mellitus are likely to occur. Women between the

ages of 30 and 55 are at greater risk of developing heart disease or potentially suffer from a cerebral vascular accident, or death.

Eighteen to 38% of pregnant American women are usually obese according to Hull et al. (2011). Medical complications increase during pregnancy and after delivery in obese pregnant women (Fuber & McGowan, 2011). Khazaezadeh et al. (2011), conducted a study and found that 27% of obese pregnant women died during labor and delivery. Common complications experienced during labor and delivery include difficulty accessing the fetal heart rate, infants requiring cardiopulmonary resuscitation, mother and baby requiring longer hospital stay post delivery, and infant and maternal mortality. Pregnancy-related deaths among all women are defined when death occurs within 1 year of the termination of the pregnancy regardless of the place or duration of the pregnancy (CDC, 2013). Although the CDC (2013), had requested 50 states, Washington D.C., and New York City to report pregnancy-related deaths, there are no specific records of deaths among pregnant women of normal weight. The most recent data from the CDC records that in 1987, there were 7.2 pregnancy-related deaths per 100,000 live births. In 2009, there were 17.8 pregnancy-related deaths. The cause of the rise in the number of pregnancy-related deaths is unclear, however, diseases and conditions commonly seen in obese pregnant women are the most prevalent causes noted such as: cardiovascular disease, infections, endocrine, hemorrhage, hypertension, thrombotic pulmonary embolus, anesthesia complications, and cerebral vascular accidents or strokes (CDC, 2013).

A contributory factor to obesity among pregnant women is a sedentary lifestyle and the consumption of high-energy dense foods, which are foods high in fat (CDC, n.d.). Studies conducted over longer periods of time have verified that caloric intake is decreased when the energy density in foods is reduced. Fat, as an example, has high-energy density, although protein and carbohydrates provide less than one-half of energy per fat gram. Water and fiber provide minimal, if any, energy to foods (CDC, n.d.). See Figure 1.

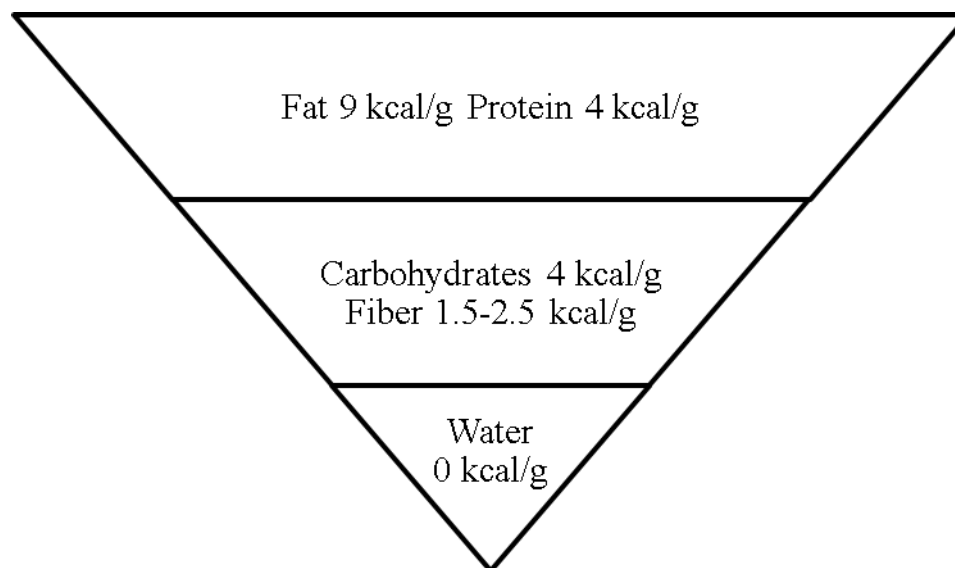

Figure 1. Energy density values of food and water.

According to Bourdeaudhuij et al. (2007), in the United States diets high in fats are common among both men and women. Another contributory factor to obesity is literacy. Kumar et al. (2010), concluded in a study that the below basic literacy rates

affect 90 million Americans. When obese mothers fail to understand factors that contribute to obesity, they are likely to remain obese in future pregnancies.

About 1 in 5 obese pregnant women who deliver are high risk and are at greater risk for medical complications such as gestational and pre-existing diabetes mellitus, hypertension, and the need for a cesarean section (Chu et al., 2008). Providers who manage obese pregnant women reported personal shame related to their own weight issues and biases related to the notion that pregnant women who are obese are not motivated or receptive to change and should be ashamed that they are pregnant (Schmied et al., 2011). Providers have also complained of complications related to poor staffing, equipment not being large enough, fetal heart tones not being easily accessible during labor, fear of both fetal and maternal death, and fear that obese pregnant women are putting their practice in jeopardy because they are high risk for serious complications (Schmied et al., 2011).

Providers have continued to fail to address co-morbid conditions that occur when treating obese pregnant women (Schmied et al., 2011). Health care providers stated that they are "in the dark" and having difficulty in determining how to support and treat this population and believe that they will not have success in caring for them (Schmied et al., 2011, p.11). The purpose of this study was to impact social change through awareness, collaboration, management of diseases, foster open communications between providers and patients, decrease the rates of infant and maternal mortality, and for providers to recognize the shame, public scrutiny, and social stigmas faced by overweight and obese

pregnant patients, and the impact that such social and physiological issues have on their overall well-being.

Theoretical Framework

Phenomenology inquires and identifies the procedures, methods and philosophical lived experiences of a small number of humans over an extended period. Researchers look for meaningful relationships and patterns that are common within the participants, while avoiding their personal biases or experiences (Creswell, 2009). Theorist Ludwig Binswanger, researched feelings of guilt associated with existentialism, or the inability to ignore the responsibility which lies within individual actions (Ghaemi, 2001). While education and knowledge from providers may be vague, providers have had to address life-threatening conditions when they arise such as preeclampsia, a condition which causes fetal distress and premature delivery, and is a condition that is commonly related to obesity (Schmied et al., 2011). Binswanger's theory in this study correlates with the feelings of guilt and responsibility that according to previous research, many obese mothers experience. Sutin and Terracciano (2013), conducted a study over a four year period, and concluded that negative public perceptions and negative feedback contribute to weight gain in persons who are overweight or obese. From the Health and Retirement Study, at least 6,157 participants were surveyed and more than half were females (58.6%), and were 50 years and older. The participants were surveyed every two years for up to four years. Weight discrimination contributes to emotional stressors and people who are already overweight or obese have a higher risk of weight gain rather than weight loss. See Table 3 which demonstrates the odds ratio for obesity discrimination over a

four year period. According to Sutin and Terraciano (2013), weight, race, sex, and age ranked highest in the percentages of the discrimination participants faced. Weight discrimination ranked 8.0% and participants either became obese (2.54), or remained obese (3.20). Age ranked 30% in obese participants related to discrimination, (.89), remained obese, and (1.31), became obese. Race ranked 10.1% in relation to obesity and discrimination, (1.18), remained obese, and (.83), became obese. Sex ranked 13.6% in relation to obesity and discrimination, (1.30), remained obese, and (1.20), became obese.

Table 3

Factors That Impact Obesity Related to Discrimination

Discrimination	Percentage	Remained Obese	Became Obese
Weight	8.0	3.20 (2.06-4.97)	2.54 (1.58-4.08)
Age	30.0	.89 (.69-1.15)	1.31 (1.03-1.66)
Race	10.1	1.18 (.78-1.80)	.83 (.53-1.30)
Sex	13.6	1.30 (.89-1.90)	1.20 (.88-1.64)

Note: Adapted from "Perceived weight discrimination and obesity", by S. Sutin & A. Terraciano, 2013, *PLOS ONE, 8*, p. 7.

Table 3 (Sutin & Terracciano, 2013), shows that the participants in the study who did not report weight discrimination were less likely to become obese. Those who were obese and reported experiences of discrimination were three times more likely to become obese. There is a relationship between Sutin and Terraciano's (2013), conclusion and Binswanger's theory. Sutin and Terraciano (2013), concluded that people who are overweight and obese and who face discrimination are binge eating in response to the release of the opioid stimulant cortisol. Binswanger's theory concluded that feelings of

guilt and overeating may be expressing feelings of loneliness and emptiness, while eating excessively provides a feeling of fulfillment (Ghaemi, 2001). Discrimination experienced from providers, family, employers, and the public will likely have an overall negative impact in relation to progress made to individual weight loss attempts.

Ludwig Binswanger had an extensive history of understanding the struggles of feelings of being overweight or being “fat” as his client Ellen West referred to herself. Binswanger was born in Switzerland in 1881, into a family who had established psychiatric and medical practices. He followed in the family tradition. He ran the Bellevue clinic after the unexpected passing of his father (Buhler, 2004). He concluded that Ellen West and her personal views regarding overeating and being fat were related to her being-in-the-world, an existential technique. She was a patient in Binswanger’s Bellevue Sanatorium in Kreuzlingen, Switzerland during her extensive poor mental history and her obsession with obesity. Her fixation was classified as bulimia nervosa and anorexic illness, which led to her eventual suicide (Ghaemi, 2001). Binswanger expresses the importance of existentialism or the ability to express one’s inner most personal thoughts. Ludwig Binswanger managed Ellen West during her perceived problems with being fat, listened to her perspectives, and allowed her to express herself. Ellen West had an extensive family history of suicide and she was entrapped in her own internal suicide (Ghaemi, 2001). Her weight discrimination led to her obsession with weight loss and eventual death. Binswanger believed that in many ways Ellen West had experienced freedom after her apparent suicide due to her obsession with obesity (Ghaemi, 2001).

Existentialism psychology is closely related to the real-world, lived experiences and expressions. Binswanger related philosopher Martin Heidegger's existential psychiatry to phenomenology. According to Ghaemi (2001), Heidegger stated that the meaning of Dasein is the ability of a person to allow him or herself to be defined by the interpretations of the public. According to Bozarth (2012), theorist Carl Rogers states that humans are aware of what is needed to promote good health, what causes feelings of sadness, negative assumptions, and rejection. Rogers believed that people know what is best for them and they should lead the practitioner who is providing care for them to their perceived problems (Bozarth, 2012). In relation to the views of Rogers theory and pregnant women, this concept welcomes an additional study in relationship to obese pregnant women communicating their problems and finding solutions rather than the reverse. Theorist Rogers states that humans also seek to have a high level of self-esteem, a sense of self-worth, and a high regard for oneself (Bozarth, 2012). Feelings of high self-esteem and self-regard are established by how others make us feel. Obese pregnant women have a greater tendency towards feelings of negativity and some have expressed the desire to end their pregnancies due to negative experiences, stigmatization, and discrimination that they anticipate they are likely to receive from providers and the public (Hull et al., 2011). Women who were obese in previous pregnancies are likely to be obese in future pregnancies. Obese pregnant women should be encouraged to have preconception check-ups and providers should place emphasis on the importance of pre-testing (Hull et al., 2011). Some of the most important areas of concern during a pre-pregnancy visit are assessments related to the thyroid, folic acid intake, blood pressure

readings, vitamin intake, and blood sugar (Hull et al., 2011). Weight loss efforts can be monumental and may be unattainable for many people due to feelings of discrimination which enhances the human desire to eat more to satisfy the "emptiness" often experienced.

The Transtheoretical Model of Behavior Change

According to Buchan, Ollis, Thomas, and Baker (2012), the World Health Organization states one of the main causes of death prematurely is a lack of physical exercise, within developed countries. Psychosocial influences play a significant role in the desire to participate in physical activity. Two theories of application most commonly used in behavioral studies are the transtheoretical model of behavior change and the social cognitive theory (Buchan et al., 2012). According to Prochaska (2008), the transtheoretical model of behavior change can be used for populations who are generally not agreeable to change, are underserved, lacking motivation, and poor validation of further studies. Models of change in this study relate to the present study and research questions in relationship to factors which hinder the overall health of pregnant women who are obese, who have experienced discrimination, lack motivation, have poor dietary intake, and who have no desire to exercise or manage weight.

The transtheoretical model of behavior change identifies changes as a process and movement through the stages of readiness varies (Drieling, Ma, & Staffors, 2011). The stages of change identify five stages of a person's desire and acceptance to change. The five stages of change, according to Prochaska are: pre-contemplation which is stage one where the person is not ready to change; contemplation is the second stage in which the

person is ambivalent about change; the third stage is preparation in which a person has the intent to change and will do so within the next 30 days; the fourth stage is action which the person has reacted to change within 6 months; and the fifth stage is maintenance in which the person has maintained action for 6 months or longer and does not need to apply change processes. In a study conducted by Swan, Kilmartin, and Liaw (2007), women with a healthy body mass index were in the pre-action stage, whereas women with co-morbid conditions such as gestational diabetes mellitus did not engage in behaviors to reduce the risk of developing gestational diabetes mellitus or decreasing the body mass index. Progression and regression in the stages of change, identifies feelings of acceptance, support, and personal weight management (Stoltz, Reysen, Wolff, & Kern, 2009).

The Social Cognitive Theory

The social cognitive theory identifies that a change in behavior occurs more likely with self-regulation, skill building, and behavioral capability (Drieling, Ma, & Stafford, 2011). The concepts of the social cognitive theory may be helpful to providers in the management of obese pregnant women who are in need of self-regulation or self-control, the ability to make healthy choices, and the management of behavioral changes such as avoiding overeating or snacking on foods high in carbohydrates. The social cognitive theory relates to this study through examination of factors that impeded their overall progress. Obese pregnant women often complain that providers do not offer guidance or education related to healthy dietary choices. Readiness to change, however, often times does not equal behavioral changes (Swan et al., 2007). Positive change related to high

risk populations with chronic diseases and conditions is often difficult to achieve. An understanding of their experiences, beliefs, and the impact of social discrimination is helpful in the development of effective interventions (Swan et al., 2007).

Prevalence of Obesity in Pregnant Women

The health of obese pregnant women is jeopardized when women who are of child-bearing age are becoming increasingly obese. deJersey et al. (2010), found that pregnant women are at a higher risk for weight gain related to the omission of the basic food groups during pregnancy and failure to receive daily minerals necessary to promote health such as calcium, folic acid, and iron. Rates of obesity during pregnancy have risen to alarming rates in the past decade. Providers have failed to provide the treatment and management of chronic diseases and conditions associated with obesity and pregnancy. Being overweight or obese during pregnancy is rapidly becoming a major risk factor for mothers and their unborn infants. According to Hillemier et al. (2011), even women of normal weight were overweight by their first follow-up visit. Post-partum women who are overweight or obese are more likely to have problems and continue to be overweight or obese in future pregnancies.

Experiences of Obese Pregnant Women

Obese pregnant women face scrutiny and public shame related to their condition. According to Fuber and McGowan (2011), obese pregnant women are often distressed when interacting with the public, healthcare providers, and during procedures such as fetal imaging. They report unwanted stares in public settings, disrespectful remarks when eating in public, and scrutiny from healthcare providers during difficult testing

procedures such as when the provider is assessing fetal heart tones. Obese pregnant women endure many forms of stigmas and humiliation and according to Hull et al. (2011), mental stressors contribute to weight gain. Knowledge of public scrutiny, personal negativity, stressors and stigmas faced by obese pregnant women should be recognized and addressed as a part of the plan of care. Providers should incorporate the management of social and physiological needs to care during pregnancy while recognizing that such stressors may contribute to additional weight gain.

Developing Trust

Developing trust between the provider and the patient is critical to enhancing treatment outcomes and communication. Providers should treat obese pregnant patients with respect and kindness which builds trust and opens the lines of patient to provider communication (Hull et al., 2011). Multiple medical complications are likely when patients are obese and pregnant. Providers should maintain open lines of communication to improve relationships and enhances the receptiveness of the patient to education and counseling. Providers must keep in mind that women who are of normal weight during pregnancy are not excluded from potential complications, therefore, education and counseling should be a standard of practice for all pregnant women. Obese pregnant women lack trust and openness with providers due to fears of stigmatization (Furber & McGowan, 2011).

Poor Knowledge and Awareness of Obesity or Complications

Obese pregnant women who have a body mass index of 25 to 30, stated that they were not aware they were considered to be overweight or obese (Khazaezadeh et al.,

2011). The participants stated that they had no knowledge of the acronym for body mass index or the meaning. They also stated that they did not consider themselves to be overweight or obese. Obese pregnant women should be provided education regarding healthy weight, eating habits, and exercise. Obese pregnant women stated they were not aware of health complications or that they could lead to co-morbid conditions such as: hypertension, gestational diabetes, kidney failure, coronary artery disease, cancers, and cognitive decline. Obese pregnant women lack the knowledge and education needed to address problems related to obesity. Obesity and pregnancy contributes to an overall negative impact on the life of the mother and the unborn child. Such complications associated with obesity generally last a lifetime. Infants born to obese mothers are likely to become obese at some point in their lifetime. Maternal obesity and macrosomic birth weights are 1.5 to 4 times likely to be connected, while gestational diabetes is an additional factor which impact infantile birth weight (Ramachenderan et al., 2008). Infants born to obese mothers are likely to be obese at some point in their lifetime due to neonatal thickness of the skin resulting in a larger fat mass (Galtier-Dereure et al., 2000). Fetal weight and obesity have also been influenced by the location of body fat mass in the waist-to-hip in obese mothers. Knight and Wyatt (2010), concluded that midwives were reluctant to educate their patients regarding the potential for negative health implications related to being obese and pregnant. Providers reported feelings of embarrassment or shame when addressing factors related to obesity. Some providers stated that due to their own weight problems, they were not comfortable in educating patients about the need to change their eating and physical exercise habits. Knight and Wyatt (2010), found that

providers were not educating their patients due to fear and embarrassment associated with their own personal issues with diet and weight.

According to Nagle, Skouteries, Hotchin, Bruce, Patterson, and Teale (2011), obese pregnant women may receive care from multiple providers which leads to fragmented health care. They often seek care from different providers due to feelings of scrutiny and discrimination from a previous provider. Services related to information, education, and follow-up differed between providers who failed to communicate among each other. Such inconsistencies contributed to a lack of understanding in educating obese pregnant women to take care of themselves.

Inadequate Services, Equipment, Staff, and Providers

According to Schmied et al. (2011), midwives who cared for pregnant women with a body mass index of 39 or greater, had multiple concerns and issues regarding their care. Midwives shared their experiences stating that they lacked access to adequate equipment such as: larger blood pressure cuffs, bariatric beds, larger fetal straps necessary to assess the fetal heart rate, larger gowns needed during labor and delivery, weight scales to weigh up to 500 pounds, and inadequate staffing ratios. Two staff nurses were needed per obese pregnant patient to assist during delivery and to hold the extremities during birth. Participants had to be weighed on equipment scales stored on the hospital ground floor which contributed to embarrassment and shame, a common complaint shared among obese pregnant women. Providers also feared that these patients could have problems during labor and delivery which could result in eventual death. Midwives reported that the rates of obesity in pregnant women were climbing faster than

effective changes and treatments could be implemented or provided (Schmied et al., 2011). Providers stated that they had poor rapport with the patients and ineffective communication when they attempted to discuss potential complications related to being obese and pregnant, particularly when the women had no noted health problems (Schmied et al., 2011). According to Schmied et al. (2011), areas of concern for obese pregnant women are related to services, provider and patient comfort with open communication, building rapport, co-existing morbidities, inadequate equipment, and staffing.

Denied Choices

According to Swann and Davies (2012), obese pregnant women are denied some of the choices offered to pregnant women of normal weight. The cost of treating obese pregnant women is five times greater than the cost of treating pregnant women who are of normal weight. Labor in obese pregnant women is often induced due to the high risk of fetal mortality. Mothers are rarely given the choice of a vaginal birth as opposed to a cesarean section, due to the potential for fetal complications and poor labor progression. Water births are denied due to the need to access the fetus in the event of fetal distress. Obese mothers are often placed in noisy birthing suites due to the potential for complicated deliveries. Providers are criticized when they offer choices to high risk pregnant women (Swann & Davies, 2012). Obese pregnant women believe that they are prohibited from discussing their options and are viewed by providers as difficult or unwilling to be compliant (McGlore & Davies, 2012). The experiences of labor and delivery are often complicated for obese women. Communication, awareness, and an understanding of

expectations can make the birthing process easier and acceptable. Oftentimes pregnant women lack an understanding of potential health issues related to being obese, the risk of the development of diseases, and complications which might arise during labor and delivery (Hillemeier et al., 2011).

Acceptable Pregnancy Weight

Pregnant women who are overweight or obese may benefit from understanding the recommended weight parameters. These parameters are designed to decrease the rates of obesity, poor health, difficult labor, and other post-partum complications (Ronnberg & Nilsson, 2010). Women of reproductive age are more likely to transition from normal weight to overweight or obesity (Hillemeier et al., 2011). During pregnancy, women are more concerned about their health so healthy recommendations may be well received during this time (Ronnberg & Nilsson, 2010). Obese pregnant women could benefit from therapy to address behavioral trends, physical activity, dietary education, guidance, and assistance.

Multiple health complications are increasingly likely for both the mother and the fetus when the mother is overweight or obese (Hendrix, 2011). Healthy pregnancy weight varies for each mother and is based upon pre-pregnancy weight. According to the Institute of Medicine (2009), an appropriate pregnancy weight gain for obese women with a body mass index of 30 is five to nine pounds. Childhood obesity and mortality has been linked to maternal weight gain (Ronnberg & Nilsson, 2010). The rates of adverse outcomes and complications experienced during pregnancy in obese women are higher than in women of normal weight.

Women are having more twins and triplets than ever before, tend to be older, and more are becoming obese during pregnancy (Institute of Medicine, 2009). The Institute of Medicine has changed the acceptable gestational weight gain which recommends that weight gain should be in compliance with the body mass index recommendations. Abnormal weight gain is associated with pregnancy weight retention both short-term and long-term (Langford, Joshu, Chang, Myles, & Lee, 2011). Approximately 20 pounds of pregnancy weight is the placenta, amniotic fluid, fetus blood volume increase, fluid retention, and breast hypertrophy (Stotland, Haas, Brawarsky, Jackson, Fuentes-Afflick, & Escobar, 2005). Sometimes people recognize that their potential for weight gain increases in their early adult years, and begin to decrease their energy intake which results in a balance by the time they reach their 30s' (Hillemeier et al., 2011).

More women are entering pre-pregnancy overweight or obese and the Institute of Medicine acted by introducing new guidelines for acceptable weight gain during pregnancy (Cawthon, 2010). According to Cawthon (2010), women on Medicaid tend to have higher rates of obesity when compared to women who are not recipients of Medicaid. Women who were Medicaid recipients and multi-para, or who have had multiple births, had a greater tendency for being obese before pregnancy, a trend particularly noted in European American women. Among African American and Native American women, they had the same rates of obesity regardless of their provider type. The annual cost of treating obese pregnant women who were Medicaid recipients was 365 million annually (Cawthon, 2010).

Provider and Patient Communication

According to Thompson, Nassar, Robertson, and Shand (2011), conducted a study and there were 149 pregnant women and their partners surveyed. Of the participants, 39% of the pregnant women were overweight or obese and 63.6% of their partners were also overweight. At least 70% of the participants under-estimated their actual weight and 96.2% of their partners did not believe that they were overweight. The majority of the participants had not received any advice from their physician or midwife regarding being overweight or obese. Only 29.5% had knowledge of the recommended weight gain. Only 38.1% of participants, who did receive education regarding obesity, had not seen a physician in a year. At least 39% of the participants were not aware that they were obese. Many stated that they had no knowledge of how much weight gain was acceptable during pregnancy. Health behaviors and diets in pregnant obese women were strongly related to their partner's. Thompson et al. (2011), found that partners of obese pregnant women were more likely to participate in questionnaires and education regarding pregnancy and obesity, see Table 4. Such findings may benefit obese pregnant women by encouraging partner participation in education and monitoring weight goals and expectations.

Table 4

Partner and Patient Participation Rates in Obesity Questionnaires and Education

Participants	Results
Obese Pregnant Women	39.0%
Partners of Obese Pregnant Women	63.6%
Underestimated Personal Weight	70.0%
Disbelief in overweight or obesity	96.2%
Knowledge of Weight Recommendations	29.5%
Received Provider Education	38.1%

Note: Adapted from: Pregnant women's knowledge of obesity and ideal weight gain in pregnancy and health behaviors of pregnant women and their partners", by M. Thompson, N. Nassar, M. Robertson, & A. Shand, 2011, *Australian & New Zealand Journal of Obstetrics & Gynecology, 51*, pp. 460- 463.

Shared Experiences

The nation is increasingly focused on the high rates of obesity, while more obese pregnant women are recognizing the impact of scrutiny from the public (Nyman, Prebesen, & Flensner, 2010). According to Schmied et al. (2011), some obese pregnant women stated that they were offended by the negative experiences they encounter during antenatal provider visits. Many obese women shared the same experiences of feeling degraded, disrespected, and afraid. Their fear is related to intimidating questions from providers, health suggestions, and negative predicted outcomes including death of both the mother and the unborn child. Despite experiences reported of negative feelings, the rates of obese pregnant women continue to climb. Providers report concerns for obese

pregnant women regarding health risks such as multiple medical complications, while assuming responsibility for their overall health and well-being.

Choosing Midwives

According to Sutin and Terrraciano (2013), in the study of obese persons, they believe that they are viewed as unsuccessful, negative, weak-willed, and irresponsible. They concluded that living with obesity brings about constant feelings of observation and exposure. Obese pregnant women may prefer a midwife as opposed to a physician. They reported that providers often scold them and believe that they are lazy, putting their own health and the health of the unborn child at risk, that they pose a higher potential for infant and maternal death during labor and delivery, and providers also believe that obese pregnant women are putting their practice in jeopardy due to having to care for them (Nyman, Prebesen, & Flensner, 2010). Despite these concerns, they believe that, overall, they are supported, understood, encouraged, and treated as individuals, when they seek the care of midwives during their pregnancies.

Negative Assumptions

According to Nyman et al. (2010), obese pregnant women are irritated by the request for multiple tests and complain that they are not given the option to refuse due being high risk. Some of the testing, according to the participants, is necessary due to the need to determine the health of the child. Providers complain that due to excessive body fat, they are unable to assess the well-being of the fetus without additional testing. The patients report that they are uncomfortable when informing the provider about their concerns even though they need the providers help. Many obese pregnant women state

that they would have changed providers but feared that the problem would not be resolved or that they would encounter similar issues.

According to McGlore and Davies (2012), some obese pregnant women believe that providers assume that they do not participate in healthy practices. Pregnant obese women describe being obese and pregnant as stressful (McGlore & Davies, 2012). They complain of receiving multiple lectures, rudeness from providers and their staff who often interject scare tactics related to being obese and pregnant. However, weight loss during pregnancy is not encouraged (Hull et al., 2011). Instead, obese pregnant women are encouraged to maintain a healthy diet which should include fruits, vegetables, grains, protein, and regular exercise to increase the health of the mother (Cawthon, 2010). Some providers have voiced their concerns that obese pregnant women lack antenatal sensitivity that pregnant women of normal weight experience such as kicking, movement of the fetus, and assessing the fetal heart rate.

Negative Outcomes

The impact of obesity and pregnancy brings about feelings of negativity, participants report (Nyman et al., 2010). Some pregnant obese women state that they have considered getting an abortion due to their weight, and some reported fears about complications to the fetus and their own death. Many stated they were told that they should have lost weight before becoming pregnant. Many pregnant obese women believe that providers do not take them seriously and often overlook or fail to address their concerns and choices. They also complained of feeling as though they are a medical case and express the loss of enjoyment in experiencing pregnancy. Often times, providers

suggest an induction rather than allowing natural labor to occur due to the fear of fetal death (Hull et al., 2011). When labor progression is slow, providers are more likely to perform a cesarean section. Excessive mental and environmental stress influences additional weight gain, contributes to poor food choices, and increases food consumption. (Sutin & Terraciano, 2013).

The most common risk factor to multiple complications in maternal women is obesity and the concern that children of obese women will become obese either during childhood or at some point in their lives (deJersey et al., 2010). The rates of obesity continue to climb and at least one-third of pregnant women are overweight or obese. Micro-nutritional requirements such as calcium, folate, and iron must be increased when women are pregnant. However, obese pregnant women are seldom educated on factors related to the development of health complications which may be short or long-term. Poor education and awareness results in a continuous progression of poor health and maternal weight gain.

Pregnant obese women lack specialized individual education regarding acceptable weight gain during pregnancy (deJersey et al., 2010). Other important issues for weight loss and weight management are the same for all populations and include regular physical exercise, increased intake of fruits, vegetables and grains, eating smaller portion size meals, and maintaining a healthy diet. One major problem noted in educating overweight or pregnant obese women is the fact that some providers are also struggling with being overweight or obese (Herring et al., 2010). Providers did not recommend weight gain limits according to the American College of Obstetrics and Gynecologists guidelines and

failed to be completely compliant with clinical practice recommendations. Many providers who participated in the study reported personal insecurities related to dissatisfaction with their own body, health, and personal confidence. According to Schmied et al. (2011), some providers who were overweight or obese felt comfortable in educating pregnant obese women, while others believed that they were not good role models.

Providing health information is important early in pregnancy. van Zutpen, Milder, and Bemelmans (2009), through eHealth, found that pregnant women were interested in researching information regarding diet, nutrition, healthy lifestyles, and safety. Providers who are embarrassed or who failed to address the issue of obesity related to their own physical health may benefit from directing their patients to eHealth programs, an Internet program which provides education and answers and may alleviate embarrassment. Pregnant women who participated in the study preferred information related to their gestational age and requested that more information be provided.

According to Herring et al. (2011), physicians seldom referred to the pre-pregnancy weight of obese pregnant patients or made important changes to their treatment plans. Obstetric providers who did agreed to participate in the study, 38% of them were obese or overweight. When questioned, a few more than 50% of the providers were able to correctly identify body mass index ranges set forth in the guidelines from the Institute of Medicine. Most of the providers instructed the patient to gain up to 15 pounds, while fewer stated that they were told by providers to gain at least 15 pounds. Only 40% of providers believe that obese pregnant women were committed to improving

their maternal health. The providers stated that they seldom referred their obese patients to a dietitian. Obese pregnant women are obtaining a plethora of confusing information from multiple sources: printed media, the Internet, family, providers, and friends (Ferrari et al., 2013). Maternal obese women could benefit from professional nutritional counseling. Provider referrals should encourage proper dietary intake, education on how to read and interpret the nutritional contents of canned foods, the understanding of the impact of too much cholesterol, sodium, and sugar contents in comparison to acceptable daily intake. Lower rates of obesity are reported by providers due to provider perceptions regarding what is considered to be obese. Some providers are failing to follow American College of Obstetrics and Gynecology guidelines (Herring et al., 2011).

According to Denison and Chiswick (2011), obese pregnant women risk engaging in non-factual beliefs regarding pregnancy and dietary intake such as the belief that pregnant women must eat for two. Pregnant women only require 200 additional calories each day and the increased caloric requirement is expected to begin in the third trimester of pregnancy. Obese pregnant women are at a greater risk for a deficiency in vitamin D as it is stored in excessive adipose tissue. Providers must focus on educating obese women prior to conception. In addition, healthy guidelines, counseling, and nutritional and physical consultations should be ordered.

Care and Treatment

The potential for providers to care for overweight and obese pregnant women is high (Morin & Reilly, 2007). Persons are determined to be obese when their body weight is greater than 20% of what their ideal body mass index should be. Between 1991 and

2001 in Utah, researchers found that there was a 40.2% increase in women who were overweight or obese prior to pregnancy. Providers must be knowledgeable of causative and potential complications and provide treatment interventions before such health issues are profound. The higher the body mass index is in obese pregnant women, the greater the potential for developing preeclampsia. Other medical problems such as diabetes and hypertension increase the risk of developing preeclampsia. Fetal neural tube defects, cardiovascular complications, placenta displacement, and stillbirths are more common among overweight and obese pregnant women. Obese pregnant women are two times as likely to report feelings of depression as opposed to pregnant women of normal weight, even when socioeconomic issues are managed (CDC, 2013).

Obese pregnant women are likely to develop gestational diabetes mellitus while ethnicity has been shown to play an important role. Caucasian women have lower rates of gestational diabetes mellitus than Latina women (Morin & Reilly, 2007). More African American women are obese when pregnant than other races or ethnicities. The amount of adipose tissue affects insulin resistance thus, resulting in the development of diabetes mellitus. In addition, excessive adipose tissue interferes with conception and implantation in obese women. Obese women experience difficulty in conceiving due to decreased hormonal availability.

According to Morin and Reilly (2007), gestational diabetes mellitus is more effectively controlled when obese pregnant women are prescribed insulin to control their blood sugar in addition to diet and exercise. Diet and exercise alone has been less effective in blood sugar control. Obese pregnant women who use insulin to control their

blood sugar are likely to deliver infants who are of smaller birth weight. In contrast, women who use diet and exercise alone to control gestational diabetes mellitus are likely to deliver larger infants.

Obesity in pregnant women is an indicator for cesarean section births (Morin, & Reilly, 2007). Active labor is prolonged in obese pregnant women and contributes to the risk of uterine rupture and hemorrhage and is five times higher in women who had previous births by cesarean section. Attempts at vaginal births increase the risk of infection as more cervical assessments are required. Pain management is an issue in obese pregnant women. Placement of the epidural is often difficult and may require multiple attempts due to the amount of adipose tissue and difficulty with positioning.

Poor Maternal and Fetal Health

Maternal obesity is problematic for the mother and the fetus. Obese mothers are at a greater risk for diabetes, preeclampsia, heart disease, and diabetes (Leddy, Power, & Shulkin, 2008). The fetus is at risk for congenital abnormalities and stillbirth. The fetus is impacted by the maternal health of the mother. The complications related to poor maternal health can potentially last for a lifetime. Obesity in children has been directly related to maternal obesity (Leddy et al., 2008). The fetus is negatively affected by an over abundance or inadequate amounts of nutrients which cross the placenta. Obesity is often passed from parent to offspring and may continue through generations, especially among daughters.

Low Apgar Scores and Obesity

Apgar scores are determinants of the medical health and well-being of newborns. Apgar scores measured over 5 minutes are more indicative of the overall outcome of the infant (Chen et al., 2010). Extremely low Apgar scores (0 to 3), during the first 5 to 10 minutes after birth are associated with neonatal death, seizures, and cerebral palsy (Chen, et al., 2010). Babies who are born premature are born more often to obese mothers but not mothers who are overweight. Low Apgar scores are seen in premature babies born at less than 37 weeks, and in mothers who have preeclampsia and gestational diabetes (Chen et al., 2010).

Low Apgar scores in infants of obese mothers may be associated with fetal distress and the need for resuscitation and intubation (Chen et al., 2010). Apgar scores that change after approximately 10 minutes after birth, suggest that incidents of fetal acidosis and cord pH of less than 7.1 is related to insufficiency of the placenta or dysfunctional labor. Low Apgar scores may also be related to the effects of anesthesia used during a cesarean section. Low Apgar scores are also precursors to other complications such as the need for the neonatal intensive care unit, close observation during neonatal transition, mechanical ventilation, delayed mother-infant bonding, and breast feeding. Infants born to obese mothers have a higher risk of being ill at birth and inadvertently increase the cost of healthcare.

According to Van Eerden (2011), African American women have the highest rates of obesity followed by Mexican American women, then European White women. A body mass index of 30 is considered to be obese while a body mass index of 25 to 29 is

considered to be overweight. Morbid obesity is considered when the body mass index is 40 or greater. Obese women have a greater risk of reoccurring miscarriages even with fertility treatment, and are more likely to have problems conceiving related to clotting factors and inflammatory complications. As a result, low Apgar scores and maternal obesity show significant correlations (Chen et al., 2010).

Weight Loss Prior to Conception

Obesity prior to conception is a contributing factor to low birth weight infants, infants which grow too large while in utero (macrosomia), placental dysfunction, fetal cleft abnormalities, stillbirths, and even higher risk are associated with hypertension, advanced age, and diabetes (Van Eerden, 2011). Weight gain during pregnancy should be patient specific and pregnant teenagers are recommended to follow the guidelines for adults until further studies are completed. See Table 5, used with approval from the Institute of Medicine,(see Appendix E), the Institute of Medicine (2009), concluded that overweight mothers should gain a maximum weight of 15 to 25 and obese mothers should not gain more than 20 pounds maximum and can gain as little as 11 pounds. Pregnant women with twins have provisional guidelines such as: obese women should gain no more than 25 to 42 pounds, overweight women should gain no more than 31 to 50 pounds, and normal weight women should gain no more than 37 to 54 pounds (Institute of Medicine, 2009).

Table 5

Recommendations for Total and Rate of Weight Gain During Pregnancy By Prepregnancy BMI

Prepregnancy BMI	BMI (WHO)	Total Weight Gain Range (lbs)	Rates of Weight Gain 2nd and 3rd Trimester (Mean Range in lbs/wk)
Underweight	<18.5	28-40	1 (1-1.3)
Normal Weight	18.5-24.9	25-35	1 (0.8-1)
Overweight	25.0-29.9	15-25	0.6 (0.5-0.7)
Obese	$\geq$30.0	11-20	0.5 (0.4-0.6)

(Includes all classes) *Calculations assume a 0.5-2 kg (1.1-4.4 lbs) weight gain in the first trimester (based on SiegaRiz et al., 1994; Abrams et al., 1995; Carmichael et al., 1997). *Institute of Medicine* (2009).

According to Van Eerden (2011), over 50 percent of pregnancies are unexpected. Weight loss prior to conception is important to overall health but may seldom occur. Surgical procedures to enhance weight loss are optional but risky and may pose problems for the mother and the unborn child. Surgical weight loss can pose problems such as labor induction, vitamin deficiencies, the need for a cesarean section, and the rupturing of membrane preterm. Maternal complications such as thrombotic embolism may contribute to serious complication such as maternal and fetal mortality (Ramachenderan et al., 2008).

Complicated Maternal Management and Delivery

According to Ramachenderan et al. (2008), obese pregnant women are likely to have late deliveries and may carry the fetus beyond 39 weeks and maybe later than 42

weeks gestation. Ultrasonic imaging is poor and thereby increases the risk of fetal defects and abnormalities that could remain undetected. Obese pregnant women often have inadequate dilation of the cervix and difficulty beginning labor. Assistance with vaginal deliveries is common and may require the use of forceps. Obese pregnant women are at a greater risk of aspiration pneumonia due to higher levels of gastric residual and aspiration.

Summary

In summary, poor public assumptions, scrutiny, public shame and overall discrimination are social determinants to poor health and can have a negative impact on nearly every aspect of the lives of people who are obese (Sutin & Terraciano, 2013). Obesity has become one of the most common risk factors among pregnant women while other environmental factors also play an important role in their inability to lose weight (Kazaezadeh et al., 2011; Sutin & Terraciano, 2013). Research supports that at least 18%-38% of American women who are pregnant are also obese (Hull et al., 2011). Obesity and health complications are common, and in the past, were not addressed as a disease or complication that was related to obesity. (Schmied et al., 2011). The American Medical Association has since classified obesity as a disease. The Obesity Society panel met to consider obesity as a disease and concluded that the decision would lead to a greater awareness of the problem, in addition to positive treatment outcomes (Chaput, Doucet, & Tremblay, 2012). However, the rates of obesity remain higher than at any time in recorded history (Chaput et al., 2012). Death occurs at least 27% of the time during labor and delivery (Khazaezadeh et al., 2011). Factors which contribute to obesity

impact both males and females and include social discrimination, the consumption of energy dense foods, sedentary lifestyles, and diets high in fat (Sutin & Terraciano, 2013; Bordeaudhuij et al., 2007).

Phenomenological research is an inquiry about lived experiences over long periods. The purpose of phenomenology is to uncover similarities and patterns experienced by participants (Creswell, 2009). Public stereotypes regarding obesity in the United States is common (Sutin & Terraciano, 2013). Theorist Ludwig Binswanger related feelings of guilt and responsibility with individual actions (Ghaemi, 2004). Negativity and public shame has an impact on the inability of obese persons to lose weight. People are more likely to gain excessive amounts of weight when they face discrimination (Sutin & Terraciano, 2013). According to Ghaemi (2004), Binswanger theorized that overeating is the result of feelings of emptiness and loneliness. Psychological and behavioral complications are known factors to increase in weight and binge eating, which can be triggered by teasing, negative stereotypes, and stigmatizations (Sutin & Terraciano, 2013). According to Bozarth (2012, pg. 273), theorist Carl Rogers believed that humans are aware of their needs and “non-directivity” brings value to the therapists’ behavior and attitude related to client directives. Self-empowerment and self-development, according to Rogers, are important factors which are critical for successful client-centered therapy, and which facilitates an understanding of the client’s unconditional needs and frame of reference (Bozarth, 2004, pg. 273).

Since people know what needs they have and what needs to be done, it can be easily assumed that they should be able to address their needs and eradicate the problem.

However, knowing what needs to be done and accomplishing those needs involve more complexities than simply fixing the problems. This notion relates to Prochaska's pre-contemplation stage of behavioral change, in which the person is not ready to change (Prochaska, 2008). When facing issues such as shame, public scrutiny, and discrimination, people are more likely to gain excessive amounts of weight. Scientifically this is related to stress which triggers cortisol releases by the hypothalamic-pituitary-adrenal glands, where glucocorticoids are released and contributes to the consumption of excessive amounts of foods (Sutin & Terraciano, 2013). The release of cortisol is a stimulant to trigger the consumption of foods high in fat and calories. A cycle occurs with the release of opioids and palatable foods, which is a stress coping mechanism (Sutin & Terraciano, 2013).

Negative attitudes and physical and verbal aggression can induce a wide range of psychological complications such as a poor satisfaction with living, feelings of darkness and depression, poor self-acceptance and poor self-esteem (Sutin & Terraciano, 2013). Other problems related to experiences of discrimination include troubled personal relationships, inadequate health care services, decreased employment opportunities or job discrimination, lower salaries, and overall poor physical health. Poor health related to obesity and pregnancy can cause multiple co-morbid conditions that can last throughout the pregnancy, even a lifetime. Common medical complications related to obesity and discrimination are due to the presence of C-reactive proteins which are inflammatory markers, high blood pressure, and coronary artery disease (Sutin & Terraciano, 2013).

Obese pregnant women commonly face stigmas and mental stressors (Hull et al., 2011). Poor mental health outcomes, cognitive decline and dementia are likely to occur (Hillemier et al., 2011, Sutin & Terracciano, 2013). Common experiences during labor and delivery are the denial of patient decisions and involvement in their delivery such as the option to choose a vaginal delivery, water birth, and labor induction. Often, obese women are considered to be high risk and cesarean sections are performed without their input (Swann et al., 2012). Factors which impact the health and well-being of obese pregnant women should target their social and physiological well-being, emotional health, level of education related to their understanding of teaching, open communication, the right to individual choices with more than one option available, and their overall health care needs.

Chapter 2 outlined the theoretical framework for this study. In this chapter, a plethora of issues that obese women face regarding their overall health and factors which prevent overall health was explored. Issues such as: negative experiences, the lack of provider trust, inadequate patient to provider communication, poor fetal health, and maternal weight loss issues, have been examined. In Chapter 3, the methodology for this study will be outlined. A qualitative research design and approach will be used for data collection needed to explore a phenomenon, the lived experiences of obese pregnant women. Research questions will be discussed as in Chapter 1.

Chapter 3: Research Method

Introduction

This chapter provides an explanation of the participants, the research design of the study, and the rationale for the design, participants, settings, size, research questions, the role of the researcher, instrumentation, data collection methods, validity and reliability, data analysis, ethical concerns, and the conclusion.

This study will hopefully be used by providers, patients, families, employers, and the public to bring about awareness and understanding to the issues faced by pregnant obese women. This study provides an in-depth look at personal experiences, stigmas, shame, public scrutiny, poor treatment, and discrimination faced by obese pregnant women. There is a greater risk of multiple life-threatening complications to both the mother and the unborn child such as hypertension, gestational diabetes mellitus, macrosomia, renal failure, cardiac complications, cognitive decline, dementia, stillbirths, preeclampsia, and maternal mortality. It is my hope that this study will be used to improve care and treatment received by obese pregnant women and their children.

Research Design and Approach

The design of this study was phenomenological, an approach used to identify a human experience in which participants are studied to determine how they make sense of their lives, and their perceptions (Creswell, 2009). The phenomenon focused on was the commonalities shared by obese pregnant women. Obesity and pregnancy are personal experiences and women are faced with different experiences. The central problem in this study was negative perceptions, shame, social stigmas, public scrutiny, discrimination,

and poor care and treatment of the conditions and concerns related to obesity and pregnancy. The perspectives and experiences of obese pregnant women are important for providers, family, and the public to have an understanding of the complications and problems faced by obese pregnant women. Patterns and relationships are developed through prolonged participant engagement. Personal researcher experiences and biases are set aside to understand the experiences of the participants being studied (Creswell, 2009).

Participants

In qualitative research, the goal is to accurately represent the whole population. Qualitative research involves direct interaction in the natural setting and explores issues by conducting observations and interviews (Creswell, 2009). The selection of the participants for this study began through the distribution of an explanation of the study and the guidelines required for interested participants (see Appendix A). The help of the obstetricians, nurse practitioners, and staff were used to encourage patients to participate in this study. Patients with a body mass index of 30 to 50, was noted when weighed at their appointments, would be encouraged by staff to participate in this study. In addition, a description of the study was placed in the lobby areas of the participating sites located in Nashville and Franklin, Tennessee.

Specific criteria necessary to meet the requirements of the study included the following: A body mass index of 30 to 50, participants between the ages of 18 and 55 and at 20 to 32 gestational weeks. There were no co-morbid conditions such as coronary artery disease, or a lack of any disease or conditions that would be a

disqualifying factor. Participants were purposefully selected. Persons under the age of 18 or who were older than 55 years were not included in the study as persons under the age of 18 years were minors and persons over the age of 55 were unlikely to conceive. Providers were informed about the disqualifying factors and assisted in participant selection based upon qualifying criteria. The most prevalent populations represented in Tennessee include African American, European American, and Hispanic. The United States Census Bureau (2013), reported a total population for Tennessee in 2012 of 6,456,243. The population breakdown for Tennessee includes three groups with the largest percentage of representation: European White 79.3%, African American 17.0%, and Hispanic 4.8%. The study was conducted in Davidson County, Nashville, Tennessee. The population breakdown of the largest representation in Davidson County is European White 56.3%, African American 28.4%, and Hispanic 10% (United States Census Bureau, 2013).

Settings

Participants for this study were chosen from one obstetric practice with two locations and one high-risk maternal-fetal clinic with one location. The participating obstetric sites were located in Nashville and Franklin, Tennessee. Participants in this study shared similar concerns, had an understanding of the research problem, and represented populations that included the following groups: Persons insured through private providers or employers; persons insured through TennCare, a form of Medicaid coverage offered to residents in Tennessee; the uninsured; individuals reporting various statuses such as single, married, or divorced; individuals between the ages of 18 and 55

years; varying income levels, educational backgrounds, and geographic locations. The participants chosen for this study were between 20 to 32 weeks gestation, and who had a body mass index of 30 to 50, and were between the ages of 18 and 55 years. The intent of this study was to represent whole populations, to uncover their overall experiences, and to determine what factors played a role in their care and personal experiences. All participants signed the consent form prior to beginning the one-on-one interview.

Sampling Size

A vast number of women from various ethnic backgrounds are obese and pregnant, and data for this study were collected from Tennessee residents and included populations with the highest rates of obesity and pregnancy, including any race or ethnicity. There are multiple sites located in Tennessee that provide care for high-risk obese pregnant women, but two sites were chosen to yield the population needed for this study. The criteria for this study included participants who (a) had a body mass index of 30 to 50, (b) were at 20 to 32 gestational weeks, and (c) were between the ages of 18 and 55. Other co-morbid conditions or a lack of such conditions were not disqualifying factors such as hypercholesterolemia (elevated cholesterol).

Selecting the sample size is important for sampling strategies intended to be used (Creswell, 2007). The sampling size in qualitative research may vary from 5 to 30 (Guest, Bunce, & Johnson, 2006). There were 12 participants selected for this study; however, additional participants would have been enrolled if data saturation had not been met to accurately represent populations and to ensure adequate participation in the event that some were not able to complete the study for any reason. According to Guest et al. (2006), data

saturation, or when no new information is obtained, occurs after the analysis of 12 interviews. There are rarely any new emerging themes after an analysis of 12.

A power analysis was not conducted in this study because there were not enough participants to meet the mathematical procedure such as in other quantitative and qualitative dissertations (Rudestam & Newton, 2007). Adequate population representation is needed for a strong argument.

Research Questions

The questions below were designed to explore the lived experiences of obese pregnant women, their views, stigmas, and factors that contribute to overall poor health.

RQ1 - What have obese pregnant women experienced regarding their health, pregnancy, and discrimination?

RQ2 - What knowledge do obese pregnant women have regarding poor health implications related to being obese and pregnant?

RQ3 - What views do obese pregnant women have regarding the health of the unborn child?

RQ4 - What advice about obesity and potential fetal and mother complications did providers give obese pregnant women?

RQ5 -What barriers such as embarrassment, shame, or guilt exist and prevent obese pregnant women from openly communicating with providers?

RQ6 - How has obesity and pregnancy impacted the daily routines, personal relationships, job duties and performance, and public perceptions of obese pregnant women?

RQ7 - Is obesity during pregnancy a normal expectation based upon the experiences of obese pregnant women?

Researcher's Role and Bias

My role as a researcher is to guide the processes related to the study. I recognize that my personal assumptions may exist. My beliefs stem from my nursing school experience and the treatment that my obese pregnant patient had during her obstetrical care and labor and delivery. According to Maxwell (2005), bias, also known as the researcher identity and experiences, cannot be of value to the study but should be eliminated from it.

According to Knight and Wyatt (2010), one successful recruitment strategy used to recruit obese pregnant women was prior to the patient weight assessment the physician explained the criteria for the study to their employees (nurses and aides). The nurses and aides provided the patients with educational materials and asked patients if they were interested in participating in a project designed to help mothers who are overweight or obese to provide their personal views and experiences, and assist through sharing their experiences in ways to improve their overall care. This participant selection design was used in this research study. The study occurred over three months and the qualifying participation pool was selected using this approach. The time would have been extended if adequate sampling had not been obtained.

The description of the study was located in the lobby of the chosen participating sites and distributed during office visits by the providers and office personnel. The physician explained the criteria of the study to the employees and they asked the patients

if they are interested in participating. The selection of participants was obtained through the distribution of the description of the study by the physician, nurse practitioner, and the nursing aides. Observational notes, observing reactions and interactions, and one-on-one interviews between the researcher and the participants were conducted. The interviews were audio-recorded. Observational notes were kept in a journal and were used to evaluate participant reactions to questions and responses, and were matched and coded with the audio responses of the participants. Only one, one-on-one interview session with each participant was completed for this study. Once participants were selected for this study, the one-on-one interviews began as soon as the participants and the researcher agreed to the date and time convenient for them. Participants preferred to have the interview on the same day of their scheduled office visit, which occurred before or after the scheduled appointment time, or at any other time that was convenient for them. The study occurred over 3 months.

Instrumentation

Instrumentation is the collection of rigorous data and the type of instrument that will be used. The survey instrument that I used was through one-on-one interviews between the researcher and the participants (See Appendix B). The interviews were audio-recorded. An analysis of the data was collected using NVivo10 to determine similar themes.

The preferred method of the distribution of the survey instrument in a qualitative study is one-on-one interviews (Creswell, 2009). The interviews occurred before or after a scheduled clinic visit or any time most convenient for the participants. The interviews

took place on-site in a private room. Participants called or emailed the researcher to schedule a convenient time for their one-on-one interview.

Data Collection Methods

Research permission was sought from three participating sites located in Nashville and Franklin, Tennessee. Participants signed the consent form which provided verification of their understanding of the goals of the study and their desire to participate in the presence of the researcher.

Data collection through the interview process is common in phenomenological research. Determining the type of interview that will yield the most information is important (Creswell, 2007). This study included in-depth semi-structured interviews, which involves participants who shared the same lived experiences. This study included one-on-one interview questions (see Appendix E) and audio-taping which occurred between the researcher and the participant. In addition to written and recorded responses, I kept a journal which was used to document actions, information, and responses that were not captured in the written or audio recorded responses.

After the collection of the data, all of the information and participant identifiers remained private. A numerical coding system was used to represent the participants, although participant names and numbers were matched and known by only the researcher. The interview data was put into a computer database and placed under a security code that only the researcher has access to. Audio recordings were kept confidential and secured under a double locking system. The audio recorder is placed in a secured locked file drawer in my library, where the file cabinet is also locked. The

audio recordings are kept securely under double lock for 5 years after the completion of this study. After 5 years, the audio recordings will be destroyed by shredding.

The study was designed to bring about provider and public awareness to (a) factors which impact the social and physiological well-being of obese pregnant women, (b) negative social stigmas and public scrutiny, (c) issues of discrimination, and (d) provider care and treatment. Negative social experiences and stigmas, faced by obese pregnant women, in my opinion, contributes to the inability of obese pregnant women to successfully lose weight. This study included semi-structured interviews with 12 participants. Data saturation was achieved after 6 participants but I wanted to ensure that no other themes emerged so I continued the interview process until I reached 12 participants. I focused on making the participants feel at ease by thanking them for agreeing to participate in this study, introducing myself, asking the participants how they prefer to be addressed, making direct eye contact, smiling, inviting the participant to have a seat, and beginning by engaging in passing casual conversation. The interviews took place in a private room located within one of the sites of participation, in which only the researcher and the participant were present.

Recent studies have been conducted on maternal-fetal complications, the lack of physical exercise, and dietary concerns, but few studies have been conducted to learn about the impact that social scrutiny, discrimination, and inadequate care and treatment has on obese pregnant women and the unborn child. According to Shub, Huning, Campbell, and McCarthy (2013), at least 94% of women who participated in a study, believe that excessive gestational weight gain and pregnancy complications are related.

However, the participants in the study were not able to identify any specific risks. Most of the women identified these conditions, with the highest number of women recognizing gestational diabetes (51%), hypertension or preeclampsia (27%), and excessive weight retention, postpartum (14.4%). Most of the women (71%) were concerned that excessive gestational weight gain would contribute to difficulty moving or excessive back pain. Fewer than 5% recognized the potential for problems with delivery, preterm birth or post-term birth, or neonatal mortality (Shub et al., 2013).

In a qualitative study, Ferrari et al. (2013), found that women were confused about what constitutes a healthy diet and physical exercise during pregnancy. Many participants in this study complained about being confused by provider instructions, or that the instructions were not personalized for them so they avoided following the advice of the provider. In another study conducted by Stengel, Kraschnewski, Hwang, Kjerulff, and Chuang (2012), overweight and obese pregnant women complained about being given conflicting information about gestational weight gain, providers did not seem concerned about their weight gain, or they complained about being provided no information at all. Participants in this study complained that providers lacked knowledge about safe physical activity for obese pregnant women. In this study, women stated that they would like to have the advice of their provider regarding their health and pregnancy. And finally, Olander, Atkinson, Edmunds, and French (2011), found in an exploratory weight gain study that women received no advice from their midwives, felt a lack of concern about weight gain during pregnancy, and believed that if their weight was an issue then the midwife would have told them. As a result of lacking guidance and

information, obese pregnant women are left to decide on their own how much weight they should gain, which leads to an excessive amount of weight gain.

Expert Panel Evaluation

An expert panel of four was identified. The expert panel included two professors from the College of Health Sciences, who are faculty members at Walden University. The chosen professors have earned a Ph. D. and completed research in the areas of maternal health, obesity, and pregnancy. The professors at Walden University had no prior connection with the researcher or this study. Two physicians located in Nashville, Tennessee, who provide care for high-risk maternal-fetal obese pregnant women, agreed to participate on the expert panel. They too had no prior connection to this study or the researcher in relationship to obesity and pregnancy. The purpose of the expert panel was to explore the implications for this study and to test the concerns and theories of this study. This exploratory research study was used to ensure that participants understand the concepts of the questions, that the questions provide concreteness, clarity, avoided being viewed as offensive, and to determine if any questions might require restructuring in an effort to address the problems cited in this study. There were a few changes made to two of the questions as deemed by the dissertation chair. Both questions were restructured for clarification. The assembly of the expert panel was used to evaluate if the research questions would provide a clear understanding of the phenomena and factors which guide the actions of obese pregnant women.

A written notification was emailed to the chosen experts in the study who were professors at Walden University and two obstetricians caring for high-risk maternal-fetal

obese pregnant women. The experts were provided my Prospectus to be used as an overview of the problem related to this study. The experts were asked to verify their interest and availability to serve on this panel. The goal of this study was explained to the panel with the intent of benefitting the health and well-being of obese pregnant women. The results of the study will be used to educate providers and society on how obese pregnant women are viewed, accepted, discriminated against, and cared for. A consent form was sent to validate his or her willingness to participate and to assure the panel that his or her identity or participation on this panel would never be disclosed. After completion of the evaluation and feedback, a monetary Starbucks gift card of $15.00 was mailed to each expert panel member as a way of saying thank you for sharing his or her time and expertise. There was a two week time allotment requested for the return of feedback of the questions.

Qualitative and Quantitative Comparison

A qualitative research design was used for this study. In qualitative research, the findings are not arrived at by quantification or statistical means (Golafshani, 2003). Qualitative research is designed to understand a phenomenon in the real world setting, without manipulation of the phenomena. This research is designed to yield insight into factors which impact the social and physiological well-being of obese pregnant women. According to Golafshani (2003,) qualitative research involves observations and interviews while quantitative researchers strive as much as possible to dissolve themselves from the research process. Discussions about the real world are subject to

change and qualitative researchers must be available to record the events before and after the change.

In contrast, according to Golafshani (2003), quantitative research uses quantitative measures and experimental methods to test the hypotheses, while emphasizing the analysis and measurement of the relationship between variables. There is less flexibility in quantitative research. Questions are fixed or closed-ended and do not allow for elaboration. According to Rudestam and Newton (2007), all research should yield findings that are convincing and based upon critical investigation. Validity and reliability, used in quantitative research, is inappropriate in a qualitative phenomenological study. Other leading qualitative researchers argue that validity and reliability are terms pertinent to quantitative research and not to qualitative research (Morse, Barrett, Mayan, Olson, & Spiers, 2002). According to Morse et al. (2002, pg. 2), Guba and Lincoln argue that trustworthiness is parallel in qualitative research to credibility, transferability, dependability, and confirmability. These four aspects are viewed as alternative criteria for qualitative research.

There are many ways to assess qualitative rigor and ways that can be used to strategize that the results are by reactivity or the influence of the researcher on the participants (Maxwell, 2005). The goal in reactivity is not to attempt to avoid influence but to embrace it and use it productively. Another way to assess qualitative rigor is by avoiding researcher bias, such as when the researcher selects the data that conforms to the existing theory, or through data that stands out to the researcher (Miles & Huberman, 1994). Confirming results with the participants, or categorizing, and member checking

when coding, are commonly stated methods (Morse et al., 2002). However, according to Maxwell (2005), in order for a study to be credible and useful, researchers are not required to assure an ultimate truth.

Triangulation is used to check validity through the analysis of a research question from multiple angles or perspectives. According to Patton (2002), inconsistencies in triangulation, shows strength rather than weaknesses.

Qualitative Design and Approaches

Multiple qualitative methods, measures, and approaches exist although most of them fail to uncover the focus of this study. This study is designed to uncover factors which impact the social and physiological well-being of obese pregnant women.

Action research is research designed to address a problem and promote social change. The research process is believed to be the beginning of social change. Researcher biases are likely due to the focus on change as opposed to exploring the phenomenon (Creswell, 2007).

Grounded theory is designed to discover or to generate theory. Participants in a grounded theory study all have had the same processes, experiences, interactions, or actions. Grounded theory is designed to explain the theory (Creswell, 2007). This study is designed to explore the lived experiences of obese pregnant women.

Ethnography or ethnographic research focuses on an entire cultural group (Creswell, 2007). Ethnography is used to learn the beliefs, values, behaviors, and cultural norms of a particular cultural group or organization. The researcher becomes immersed in

the culture and observes lifestyles, behaviors, and patterns (Rudestam & Newton, 2007). Ethnographic research is costly, time consuming, and requiring extensive field work.

Case study research involves the study of a problem or an individual issue within a system over a period of time (Rudestam & Newton, 2007). Multiple data sources of information are collected and a single case is studied. However, this research is designed to explore the lived experiences of obese pregnant women.

Phenomenological research uncovers the lived experiences of individuals (Creswell, 2007). A phenomenological study is designed to describe common experiences, a phenomenon, shared by individuals, as well as their interpretation of the world. According to Rudestam and Newton (2007), researchers attempt to describe a human experience.

Phenomenological Approach

Phenomenology is the ability to describe or explain a personal experience and is known as a science of conscious according to Edmund Husserl, the founder and philosopher of phenomenology (Rudestam, & Newton, 2007). According to Hopp (2008), Husserl would argue that the perception of a person can be transformed into knowledge. This phenomenological study is designed to explore the lived experiences and factors which impact the well-being of obese pregnant women.

According to Ghaemi (2001), Dasein is the ability of a person to allow him or herself to be defined by the interpretations of the public. According to Sutin and Terraciano (2013), people who are overweight or obese and who face discrimination, are more likely to gain more weight. The health belief model was used in this study to

examine beliefs that obese pregnant women share. The transtheoretical model of behavioral change was applied in this study to identify the change process and movement through the stages for obese pregnant women. The social cognitive theory was applied in this study to correlate the need for change through self-regulation, skill building, and behavioral capability (Drieling et al., 2011).

There have been multiple studies conducted in relationship to risk factors and pregnancy outcomes for obese pregnant women. However, few studies have been conducted which explore the social and physiological factors and the impact on the lives and well-being of-being of obese pregnant women. One of the problems in my view, in relation to obese pregnant women, is the lack of knowledge or recognition that obesity in pregnancy is related to more than overeating, poor food choices, and a lack of physical exercise. The day-to-day lived experiences of obese pregnant women can be explored through a phenomenological approach to learn about the world in which obese pregnant women live. This study is designed to learn more about the lived experiences of obese pregnant women.

Data Analysis

The purpose of the data analysis is for the researcher to make sense of the data collected and to interpret the findings. Data must be analyzed in extensive detail to narrow the research to the root of the problem (Creswell, 2009). This research involved asking questions, make interpretations, documenting observations, and audio-recording the interview. The data was collected through purposeful sampling with the providers, nurse practitioners, and staff encouraging qualifying patients to participate and, through

the distribution of the description of the study. The responses were entered into NVivo10. This software was useful in organizing and analyzing participant responses. Coding structures was used to develop themes. The data was then reviewed, merged, then retrieved. I also used NVivo10 to load researcher ideas as a reference. Semi-structured interview questions were analyzed. The data was analyzed through grouping participant responses, and to draw upon common themes and issues. NVivo10 was used to summarize data while maintaining the integrity of collected data. In phenomenological research, descriptions are formed, significant statements are analyzed, and the meaning of the data is generalized.

Ethical Concerns

The Internal Review Board at Walden University has specific guidelines for researcher compliance. I received approval from the Walden University Internal Review Board to conduct this study and my IRB approval number is 11-25-14-0296506. I sent a description of the study (see Appendix A), and letters of cooperation to one obstetric practice with another affiliate location and to the maternal-fetal clinic to obtain permission to recruit participants. The letters of cooperation (see Appendix F), indicated that the chosen providers would have an understanding of the study and agree to invite and recruit participants to join the study. The description of the study indicated the eligibility requirements for participants. Participants were informed as indicated on the consent form that they would be compensated for participation after the interview and I gave them a $25.00 gift card as a way of demonstrating appreciation for their time and for sharing their experiences.

Another ethical consideration for this study is the informed consent (see Appendix D), which was distributed to participants after the criteria for the study had been met. The consent form contains the nature, purpose, and eligibility requirements of the study. The voluntary nature of the study is included, in addition to the risk and benefits of participating in the study. Described in the consent form was information related to the privacy and confidentiality of the participants in the study. Participants were made aware that they may withdraw from the study at any time. Lastly, the consent form contained information related to the researcher, the affiliation with Walden University, the IRB approval number, the researchers contact information, the name of the dissertation chair in the event that a participant wished to discuss privately any questions or concerns, and the name and number of a Walden University Representative.

Participants were recruited from Nashville and Franklin sites of cooperation located in Tennessee. The sites of cooperation requested that a poster be made for each site, indicating the nature and explanation of the study and to be placed in the lobbies. Fliers were made containing the same description of the study and were also placed in the lobby. The chosen sites provide care for high risk maternal-fetal obese pregnant women. The participants were selected based upon meeting the criteria and their expressed desire to participate.

Participants were recruited using purposeful sampling. Purposeful sampling is used in qualitative research and is guided by the selection of participants who have experiences related to the phenomenon (Creswell, 2007). The form of sampling most appropriate for this study is Maximum Variation. According to Miles and Huberman

(1994), this approach is commonly used in qualitative research in which the researcher has advanced criteria variations and common patterns.

Summary

In summary, Chapter 3 presented the qualitative research design and approach, how the participants were selected, the settings in which the study took place, the participants, size, revisited the research questions, the role of the researcher, instrumentation, data collection methods, the expert panel assembly, qualitative and quantitative comparison, qualitative design and approaches, a phenomenological approach, data analysis, and ethical concerns. Chapter 4 will provide the results of the data analysis.

Chapter 4: Results

Introduction

The recent rates of obesity in the United States have been the highest ever recorded despite impressive published data (Chaput et al., 2012). According to the World Health Organization (2011), nearly 36% of adults are obese and 1 out of 3 women. Among population health problems, which are increasing worldwide, is the fact that populations are becoming more overweight and obese (Shub et al., 2013). Pregnant women are becoming increasingly overweight or obese, which creates one of the greatest future health challenges (Olander et al., 2011). American pregnant women are obese 18% to 38% of the time (Hull et al., 2011). The onset of obesity can occur when women fail to lose the weight they gained during previous pregnancies or when women who are already overweight or obese start to become pregnant (Olander et al., 2011).

According to Stengel et al. (2012), gestational weight gain continues to climb and 40% of normal weight women and 60% of overweight women are exceeding the recommendations set forth by the Institute of Medicine. In developed countries, maternal obesity is commonly related to stillbirths (Shub et al., 2013). In addition, failed inductions, hypoglycemia, gestational diabetes mellitus, macrosomia, preeclampsia, operative or instrumental delivery, perinatal mortality, and infant and childhood obesity are related to excessive gestational weight gain and maternal obesity. The body mass index is used to determine weight status (Hull et al., 2011). According to Shub et al. (2013), pregnant women are most likely to gain excessive weight when they

underestimate their body mass index, and obese pregnant women are likely to incorrectly assess their own body mass index.

The purpose of this qualitative study was to explore the experiences shared by obese pregnant women related to their health, co-morbid conditions, knowledge and education, and their experiences with negative perceptions, if any exist. The participants in this qualitative study participated in semi-structured interviews to address the research questions:

1. What have obese pregnant women experienced regarding their health, pregnancy, and discrimination?
2. What knowledge do obese pregnant women have regarding poor health implications related to being obese and pregnant?
3. What views do obese pregnant women have regarding the health of the unborn child?
4. What advice about obesity and potential fetal and mother complications did providers give obese pregnant women?
5. What barriers such as embarrassment, shame, or guilt exist and prevent obese pregnant women form openly communicating with providers?
6. How has obesity and pregnancy impacted the daily routines, relationships, jobs, and public perceptions of obese pregnant women?
7. Is obesity during pregnancy a normal expectation based upon the experiences of obese pregnant women?

The results of this study could be used to assist physicians, other clinicians, and the public on factors that impact the overall health and well-being of obese pregnant

women. This chapter describes the process of participant recruitment, data collection and storage, data analysis, data verification, and the resulting themes. The phenomenological research approach will also be described in this chapter, which guided the analysis of the data.

Recruitment

The recruitment process for this study was pre-planned and organized with three sites of cooperation. I communicated with all three sites of cooperation and shared a description of the study (see Appendix A) and letters of cooperation (see Appendix F) prior to the beginning of the study.

Recruitment for 12 participants occurred over 3 months. The providers and the other medical staff at the sites of cooperation reviewed the qualifications of the study, handed out fliers, and asked patients if they wanted to participate in a voluntary study related to obese pregnant women. The participants who agreed to the study initiated the contact with me. I screened participants by phone or in person by asking their body weight and height, gestational weeks, and age. This information was also verified by the providers to ensure that the body mass index and gestational weeks were accurate. I reviewed the nature of the study again with each participant, confirmed that they were between the ages of 18 and 55 years, and between 5 to 8 months gestation. None of the participants knew their body mass index; therefore, the body mass index was obtained from the provider. The consent form was read and signed in person by each participant prior to the beginning of the interview (see Appendix D). I answered any questions that the participants had and I asked how they would like to receive verification of their

transcript, either through e-mail or the United States Postal Service, at which time I requested an e-mail address or home address.

All 12 participants who agreed to the study met the eligibility requirements. All 12 participants were obese pregnant women who participated in individual interviews, which ranged in length from 45 minutes to 1.5 hours. Eight of the participants came from Franklin, TN, and four of the participants came from Nashville, TN.

Patient Profiles

The participants were from five counties in Tennessee and included Nashville, Franklin, Hickman, Columbia, and Nolensville. Participant ages ranged from 19 to 30 years. There were three participants who were 21 years old, one participant who was 19 years old, one participant who was 24 years old, two participants who were 30 years old, one participant who was 20 years old, two participants who were 25 years old, one participant who was 23 years old, and one participant who was 27 years old.

There were six participants who were European White, five participants who were African American, and one participant who was bi-racial (European White and African American. At the time of the interviews, two of the participants worked part-time, two of the participants were employed full-time, one participant was a student nurse, one participant was receiving disability, one of the participants was a stay-at-home mother, four of the participants were unemployed, and one of the participants was laid off from work. Eight of the participants were single, three of the participants were married, and one of the participants was legally separated. Of that number, two of the participants

were sisters. Table 6 provides a description of each participant at the time of the interview.

Table 6

Participant Profile

Participant	Race	Education	Age	Employment Status	Number of Pregnancies	Gestational Months	BMI	Obesity History	Marital Status
P1	African-American	High School	25	part time	(1)	71/2 months	45	childhood	Single
P2	African-American	Nursing Student	27	student nurse	(3)	6 months	31	adulthood	Single
P3	White	Junior High	21	disabled	(1)	8 months	39	childhood	Single
P4	White	High School	23	stay-at-home mom	(3)	7 months	42	childhood	Married
P5	Bi-racial	High School	19	unemployed	(2)	8 months	33	since pregnancy	Single
P6	White	High School	21	full-time	(3)	5 months	30	since pregnancy	Married
P7	African-American	High School	21	unemployed	(1)	6 months	31	since childhood	Single
P8	African-American	Nursing Aide	24	full-time	(1)	8 months	41	childhood	Single
P9	White	High School	30	unemployed	(4)	8 months	35	since pregnancy	legally separated
P10	White	High School	25	unemployed	(2)	8months	43	since childhood	Married
P11	African-American	High School	30	unemployed	(4)	8 months	33	since pregnancy	Single
P12	White	High School	20	part-time	(1)	5 months	30	since childhood	Single

Participant Number 1, P1, is a 25 year old, single, African American female. She is seven and a half months pregnant and this is her first pregnancy. She works part time in the family owned restaurant business. She described having to deal with negative comments and being made fun of her whole life. She also described being made fun of on her current job by customers related to her weight and pregnancy. She lives in an apartment with her boyfriend who is the father of their baby. She has struggled with obesity since childhood and has weighed more than 300 pounds in high school. She described having a personal trainer and had lost 38 pounds prior to this pregnancy. She stated that she has been told by her provider that she has borderline problems with asthma, high blood pressure (hypertension), and diabetes mellitus.

Participant Number 2, P2, is a 27 year old, single, African American female. She has three children, two of which are twins. She is six months pregnant and this is her third pregnancy. She is a full time nursing student. She described witnessing discrimination on her job and members of the leadership team making derogatory statements about other pregnant obese women. She described weighing more than 290 pounds with her last pregnancy. She states that she has problems with her blood pressure and cannot take birth control pills. She lives in an apartment with her boyfriend and her three children. She described being very emotional related to her hormones and stated that her friends also noticed the changes in her mood.

Participant Number 3, P3, is a 21 year old, single, disabled, European White female. She is eight months pregnant and this is her first pregnancy. She lives with a relative and describes having very little family support. She described that her parents

have not been there for her and the father of her baby as being absent. Due to her disability, she receives Social Security benefits. She has struggled with obesity since childhood.

Participant Number 4, P4, is a 23 year old, married, European White female, and a stay-at-home mom. She is seven months pregnant and this is her third pregnancy. She lives in a home with her husband and their two children. She described having struggled with obesity since childhood.

Participant Number 5, P5, is a 19 year old, single, biracial female (European White and African American). She is eight months pregnant and this is her second pregnancy. She had a miscarriage and conceived in less than a month later. She lives at home with her mother and she is unemployed. She described having a very supportive mother and family. She has had problems with obesity during this pregnancy. She described having relationship problems, and a lack of trust with her boyfriend. She also described having friends and employers make derogatory statements about her weight and pregnancy. She was required to perform task on the job that she could not fulfill due to her pregnancy. She was fired from that job since her pregnancy. She was hired on another job but never given a start date. She reported that at this time she is unable to work.

Participant Number 6, P6, is a 21 year old, married, European White female. She works full-time in a metro school cafeteria. She is five months pregnant and this is her third pregnancy. She has had problem with obesity since her first pregnancy. She lives in a home with her husband and their children. She described giving birth to her first

child at the age of 14 years old and was urged by her parents to put her daughter up for adoption. She stated that she revoked the adoption after nine weeks, and her child was returned to her. She recalled this incident as being stressful and overwhelming.

Participant Number 7, P7, is a 21 year old, single, African American female. She is unemployed. She is six months pregnant and this is her first pregnancy. She has had problems with obesity prior to this pregnancy. She lives in an apartment with her boyfriend. She stated that her family is very supportive.

Participant Number 8, P8, is a 24 year old, single, African American female. She works full-time as a Certified Nursing Assistant in an Assisted Living Facility. She lives in an apartment with her boyfriend and states that they have been homeless in the past. She described having relationship and trust problems with her boyfriend. She is eight months pregnant and this is her first pregnancy. She has had problems with obesity since childhood and has weighed more than 300 pounds while in junior high school. She described a familial history of obesity and stated that her mother gained 100 pounds with her last pregnancy. She described having a personal trainer and had lost 30 pounds prior to this pregnancy. She credits her lifestyle change to her weight loss. She described herself as being very emotional at times and crying, but she had no idea as to why she was crying. She stated that she is hormonal and will be glad when this pregnancy is over.

Participant Number 9, P9, is a 30 year old, European White female, who is legally separated from her husband. She is eight months pregnant and this is her fourth pregnancy. She has three other children who are being cared for by other family members. She is unemployed and lives in a community recovery house for pregnant

women who are being detoxified for opiates and other addictions. She is being followed by an obstetric physician in addition to a high risk fetal-maternal clinic. She is receiving Sebutex for detoxification. Her baby is breech and the provider is unsure if the fetus will move into the vaginal canal prior to delivery. In addition, she is anxious about the possibility of having a cesarean section. She has had problems with obesity since her first pregnancy.

Participant Number 10, P10, is a 25 year old European White, married, female. She is unemployed, and described that she preferred not working during this pregnancy because she does not have to hear negative comments being made about her, or nasty looks like she received during her last pregnancy. She is eight months pregnant and this is her second pregnancy. She had thyroid problems during her first pregnancy and was considered high risk, however she has not been checked for thyroid problems during this pregnancy so she has no idea about her risk. She lives in a home with her husband and her daughter. She has struggled with obesity since childhood. She gained more than 60 pounds during her first pregnancy. Her sister is also a participant in this study.

Participant Number 11, P11, is a 30 year old, single, African American female. She was laid off from her job after she became pregnant. She described being sick most of the time and unable to perform her job. She reported that her employer laid her off rather than terminating her so that she could receive unemployment. She is eight months pregnant and this is her fourth pregnancy. She described having major problems with the father of her children. She has two other children and has had one miscarriage. She lives

in an apartment and her family helps her to care for her children. She has struggled with obesity since childhood.

Participant Number 12, P12, is a 20 year old, single, European White female. She is employed part-time as a bartender. She changed her employment status to part-time after becoming pregnant and being harassed, talked down to, and made fun of, by her coworkers related to her pregnancy and her weight. She is five months pregnant and this is her first pregnancy. She lives in an apartment with her boyfriend and reported that they will be moving to Missouri in the next few months, therefore she will not deliver her baby in Tennessee. She has a sister who is also a participant in this study, and like her sister, she has struggled with obesity since childhood. She described losing weight and lost down to 120 pounds, but has since gained 50 pounds. She stated that her family is very supportive of her. She described being very emotional and crying at times and had no idea why she was crying.

Data Collection and Storage

Data collection for this study included field notes, digital recordings, and reflective journaling. I kept field notes of each participant and accurately captured their point of view. I maintained my journal, expressing my own beliefs and preconceived ideas but kept them separate from the actual experiences and views of the participants.

I digitally audio recorded all of the participant interviews. I then transferred the digital audio recordings to the computer and transcribed the recordings verbatim. I have the participant information, field notes, recorded interviews, and journals in a locked file.

The interviews that were transferred to the computer are password protected and can only be accessed by me the researcher.

Data Analysis

Data analysis for this study included member checking, reviewing, reading, and rereading the written transcripts, listening to the digital audio recordings multiple times, transcribing the interviews using both written and audio recordings for accuracy, and highlighting common statements and experiences of each participant. I reviewed the transcripts repeatedly to determine if any correlation existed between the lack of knowledge related to obesity and pregnancy, social discrimination, and support from the family and employers. I ruled out my own personal bias that pregnant obese women face.

All interviews were transcribed by me within 7 days after the digital audio recordings. I read the written transcription of each participant and matched each individual written transcript with their digital audio recordings. I informed each participant at the beginning of the interview that I would send them a copy of the questions and their responses to ensure accuracy. I gave all 12 participants a copy of the consent form in the event that they had any questions. There were 11 participants who requested their transcripts be sent by email and one participant requested her transcript be sent by United States mail. Included with the transcript was the member checking letter which explained the transcription to determine if the transcript accurately reflects their shared experiences (see Appendix G). The participants were instructed to feel free to correct, extend, or clarify anything that does not reflect their experiences. All 12 participants confirmed receipt of the transcript and none requested changes be made to

the transcript. Two of the participants sent a text message confirmation to my cell phone, nine sent an email confirmation, and one called my cell phone to confirm transcript accuracy. Member checking was used to verify the accuracy of the transcriptions and the experiences of each participant.

I used NVivo 10 to organize and analyze participant responses. I used 13 semi-structured interview questions to develop categories for grouping. Coding structures were used to develop themes. The health belief model was used in this study to examine beliefs that pregnant obese women share. The transtheoretical model of behavior change was applied in this study to identify the change process for pregnant obese women, if any such changes exist, and the social cognitive theory was applied in this study to correlate the need for change through self-regulation, skill building, and behavioral capability (Drieling et al., 2011). The categories were (a) education related to obesity, health and disease, (b) meaning of the acronym for body mass index, (c) communication with provider, (d) labor and delivery preferences, (e) carbohydrate consumption related to feelings of stress, (f) experiences of support from family, friends, and employers, (g) beliefs of differences in treatment for normal weight pregnant women, (h) beliefs that obesity during pregnancy as the norm, (i) pregnancy and stressful situations. From these categories, further analysis was conducted to specifically address factors which impact the overall well-being of pregnant obese women. Participant responses were categorized to support the themes.

According to Rudestam and Newton (2007), traditionally qualitative research has an approach to textual data analysis. I selected Moustakas (1994), presentation and

modification of the data using the van Kaam method. The first approach that I used was to review all participant statements and determine how well they described their experiences related to pregnancy and obesity and social factors which impact their overall health. Each statement was considered credible and of value. I wrote descriptive responses from each of the participants then grouped them into clusters with similar meaning.

The second approach that I used was the elimination of overlapping or redundant statements. I maintained the key meaning of each participant responses. I categorized all responses and experiences and examined potentially different meanings.

In the third approach I used multiple perspectives and applied descriptive textual experiences to uncover actual lived experiences of pregnant obese women.

In the final step, the essence of the phenomena was developed. I evaluated and created a structural description of the experiences of pregnant obese women. In this step I was able to analyze the current experiences of pregnant obese women and compared current experiences to the existing body of knowledge. I analyzed the data repeatedly to ensure the validity of participants using numerous perspectives.

Evidence of Trustworthiness

The verification of collected data included transcription of interviews, digital audio recordings, coding, and analyzing the data, thus dependability. According to Lincoln and Guba (1985), member checking is used to establish credibility, which is the most critical technique. Transferability is achieved when thick description is used. A detailed description of each participant was used to transfer information to other settings and to support the current themes developed. I also transcribed and coded records of the

interviews, kept a journal, and took field notes. To ensure confirmability, an audit trail was maintained in the event of replication of the study.

Themes

This study was designed to explore views and responses of pregnant obese women and factors which impact their social and physiological well-being. This study was used to uncover multiple factors which may hinder or inhibit maternal and fetal health and well-being.

The health belief model guided this study in relationship to the readiness of pregnant obese women to act upon their health as well as the prevention of disease, or the lack of readiness to act upon obesity. The views of pregnant obese women are based upon their individual perception of poor health, or their belief that they are not susceptible to it. The motivation of pregnant obese women is the focal point to improving maternal and fetal health. This model was used to determine individual awareness of the severity of obesity and complications that may last a life time.

The participants in this study seemed to have little awareness or concern that they were obese and at risk for multiple health complications which could adversely affect both the mother and the unborn child. Since the participants in this study received minimal to no education regarding their health, nearly all of them viewed themselves as being healthy.

Results

The purpose of this phenomenological study was to explore pregnant obese women and factors which impact their social and physiological well-being. Participants

in this study shared similar lived experiences. Themes were developed as a result of consistent similarities among the 12 participants (See Table7).

Table 7

Interview Themes

	Themes
1.	Beliefs of being healthy despite obesity and excessive weight gain
2.	Uncertainty hinders labor and delivery discussions or decisions
3.	Comfortable provider communication when unrelated to obesity
4.	Public disrespect and shame related to pregnancy and obesity
5.	Similarities in carbohydrate consumption in pregnant obese women
6.	Self-concept influences feelings of public rejection or support
7.	Provider and public treatment differs related to pregnancy and obesity
8.	Obesity and excessive weight gain expected during pregnancy
9.	Stressors during pregnancy related to life circumstances

Individual Depictions

Theme 1: Beliefs of Being Healthy Despite Obesity and Excessive Weight Gain

All 12 of the participants were pregnant and obese however, they all believed that they were healthy. Some of the participants believed that they were healthy either because they had not been told that they had any health problems, or because they had not received any education in relationship to pregnancy, weight, or the potential of developing co-morbid conditions. Some of the participants described their knowledge of

past health issues, but since they were not evaluated for such conditions during this pregnancy they believed that previous co-morbid conditions no longer existed.

P1: I have not been told anything. I researched most of it myself. I do not have any other conditions except borderline diabetes... my doctor told me.

P2: I have not been told anything about my health. My doctor asked me if I had any blood pressure problems. The last time I was pregnant I had problems with my blood pressure.

P4: Whenever the doctor checked on my baby towards the end...he has always said that my babies were healthy.

P5: The doctor used to ask me a million questions. He told me about eating healthy and being healthy.

P8: I always ask a lot of questions. My doctor will tell me about anything that I ask questions like how much my baby might weigh.

P9: The doctor told me about the effects of Subutex. I was taking Subutex during the first part of this pregnancy and I was told about the need to be referred to a high risk clinic. I needed to be eventually detoxed from Subutex.

P10: My baby is healthy. I have not had any problems and no discussions about my health.

P12: The doctor said that everything looks good. He does get on me about my weight because I am supposed to weigh 120 pounds but I am at 170 pounds at 5 months.

P3, P6, P7, and P11 stated that they had not been told anything about their health or the health of their unborn child, despite being obese. P7 weighs 157 pounds, while P3,

P6, and P11 weigh more than 200 pounds. Some of the participants believed that they are healthy because they have not been assessed for any health conditions such as diabetes mellitus or hypertension. Seven of the participants discussed medical conditions that they learned about in the past. Some of the participants were told that they had borderline disease or conditions while some participants described medical problems in previous pregnancies or in their family history.

P1: I have been told that I may be borderline diabetic, have thyroid problems, and asthma.

P2: My doctor talked about high blood pressure but not with this pregnancy. I was really huge with my second baby.

P4: When I first got here I was given pamphlets to tell you...Especially since that one was my first baby. I remember going home with stacks of papers. I was very young, 17 years old, when I had my first child...I definitely needed the education at that time.

P7: The doctor told me about high blood pressure, but I do not have it.

P8: I do not have gestational diabetes...Not on my mothers' side, but my fathers' side there is a lot of illnesses. But I have been fortunate not to have it.

P10: I have thyroid issues, but I have not had a discussion about it...So I am not taking anything for it. I have not been tested during this pregnancy, so I am not sure if I am having problems or not. I was considered high risk during my last pregnancy because of my thyroid problems.

P12: I have not had any medical conditions. I am 5 months pregnant and I have gained 50 pounds, but I know that I am supposed to be gaining about 2 pounds every 3 weeks.

P3, P5, P6, P9, and P11 stated that either they have not received any education about medical conditions often associated with pregnancy and obesity, or they described that they have no health conditions at all.

P3 described that she had no health conditions and that she felt fine and just wanted to deliver her baby.

P5 described that she had not had any discussions about health or medical conditions.

P6 described that she has gained 75 pounds in 5 months but she has not received any education or medical assessments.

P9 described that she has a history of a substance abuse problem and has gained 50 pounds since this pregnancy. She described not having any conversations with her provider about disease or conditions.

P11 described that despite her weight of 217 pounds she has not been given any education regarding medical conditions or concerns. Most of the participants described concerns about their labor and delivery preferences and they were unsure of how their delivery would end due to their weight gain and their experiences with previous deliveries. This will be discussed in greater detail in Theme 2.

Theme 2: Uncertainty Hinders Labor and Delivery Discussions or Decisions

All 12 participants described that they preferred natural or vaginal births and most of them described that that they would ask for an epidural. Most of the participants

described having concerns and opposition to having a cesarean section, but recognized that they may not have a choice. Two of the participants have had discussions with their provider about their delivery choices while 10 of the participants have not.

> **P2**: I really would like to have a natural birth but I will probably have a c-section because I had to have a c-section when I had my twins. The doctor is old fashioned and he will not take any chances.
>
> **P3**: I want to be able to have my baby naturally...But I do not deal well with pain.
>
> **P5**: I definitely want an epidural...And I am not doing it without an epidural. I did not tell my doctor that I do not want a c-section because you never know what might happen. I do not know what I will have to do.
>
> **P6**: All of my pregnancies have been late deliveries. I delivered all of my children at 42 weeks and I had to be induced. All of my births were vaginal and I had an epidural.
>
> **P7**: I know how I want to deliver my baby...I want to deliver naturally. I do not want an epidural but I have not discussed this with my doctor yet.
>
> **P8**: My mother had to have a c-section with all four of her children. I am not sure that I want to have a c-section. Some people say it is easier to have a c-section...Some people say it is easier to have the baby vaginally...Some people say do not have an epidural. So, I have all of these questions. The doctor told me that when the time comes we will see when we get to the hospital.

P9: I prefer to have a vaginal birth...But we have a problem right now. The baby is breech so we are waiting for him to flip back over before I go into labor. So right now there is a question about a vaginal delivery.

P10: I do not want a c-section...I do not care what I have to do...I am not going to have a c-section. If I have already been through that much pain there is no need for a c-section. I almost had to have a c-section before...I had 22 hours of pushing and nothing happened. The doctor came in and said get ready for a c-section...So I pushed every contraction after that.

P11: We generally wait until one more week or so...Then we will decide...But I do not want a c-section.

P12: I have not talked with him about my delivery preferences...I am moving to Washington State so I will not deliver here.

Two of the participants P1 and P4 stated that they had talked to their provider about their delivery preferences. Both of the participants were certain about what they wanted and they both expressed concerns about pain. They were uncertain about the outcome of the delivery.

P1: I talked a little bit about it. I will talk more when I go back the next time. I am not good with pain...I will need something because I will pass out with pain. I just do not want to feel all of it.

P4: I have discussed having a natural birth but I might need some medication.

The participants were comfortable when communicating with their providers but had not had any discussions about being obese and the complications often associated with their delivery. This will be discussed further in Theme 3.

Theme 3: Comfortable Provider Communication When Unrelated to Obesity

Eleven of the participants were comfortable communicating with providers. Some of the participants have had long-term familiar connections in which the providers cared for several generations within their families. Others reported having been a patient with a provider since they were 15 or 16 years old. Most of the participants described feeling comfortable with their provider, although discussions were not related to obesity, an acceptable pregnancy body mass index, delivery complications related to obesity, healthy eating, maternal-fetal complications, or weight management.

> **P2**: I talk openly with my doctor. I have been with him since I was about 16 years old.
>
> **P4**: I feel very open when talking with him. This is the reason why I keep coming back to him [doctor] every time.
>
> **P8**: No I do not feel uncomfortable...He is the doctor that delivered me and he delivered all four of my mothers' children.
>
> **P11**: I do not feel ashamed or embarrassed to communicate with my doctor. I have been seeing him since I was 15 years old.
>
> **P12**: I do not have any trouble communicating with my doctor. I am so comfortable with him that I am going to ask him when I can start having

intercourse again. I had been having some problems with my cervix at the beginning of this pregnancy and I was told that I could not have intercourse.

P1, P3, P5, P7, P9, and P10 described feeling very comfortable communicating with their provider. They did not discuss any particular connection or long-term patient and provider relationship. P3 described feeling embarrassed to communicate with her provider. She believes that the provider likes to argue with her regarding misinterpretations of the gestational age of the fetus.

P3: I feel embarrassed communicating with my doctor. Sometimes he likes to argue with me. I told him that I was further along in my pregnancy than I actually was and he corrected me. I was not that far along...I was just trying to push it.

P6: I have been a patient with the same provider since I was 14 years old. I used to feel ashamed talking to my doctor when I was younger because everything seemed nasty then.

Few of the participants described having discussions with providers related to acceptable pregnancy weight, though most described feeling comfortable communicating with them. At least half of the participants did not know the meaning of the acronym body mass index or what their body mass index should be. P2, P3, P5, P10, and P11 were not told how much weight they should gain during this pregnancy. P10 had a pregnancy body mass index of 43 and believed that her pregnancy weight was acceptable. Some of the participants believed that they did not need to know how much weight they should gain during pregnancy since they were not told that they had diabetes or high blood pressure.

P3: No... My doctor did not tell me how much weight I should gain with this one...But I lost 30 pounds during this pregnancy...Now I am gaining two pounds a week.

P4: He told me approximately but I do not remember the numbers...All that I know is that I have not gained a lot of weight during this pregnancy. He [doctor] is happy with my weight.

P5: No I was not told how much weight I should gain during this pregnancy, but I have gained a lot...I used to weigh 125 pounds but now I weigh 181 pounds. I have gained 9 pounds a week...My mother told me that at the end of her pregnancy she started to gain weight like crazy.

P1 and P9 had not been told how much weight they should gain during this pregnancy. P1 stated that she had conducted her own research and found out how much weight she should gain. P1 described having a personal trainer and did not believe that she had gained too much. P9 described that she believes that her prior drug abuse contributed to her weight gain during this pregnancy.

P1: My doctor has not discussed how much weight I should gain with this pregnancy but I found out about 30 pounds...I have gained 26 pounds...I am happy I can stay at this weight or gain about 5 or 6 more pounds until the baby is born.

P9: I know that around 25 pounds is average. I have probably gained about 50 pounds during this pregnancy...I was just coming off drugs right at the beginning

so I ate more and that had a lot to do with it...So naturally I would gain some weight.

P6, P8, and P12, described that they were told how much weight they should gain. P6 describes her provider as being happy with her weight since she does not have blood pressure problems. P8 describes losing weight early in her pregnancy due to hyperemesis.

P6: My doctor told me to gain 30 to 35 pounds...He never says anything about my weight because I do not have diabetes or high blood pressure. My weight was 135 pounds and now I weigh 210 pounds.

P8: My doctor told me that I would gain anywhere from 20 to 40 pounds. I lost a lot of weight during my first trimester... and I believe that most of it was my fault because people said that when you continue to vomit to push fluids but I could not do that.

P12: My doctor told me that I should gain about 30 to 40 pounds.

All 12 participants described that they did not know their body mass index and P10 described that she did not want to know. P2, P4, P6, P7, P8, P9, and P10 described their understanding of the acronym for the body mass index however none of the 12 participants discussed their body mass index with their provider. Participants described various experiences related to public scrutiny and disrespect. This will be discussed further in Theme 4.

Theme 4: Common Experiences of Public Disrespect and Shame Related to Pregnancy and Obesity

Six of the participants P1, P2, P5, P6, P10, and P12 described hearing disrespectful comments from family members or employers related to their pregnancy weight gain, and of being treated differently in public. P6 has a history of being morbidly obese during previous pregnancies. She expressed concerns of excessive weight gain during this pregnancy too. P6 described that her mother feared her gaining too much weight like she did in her previous pregnancies.

> **P1**: Oh my goodness...People who come in the restaurant can be evil...They feel like they know me because they see me so much. They don't say it to my face but they make side comments. It's nothing new...I never say anything back to the customer...They are why we are in business. I may make a comment about it to my mother. So I take it and keep it moving.
>
> **P2**: My granddaddy said things like...What is wrong with your belly...You are getting too big...I did not want to tell him or anybody else that I was pregnant until I knew for certain.
>
> **P5**: People have said some really mean things to me about being pregnant and my weight...But they act as though they are just playing around.
>
> **P6**: People would say things like you have gotten too fat...You are eating too much...Don't gain too much weight with this baby...You are going to be miserable.

P10 described experiencing scrutiny and disrespect during her first pregnancy. She described experiencing negative comments, disrespect, and being treated differently in the work place during her last pregnancy. She chose not to work while pregnant this time due to the fear of having to endure the same type of treatment.

> **P10**: I have tunnel vision...If I hear criticism or disrespectful comments I do not listen.
>
> **P12**: I think pregnant obese women are treated differently in public, amongst friends, and in the work place. Every time I go into the maternity store, there is an attendant who is very, very petite. She treats me differently than one of the pregnant women who are of normal weight. She ignores me... But I just ignore her because if someone is mean it will come back to them.

P3, P4, P7, P8, P9, and P11 described that they have not had any problems with shame, scrutiny, or disrespect in public. P9 described that she did not believe that pregnant obese women were treated differently by providers, however P3, P4, P7, P8, and P11 described that they believed that pregnant obese women were treated differently than pregnant women of normal weight. Theme 5 discusses similarities in carbohydrate food choices among pregnant obese women.

Theme 5: Similarities in Carbohydrate Consumption in Pregnant Obese Women

All 12 participants were asked if public criticism and discrimination contributed to stress and overeating. At least 6 participants described overeating related to stress, while 6 other participants described that stress did not cause them to overeat. At least 10

participants described the desire to snack on carbohydrates such as chips, potatoes, rice, pizza, and sugary foods such as candy and sodas.

> **P2**: Yes I eat more when I am stressed. My eating habits are horrible. I used to eat really healthy... But now I am irritated and hormonal. At night I want to eat greasy foods, which gives me heartburn...Because I am eating lunch at 2am. I cannot stay full...I don't know if it is because I am running around working and burning so many calories. I should not be eating this much food like I am a garbage disposal. I guess each pregnancy is different. I eat when I am, stressed. I have been craving greasy foods with this pregnancy. I eat potatoes and rice, and cereal and milk every morning. I cannot eat pancakes with syrup or cinnamon...I cannot eat that...No sweet foods.
>
> **P3**: Yes I eat more when I am stressed. I like to eat at fast food restaurants when I am stressed. I love potatoes too much. I still eat pizza even though I was given a healthy diet plan to follow from the health department.
>
> **P4**: Normally I eat more when I am stressed out, but not when I am pregnant. I have been good this pregnancy. I eat whatever...It just depends upon whatever is in the house snack wise. I like crackers, chips, and chex mix. I eat bread, pizzas and rice...If it is there [in the house] I will eat it.
>
> **P5**: I am not sure if criticism contributes to eating more... But I do crave sweets a lot. I try not to stress myself out because I had a miscarriage with my first pregnancy...But I got pregnant not even a month after that. I will think of a food

that I like and I will have a craving for it until I eat it...But I do love sweets...But I eat everything.

P7: I probably eat more when I am stressed and I eat the same kind of foods most of the time. I eat a lot of fruit...But I also eat chips and candy sometimes...But for the most part, I eat healthy.

P12: Criticism is what has caused me to snack throughout the day...Then I might eat a smaller portion at dinner time. I used to eat one full meal a day then I would snack throughout the day. But every since people have made fun of my weight...I stopped caring. I call it depressed eating. I usually eat candy but it is the worst for you...But I love it and I also love pizzas and potato chips. I crave canned peaches and pears, even though they are not good for you with all of that sugar in them. At first I was craving sour candy and that is all I wanted...But now I do not want sour candy. Now I want milk even though I am lactose intolerant...So I am drinking regular milk and it has not bothered me.

Neither of the participants described feelings of social discrimination or public scrutiny as a reason to overeat, nor to contribute to stress, according to P6, P8, P9, P10, and P11, except P1 who described public scrutiny as a factor in overeating.

P1: When I was younger I was overeating because of the way people were treating me because I was overweight. Now it does not bother me and if it does, I will talk to my mother and my boyfriend. I eat everything that I was eating before because my metabolism has built up over the past three years. I don't like junk

food. I believe that you can do what you were before you get pregnant, after you get pregnant. I am doing the same routine and regimen before I got pregnant.

P6: I do not really eat much...but some days I go through phases of being hungry all of the time. At work I cannot eat all of the time. I eat chips and dinner or just dinner. When I feel stressed I eat chips. The doctor told me to substitute the chips with carrots...But it is not the same. My daughter would eat the carrots.

P8: I do not believe that public criticism causes me to eat more...That is not what I do. I know that I am overweight now but I used to be massively obese. When I was in high school I weighed over 300 pounds. My personal trainer told me that the way that I eat should not be thought of as a diet...But as a life style change. There are a lot of foods that I do not eat anymore...I just don't like it. I eat potatoes, red potatoes...But I eat things in moderation. I am a snacker and I eat things like trail mix, carrots, and broccoli. I do not eat McDonalds or Wendy's anymore. I used to like fast food restaurants...But I have to give credit to my trainer. I used to put a lot of dressing on everything that I ate...But I do not do that anymore.

P9: I do not eat much because I have a lot of indigestion. I can barely fit into any of my clothes at this point. Today I have only eaten a banana and drank a cup of coffee. I am on my way to an 8 pound baby according to the high risk clinic...But I usually have 8 pound babies anyway. So when I feel stressed, I do not eat much...I just don't have the room to overeat.

P10: I do not eat more when I am stressed...I lose my appetite when I am stressed out. When I feel stressed I drink a lot of cokes.

P11: I have never been big on eating junk foods...I have never been a sweet's person...So stress does not cause me to eat more. If I eat carbohydrates, it's not because I am stressed but because I want to eat them.

The participants described either being supported by family, friends, and employers since this pregnancy or a lack of support, discrimination, scrutiny, and unfair treatment on the job. This will be discussed further in Theme 6.

Theme 6: Self-Concept Influences Feelings of Personal Support or Rejection

Among the 12 participants, 5 described feeling a lack of support after people realized that they were pregnant. Some of the participants P1, P2, P3, P5, and P6 described experiencing rejection due to having a negative attitude, impatience, and hormonal changes.

P1: At first everyone had negative things to say about me being a big girl and being pregnant...But the main ones who are my mother and my boyfriend, they have been good. My attitude was horrible...My patience was thin. If a person said something to me that did not make sense, I would come down really hard on them. I went off [got really mad] and said offensive things towards a customer when I was 4 months pregnant. The owners of the restaurant [grandmother and mother] made me stop working for a month. I had to get myself together and figure out what I was going to do.

P2: My friend who is here with me now, she is a nurse and she is supportive of me. Other people including my employer and family members have not been very supportive. She was the first one to tell me that she noticed that my attitude

had changed...She said that I was hormonal and that she believed that I was pregnant. My attitude was on the rocks...I found myself crying sometimes but I did not know why I was crying.

P3: My family and friends are not really supportive of me. My aunt who brought me here today, she is supportive of me. My family members have not done anything that they said they were going to do for me. They have made so many promises to me and they have broken every one of them. I need some things before my baby is born and I do not know how I am going to get them.

P5: My family is supportive of me since I have been pregnant...But my job was not supportive at all. They were rude to me all of the time. They wanted me to do things that they knew that I could not do. I got fired from one job because they wanted me to take out the trash but they knew that the trash was too heavy and that I could not do it. They knew that I was pregnant before they hired me...So I don't know why they hired me.

P6: People would say that I had gained too much weight. I was in school but I kept going. I did not really feel that big...But when I look back on how much weight I gained I guess I was. Now people look at me funny...Just like they did before.

P4, P7, P8, P9, P10, P11, and P12 described that their family and friends have been supportive of them since they became pregnant. P8 described support from her current employer and described a lack of support from her previous employer.

P8: On my current job...I have been quite surprised. People that I really didn't know gave me a baby shower...They even decorated the private dining room and that was a surprise. The nursing director knew that I was pregnant but the company still paid for me take my certification exam. My starting salary was the same as nursing aides who already had their certification. I have been blessed. But I will not be able to collect short-term disability so that is why I am still working this late into my pregnancy. But when I first got pregnant...I lost my job. I started missing so much and I lost the job...After that I ran into a hardship...I could not get hired anywhere even though I have an extensive resume...I have done a little bit of everything. My fiancé had to support us after I lost my job.

P11 stated that her family and friends have been supportive but make her feel as though she is helpless by wanting to do everything for her. P12 described that her family and friends have been very supportive. She described her mother as being very supportive and expects her to come to visit her as soon as she delivers the baby since she and her boyfriend will be moving to Washington State before the birth.

The participants described their experiences and views of being treated differently than pregnant women who are of normal weight. This will be discussed further in Theme 7.

Theme 7: Provider Treatment Differences Are Related to Pregnancy and Obesity

Twelve participants described their views about pregnancy, obesity and treatment. Eight of the participants P2, P3, P4, P5, P7, P10, P11, and P12 believed that pregnant obese women are treated differently than pregnant women who are of normal weight. They described that they get looks in public that make them feel as though they are being

looked down on, they described that employers hired them but never gave them a start date, or hired them and required them to complete tasks that they could not complete so they were terminated, or never hire them at all after realizing that they were pregnant. Further, they described people made negative comments such as they cannot see the pregnancy because of their weight, or that they would deliver a 10 pound baby.

> **P2**: I think that providers treat big women differently and I think that the public does too. I saw it first hand in the work place and I did not think that it was right. They were talking about a big girl who was pregnant...They would say that she is so big that they did not see a baby...I told them that she is still pregnant whether they could see it or not...She is still carrying a baby. I told them that she is pregnant and she is tired. I could not believe that people in leadership would say things like that.
>
> **P3**: I believe that doctors treat bigger women who are pregnant differently than they treat normal weight women who are pregnant. I do not know why but I know that they do. I know because of the looks that people give me. I don't know if you have ever noticed but if a bigger woman walks by, she will get looks like she should be ashamed of herself.
>
> **P4**: I have heard from a few of my friends that doctors prefer not to see larger women when they are pregnant. They feel that they are a risk to take care of.
>
> **P5**: I believe that bigger women are treated differently mostly on the job. I have never had a problem getting a job in the past but now it is really bad since I am pregnant. Nobody will hire me. I was surprised when the call center hired me...It

was a sit down job so it should not have mattered if I was pregnant or not...But you see how they did me...They kept putting my training date back for a total of two months. They knew that I was pregnant when they hired me but they had no intentions of ever letting me work. Now I cannot work because I am too far along. But if I am walking into a store, some people are nice and will hold the door for me.

P7: I believe that doctors treat overweight or bigger pregnant women differently. People make you feel like you have a disability sometimes.

P10: I believe that doctors treat heavier women who are pregnant different. The whole you are heavy with twins statements...One woman said to me that I was going to have a 10 pound baby...I said to her no she is 6 pounds. My sister is getting a lot of negative comments like that and she is very stressed out. I have heard people in public say negative things about heavy women and employers can be very negative too. I was working during my first pregnancy and I had to hear a lot of negative comments...So I decided that with this pregnancy I am not going to work so I will not have to hear those things.

P11: I sort of think that heavier women who are pregnant are treated differently than women who are pregnant and who are smaller. I think heavier pregnant women get the old stink eye a little bit more.

P12: I think that women who are pregnant and obese are treated differently. Every time I go to a maternity store I get treated differently... They act like I am not important and that they do not want to wait on me...But I notice that pregnant

women who are petite are always waited on. They treat them really nice. But you cannot mistreat people and think that you will get by with it.

P1, P6, P8, and P9 described that they do not believe that providers treat pregnant obese women.

P8: I do not believe that there are any differences in the way providers treat bigger women than smaller women because I do not see myself that way. My personality is not like that...If I feel like someone is treating me differently I will tell you exactly how I feel. So no, I do not think so. That is why I have always come to see the doctor here. He does not treat me differently.

Expectations of weight gain during pregnancy differ between pregnant obese women. This will be discussed in Theme 8.

Theme 8: Obesity and Excessive Weight Gain Is Expected During Pregnancy

Pregnant obese women believe that obesity and excessive weight gain is to be expected. Of the 12 participants, 10 of the participants, P1, P2, P3, P4, P5, P7, P8, P10, P11, and P12 believe that women should not worry about how much they gain and that such weight gain is okay since they are expecting a baby.

P1: Pregnant women should expect to gain up to 50 pounds...But that also depends upon what they were doing before they got pregnant. If a pregnant woman is lazy and just sits around then she should not gain more than 30 pounds...Otherwise 50 pounds is good.

P2: I think that some weight gain is expected and when women get pregnant...Family members cater to them. Some pregnant women take advantage

of it which causes obesity. I have been around some pregnant women who always want to eat...I tell them that they are not hungry. I think because that image is portrayed on television...So women just eat and eat...If a pregnant woman has a craving I think she should satisfy her craving...It's like they have a reason to be greedy...They take advantage of it.

P3: Yes I believe that being obese is normal during pregnancy.

P4: I think that there is a certain amount of weight that pregnant women should gain. Every pregnancy is different and every woman is different...Like my first pregnancy I gained 23 pounds and my second I gained 7 pounds. It all depends upon your body. The way you look, the way you feel...Everything is totally different.

P5: Pregnant women are supposed to gain a lot of weight. I hate it when people worry about their weight. When a woman is pregnant they should not be concerned about eating too much or worry about if they are going to get fat...I am like you need to eat because the food is going to the baby. If a woman wants to get pregnant then she should be ready for the outcome. I think that you have to eat a certain amount of food for the baby. I will not be hungry but if my stomach growls I think the baby is hungry in there so I will eat again. I have always been so self conscious about my weight, but it is not about me, it is about my baby.

P7: I do not feel like women should have to worry about how much weight they should gain when they are pregnant. Whatever the body does, it just does. Women should not have to stress about gaining a certain amount of weight.

P8: I believe that being obese is expected during pregnancy and I was scared. I was listening to everyone who did not have a medical degree. I was told that I was going to gain 30 to 40 pounds. My mother gained 100 pounds with my brother during the last month of her pregnancy. My attitude has always been...Well if I get big, I know how to get the weight off again. I was very proud of my weight when I was in high school...No one could make me believe that I was not looking fine. I have always known that I was a plus size girl...But my attitude did not show it...So I am not afraid of gaining more weight.

P10: I do not worry about how much weight I gain during pregnancy. My first pregnancy was different...I gained 60 pounds. But at the beginning of this pregnancy I lost weight but now I am starting to gain a couple of pounds here and there. Everyone is different. Before, in my last pregnancy I was swollen like a giant balloon...But with this one I have not so far.

P11: I do not think that pregnant women should worry about how much weight they gain.

P12: I feel like being obese during pregnancy varies with different women. I was not expecting this. I just ate so much because I felt like that would make the baby healthy. I was not aware of what I should be eating and how to really be healthy...I was not healthy at all. I would drink red bulls until I was seven weeks. I found out that I was pregnant when I started getting really slow at work and I began to eat excessively. I started craving random foods like jambalaya...Foods that I had never craved before. I was so sensitive and I would start crying for no

reason at all...My boyfriend would be like...Are you going to be okay...But I had no idea why I was crying.

P6 and P9 described that they did not believe that pregnant women should gain so much weight.

P6: I tried not to get so big but it just happened. After my last pregnancy I lost 30 pounds 2 months after I delivered my baby...My doctor asked me what happened...I did not know, I was eating the same as I had been before.

P9: I think it is dangerous for women to get obese when they are pregnant. I live in a recovery community house with a girl who has toxemia...But she is very small. In the recovery community there are a lot of pregnant women who are obese. It is getting very hard for me to climb the stairs on the third level where I live because I am so big.

Pregnant obese women experience stress related to relationships and numerous other life issues. In this study most of the pregnant obese women do not relate stress to pregnancy and obesity. This will be discussed further in Theme 9.

Theme 9: Stressors During Pregnancy Related to Life Circumstances

There were 9 of the 12 participants, P2, P3, P4, P5, P8, P9, P10, P11, and P12 who described stressful situations since this pregnancy. P3, P5, P8, P11, and P12 described stress related to their relationships with other people. There was not a specific common theme or one particular stressful situation related to being pregnant and obese.

P2: Work is one thing that is causing me stress...And I have been stressed out for the longest because I just don’t feel pregnant. This is my first visit to the doctor

this time. I am not a good candidate for birth control because I have had such problems with my blood pressure. We have had mostly protected sex and a couple of times we slipped up...Now I am like what happened. In the past when I was pregnant I would be nauseated but I have not been sick at all this time and this is weird.

P3: I am stressed out by the way my daddy and everyone else acts towards me. My mother is not around. We were supposed to have a baby shower but she lied to me. We never had one...So they are going to have one this week...Not her but other people.

P4: I am stressed out right now because my car broke down so it's a household with just one vehicle and that is stressful.

P5: I have been stressed out every since my first miscarriage when my boyfriend stopped talking to me. He started dating his old girlfriend. I was not seeing anyone else physically because I still wanted to be with him. When we got back together I got pregnant again. I found out that my boyfriend gave me Chlamydia and there is no telling who he has been with. I cannot trust his and that really stresses me out because it could hurt my baby. I stay stressed out and I have had a problem with trust my whole life. I never know when he will cheat on me and bring a disease back to me...But everything that I worry about is for my baby.

P8: During the beginning of my pregnancy I lost my job. My fiancé and I have been together for almost two years and like most men...He cheated on me. He waited to act a fool when I was seven months pregnant. We were homeless...Not

really we just did not have a place to call our own but we had a roof over our head. A lot of women have had to go through stress and pregnancy alone. It was hard to save money when we had to spend money every day. I have been on my own since the age of 18 so going from independence to having to depend on someone was hard...It's been stressful. He apologized for cheating on me and he did what he had to do to get back with me. He could have left a long time ago...He could have disappeared but he didn't, he stuck it out with me. He made sure that we were taken care of. People kept saying that he was going to leave me...And I felt like people were waiting on my downfall...But we are still going strong.

P9: I had to go through detox from Subutex and from opioids...And this was very stressful on me at first in this pregnancy.

P10: I am not supposed to be walking a lot on my feet because I have torn my tendons. I cannot move around as well and this has caused me a lot of distress.

P11: Yes lord I have had a lot of stress in my life since I have been pregnant this time. There have been a lot of deaths in my family...My daughters father has been very stressful to deal with...It has been a lot but this is life.

P12: I am stressed out a lot. I get stressed out to the extreme sometimes for no reason at all...Everything stresses me out. My boyfriend told me that I am hormonal and that I need to calm down. I need to talk to the doctor about what I can do to help myself to avoid being so stressed out. My baby moves around a lot when I am feeling stressed and my stomach gets upset too when I feel stressed.

In relationship to stressful situations or experiences, nine of the participants had different situations which were mostly of personal matters. P1, P6, and P7, denied having any experiences since this pregnancy which caused them stress.

P1: I do not have any particular situations which cause me stress...Just the normal things that you deal with.

P6: I have not had any stressful situations during this pregnancy. I did when I was much younger with my first child. I was 14 years old then and everybody said that I should put my daughter up for adoption. Nobody knew that I was pregnant except my mom...I was living with my mom. I did put her up for adoption but after a week and a half I revoked it and I got her back.

P7: I do not have anything that I can think of during this pregnancy which has caused me stress.

Responses from the 12 participants described stress related to multiple factors which were not common among them or the denial of any stressors during this pregnancy.

Discrepant Findings

There were several themes that emerged from the participants as well as differences which were also noted in relationship to their individual experiences. As an example, in Theme 1 the participants believed that they were healthy despite having a history of previous complications. P2 has a history of hypertension but believes because she has been asked how her blood pressure has been, even though she had not been assessed, she believed that she was fine. P1 has a history of diabetes, asthma, and thyroid problems but states that she is fine. P10 has a history of thyroid problems during her last

pregnancy and was considered a high risk. She described that she has not been evaluated for thyroid problems during this pregnancy nor did she inquire about the need to be tested. P7 described that she was told that she had high blood pressure but she states that she does not have high blood pressure. All 12 of the participants are obese but none mentioned that obesity and pregnancy could present any health problems to themselves or the unborn child.

Another discrepant example was noted in Theme 3 when discussing their knowledge about how much weight they should gain while pregnant and how much weight they had already gained. P4 weighs 249 pounds and has a body mass index of 41 but P4 believes that she has not gained too much weight during this pregnancy. P5 described her weight at125 pounds prior to this pregnancy and in her eight month she weighs 181 pounds but does not believe that her weight gain will pose any health problems. P6 states that she weighed 135 prior to this pregnancy but now weighs 210 pounds and believes that her weight gain is not a problem.

Another discrepancy was noted in Theme 7. P8 stated that she does not believe that obese pregnant women are treated differently than pregnant women who are of normal weight. However, P8 states that she is seeing the same physician that she has been seeing throughout her life time and has not seen another provider because she believes that she might be treated differently.

Another discrepancy was noted in Theme 8. P4 stated that she gained 23 pounds with her second child and only seven pounds with her third child. Her current weight is 249 pounds at 32 weeks, and if she has gained only 7 pounds during this pregnancy, she

weighed 242 pounds before becoming pregnant and 226 pounds before her second pregnancy. P4 believes that since she has not gained much more than her normal weight during her reported pregnancies, her weight does not pose any problems. P9 has a body mass index of 35 and weighs 222 pounds but believes that it is dangerous for pregnant women to get too big during pregnancy. She described someone who was small and pregnant and she was surprised that she had toxemia because toxemia is common in bigger women, she stated.

Another discrepancy occurred in Theme 9 related to factors which contributed to stress during pregnancy. P2 described that she was not a candidate for birth control pills because of her problems with hypertension. However, when asked during the interview of any health problems, P2 described that she had no health complications.

Summary

In Chapter 4, I explained the methods I used to recruit participants, explained in detail participant profiles, how the data was collected and stored, data analysis, data verification, and the development of themes. The results of this study indicated that pregnant obese women share many similarities and differences. Common themes in this study are: pregnant obese women and their perceptions of being healthy, acceptable weight and weight gain during pregnancy, the consumption of carbohydrates, and the differences noted in factors which contribute to stress during pregnancy. I presented an interpretation of the findings in Chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose and the nature of this study were to analyze the needs of pregnant obese women, the care they receive, management of disease, and to address a gap in the literature regarding their social and physiological well-being. The health of the mother and the unborn child is hindered when diseases and conditions are not addressed and adequately managed (Knight & Wyatt, 2010). Few studies have been conducted that addressed factors that impact the health of pregnant obese women and the social issues they face.

This phenomenological study was designed to bring about awareness to the lack of education, knowledge of health risk associated with pregnancy and obesity, adequate health care treatment, social issues, employment discrimination, and public scrutiny. Moustaka's (1994), presentation and modification methods were used as an approach to this research data analysis. I conducted semi-structured interviews with 12 participants. I audio recorded the interviews then transcribed each of them. The program that I used to assist with the management of the data collected was NVivo 10. I input the data collected into NVivo 10 to assist with the management and development of common themes.

This study provides a vast description of factors that impact and influence the overall health of pregnant obese women. The participants believed that they were healthy despite being pregnant and obese. Participants did not believe that their pregnancy weight posed a danger to themselves and the unborn child. The participants described uncertainties and not knowing what would happen during labor and delivery, and

acknowledged the possibility of the need for an emergency cesarean section. There were 11 of the participants who stated that they felt comfortable communicating with their provider. One participant stated that she did not feel comfortable when communicating with her provider. Feelings and experiences of public and employer disrespect and shame were a commonly shared experience. Similarities existed in participants' snacking choices and the consumption of carbohydrates. Binswanger's theory (Ghaemi, 2001), concluded that loneliness and emptiness are related to feelings of guilt and overeating. Sutin and Terraciano (2013), concluded that binge eating and discrimination are triggered by the release of the opiod cortisol. Participant self-concepts were influenced by public support or rejection. Participants described their experiences with public treatment and scrutiny of pregnant obese women versus pregnant women of normal weight. More than one half of the participants believed that excessive weight gain or obesity should be expected during pregnancy. Further, the participants described stressors they faced that were not related to being pregnant and obese but to life circumstances. According to the participants in this study, pregnancy and obesity did not pose increased life stressors. There were no specific themes that connected pregnancy, obesity, and stress. All of the participants were overweight based upon their height and body mass index. However, the participants did not believe that they were obese. Most of the participants believed that they had not gained too much weight since this pregnancy and that their providers were happy with their weight.

Interpretation of the Findings

The results of this study supported some aspects of particularly the health belief model. The social cognitive theory and the transtheoretical model of behavioral change were reviewed for application to this research. This study provides in-depth insight to common issues and biases faced by pregnant obese women. In addition, the experiences, views, treatment, and expectations shared by pregnant obese women have been expanded by this research. Multiple studies have been conducted regarding outcome and risk factors for pregnant obese women (deJersey et al., 2011; Khazaezadeh et al., 2011; Knight & Wyatt, 2010; & Ramachenderan et al., 2008). However, few studies have been conducted to explore the social and physiological impact of being pregnant and obese.

The results of this phenomenological study addressed the health belief model, social cognitive theory, and the transtheoretical model of behavioral change. The health belief model was used by social psychologists to determine why people rarely engage in activities, programs, and dietary management to prevent disease (Rimer & Glanz, 2005). Pregnant obese women did not recognize their weight as being a health issue. In addition, when providers fail to address obesity in pregnant women, those women believe that they are healthy. There are six constructs that influence personal perceptions that are related to the themes developed in this research study. The transtheoretical model of behavior change and the five stages of the desire of a person to change will be related to the themes developed regarding self-regulation and individual choices of pregnant obese women.

The Six Constructs of Pregnancy and Obesity

In relationship to perceived susceptibility, individuals may not consider themselves as being overweight or obese. When providers avoid addressing obesity in pregnant women, those women do not view their weight as being a health problem.

In perceived severity, individuals do not view their weight as being a health risk to themselves and the unborn child. If the potential for conditions and disease is not addressed by providers, individuals may believe that they are healthy and have no potential for health risk. Pregnant obese women may find it difficult to believe that there are perceived benefits related to weight loss when they do not view obesity as a health problem or when they do not feel ill (McGlone & Davies, 2012).

Barriers to action such as weight loss attempts involve the notion that excessive weight gain is viewed as normal during pregnancy and beliefs that excessive weight gain can be easily lost. Motivation for a healthier lifestyle for pregnant obese women may be limited or non-existent, particularly when they presume that their current pregnancy weight is a normal expectation.

In this study, some of the participants described diseases and conditions that occurred during their previous pregnancies. However, during this study providers did not evaluate the possibility of current diseases or complications such as gestational diabetes, hypertension, thyroid conditions, or cardiac complications. Because providers did not discuss or evaluate participants for illnesses even when they had previous conditions, participants believed that past health conditions related to pregnancy and obesity were irrelevant during this pregnancy.

This research study supported previous findings of the health belief model. According to Rimer and Glanz (2005), the readiness of people to act upon disease is based upon their believed perceptions. Of the 12 participants in this study, they did not believe that they were ill while pregnant nor did they question their providers about their health, even when they had previous histories of high-risk pregnancies. In Theme 1, none of the participants discussed their belief that they were obese or at a high risk for complications for themselves or the unborn child.

The findings of this research study will add to the body of knowledge in reference to the belief that pregnant obese women do not view themselves as unhealthy or at risk for maternal and fetal complications. The participants in this study were very happy with being obese and viewed their pregnancy weight as normal. Possibly if pregnant obese women perceived themselves as unhealthy, this notion may move them to action, although this outcome is unclear and further research would be necessary. The participants in this study did not discuss the need to make dietary changes in relationship to their snack foods. As an example, carbohydrate consumption was high among the participants in this study and they shared similar choices and likes as noted in Theme 5. The participants in this study lacked the awareness or the desire to change. This study supported previous research in which pregnant obese women were not given any dietary advice or advice about physical exercise (Ferrari et al., 2013). Participants reported in previous research studies that provider and patient communication was poor and embarrassing (Schmied et al., 2011).

The Five Stages of Change in Pregnant Obese Women

The transtheoretical model of behavior change identifies change as a process as movement through the stages depends upon readiness (Drieling et al., 2011). During the preconception stage, at least two of the participants stated that they had a personal trainer and had lost 30 pounds prior to becoming pregnant. Based upon their weight at the time of this study, even with a 30 pound weight loss, they would have still been considered to be obese. As a result, they did not consider the need to lose weight prior to conception (Prochaska, 2008).

In the contemplation stage and the preparation stage, none of the participants knew their body mass index, 10 of the participants did not describe or contemplate any desire or motivation to lose weight or discuss the benefits of weight loss versus the risk of being pregnant and obese. Two of the participants however, described getting back to their pre-pregnancy weight which was still considered to be obese based upon their height and weight.

Since the other stages of the transtheoretical model of behavioral change were not accomplished, the action and maintenance stage was also not reached in this study. Of the two participants who described having a personal trainer and having lost weight prior to this pregnancy, they stated that they had lost 30 pounds although with their current weight they are still considered to be obese. Both of the two participants had gained more than 40 pounds since becoming pregnant. Individual perceptions of what is considered to be obesity, is a barrier to weight loss. The participants in this study described some of the factors which impacted their lack of desire to lose weight which

were described as the loss of motivation, a lack of support, and public scrutiny. According to Sutin and Terracino (2013), obese persons are three times more likely to gain weight when they faced with negativity and public discrimination.

In theme 5, there were 6 participants who described carbohydrate consumption was related to life stressors. The way participants felt about themselves and their esteem level determined their feelings of support or rejection. Participants who felt good about themselves did not believe that they were obese or unattractive. During the semi-structured interview they described their thoughts about obesity as not seeing themselves as obese. Participants who were confident in themselves rarely described poor self-concepts. Participants who had negative experiences regarding their weight and who were scrutinized in public described consuming carbohydrates (binge eating) because they no longer cared about what they ate. In relationship to the transtheoretical model of behavior change, factors which hinder motivation to change are the lack of education, acknowledgement, or recognition of the potential for poor health. Some of the participants described that the providers were pleased with their weight.

Poor Self-Regulation and Self Control

In relationship to the social cognitive theory the lack of disease assessment and management plays a key role in pregnant obese women and their need for change through self-regulation. The participants in this study did not describe the need for change related to their eating habits or weight management. In relation to the social cognitive theory, personal dietary expectations and outcomes impact food choices (Sapp & Wang, 2007). Participants in this study did not identify with the need for change because they had not

been told that there was a need or a health risk involved. Some of the participants described researching on their own how much weight they should gain. However, there was a lack of motivation to gain minimal weight. Participants were not given any education regarding any health conditions, and if they had been alerted to a disease or an illness, they described that they had educate themselves. Despite the desire to self-educate, participants did not inquire about potential problems or ways to manage health problems. When pregnant obese women are not educated regarding their health by their provider, participants in this study did not take the initiative to manage their own health.

Diet choices, consumption limits, the type of foods and snacks consumed, and the avoidance of foods high in carbohydrates, fat, and sodium were not considered by the participants in this study. Some of the participants described their unhealthy food cravings such as greasy fried foods, carbohydrates, sugary foods, sodas, and frequent snacking. Some of the participants admitted that they knew that their food choices were not healthy but made no attempts to change. According to Swan et al. (2007), the readiness of people to change unhealthy behaviors does not always equal behavioral change. Most of the participants in this study preferred similar carbohydrates when snacking. Participants in this study described that they believed that there was no need to worry about how much weight they gained while pregnant because it was normal to gain excessive amounts of weight and such weight gain should be expected.

The health of the participants who voluntarily agreed to be in this study was impeded by the lack of providers addressing their risk for health issues. When providers did not view health problems related to pregnancy and obesity as important or the need

for follow up and treatment, participants did not either. One of the participants described being considered a high risk during her last pregnancy related to thyroid problems. She stated that she had not been evaluated for the same thyroid problems in this pregnancy. When asked if she would communicate her concerns to the provider, she stated that she would not because she was too far along to worry about any health problems at the current gestational age of her baby.

At least half of the participants in this study described their desire to eat excessively when they felt stressed, while six others denied eating excessively when stressed. According to Swan et al. (2007), understanding experiences, beliefs, and the impact of social issues will be helpful in developing effective interventions. This research study supports the findings of Swan et al. (2007), that positive change related to high risk populations with chronic disease is often difficult to achieve.

Obesity Awareness and Health Risks

A new outcome in this study is the fact that the participants are acceptant of being obese during pregnancy. Nearly all of the participants believed that women should not worry about how much weight they should gain during pregnancy and that whatever happens, it should be expected. The participants did not specify how much weight they should gain and shared the viewpoint that they should accept any amount of weight gain. One shared commonality among the participants in this study is that most of them have been obese since childhood. In relationship to this study, it is unclear if being obese since childhood leads to the expectation of obesity during adulthood. The participants in this study were happy and satisfied with their weight and believed that providers were happy

with their weight as well. The participants denied asking providers questions about how much weight they should gain during pregnancy. None of the participants voiced concern about being unhealthy since they had not been evaluated by providers and since they had not been told about any disease or condition. However, participants described knowledge and treatment of diseases and conditions during previous pregnancies such as: Asthma, hypothyroidism, hypertension, and gestational diabetes.

Despite awareness of complications caused by pregnancy and obesity, participants described how they preferred to deliver their babies. The majority of the participants preferred to have a vaginal delivery and had fears of being forced to have a cesarean section. Progression time is a common complication in pregnant obese women. Providers were described as being old fashioned and did not want to take any chances. Therefore participants were acceptant of not being able to choose a delivery preference and only two of the participants described having told their provider about their wishes. Participants did not acknowledge that excessive weight gain and risk during labor would hinder their delivery choices.

Only two participants discussed how much they weighed prior to pregnancy, otherwise most of them did not. Most of the participants described gaining two or three pounds per week but did not discuss their accumulated weight. However, participants described being disrespected and treated differently than women of normal weight when in public. Family members, employers, and co-workers expressed concerns about how much weight the participants had gained. Participants in this study endured derogatory statements, criticism, and negative comments. The participants described that how they

dealt with public scrutiny and disrespect was by removing themselves from negative situations or ignoring the comments by pretending as though they did not hear them. One participant decided not to work during this pregnancy as she described receiving scrutiny and disrespect on the job during a previous pregnancy.

In theme 5 some of the participants described their desire to overeat when faced with stressful situations. Other participants acknowledged snacking on foods high in carbohydrates, but some denied carbohydrate consumption as related to stressors. One of the participants described consuming carbohydrates simply because she wanted to. Carbohydrates commonly consumed among all 12 participants were candy, sodas, rice, potato chips, pizza, and potatoes. There were no food limitations described in this study or the desire to decrease portion size.

In theme 6, the way participants felt about themselves influenced how they believed others viewed them. Some of the participants described being hormonal, experiencing attitude changes, and unexplained crying episodes. One participant described that despite weighing over 300 pounds in high school, she felt good about herself and no one could convince her that she was not attractive. Participants that had strong family and employer support described feeling good about themselves.

Most of the participants believed that women who were pregnant and obese are treated differently than pregnant women who are of normal weight. In theme 7 participants describe experiencing employment discrimination, feeling as though they are looked down upon, and receiving uncomfortable looks when in public. The participants described being required to complete task by employers that they could not accomplish

due to being pregnant, and they were terminated from the job. Participants also described that providers did not wish to care for pregnant obese women because they are considered high risk pregnancies. The participants in this study described situations which caused stress though no common themes emerged. Stress was described as related to fear of being pregnant, the lack of support, relationship issues, the lack in employment, drug abuse, family issues, and other unidentified reasons for stress.

The health belief model was used to examine why people rarely engage in health measures, activities, and dietary management to prevent disease (Rimer & Glanz, 2005). The participants in this study did not discuss any health problems or concerns about their well-being, but did admit to knowledge of previous health issues. Since the providers did not discuss health issues, participants were happy with their pregnancy weight and did not discuss weight loss plans after delivery. Providers can contribute to the health of pregnant obese women by communicating with patients the health benefits associated with weight loss. Understanding the benefits of weight loss could lead to motivation and change. The readiness to act is based upon individual believed perceptions. This research adds to the existing knowledge and the phenomena lived by pregnant obese women by validating the need for education, the acknowledgement of poor health and disease related to obesity, and the motivation to change particularly before future pregnancies.

Recommendations for Future Research

This research study was designed to provide an understanding of factors which impact the social and physiological well-being of pregnant obese women. The findings

in this study indicated that pregnant obese women may be influenced by the acknowledgement of health issues by providers and the education needed to change behaviors. The health belief model relates to this study in reference to the readiness to act upon conditions is based upon believed perceptions. Since providers did not evaluate the participants in this study for medical complications, the participants believed that they were healthy even if they had health issues in previous pregnancies related to obesity. Most of the participants had no knowledge of the meaning of the meaning of the acronym for the body mass index and lacked interest in what their body mass index was. Further research is needed to determine if their education levels played a role in their beliefs that even though they experienced public scrutiny, job loss, infidelity from partners and discrimination, they did not believe they were obese. Only two of the participants had education beyond high school. One participant (P2) was in her first semester of nursing school and one participant (P8) was a certified nursing aide. According to the Census Bureau (2012), for Nashville, Tennessee, 15.28% of the population did not finish high school while only 23.37% of Tennesseans completed high school.

The participants in this study reported that they were happy with their weight and providers were too. They did not express any overall concerns regarding their health. Dr. Rensis Likert designed the Likert Scale to measure opinions and attitudes. The happiness scale would be a measure to determine individual happiness. According to Lim (2008), people tend to report that they are very satisfies with their life during the first question but differences are noted during follow up questioning. Further research is welcomed and can be used to accurately measure individual happiness.

This study may be used to provide insight for providers, patients, and communities about the need to address obesity during pregnancy and some of the complications associated with it. In sharing these findings with providers caring for pregnant obese women, the urgency and the importance of addressing the potential for health problems will be understood. Such efforts are important steps to educate, raise awareness, and help to eliminate the continuous rise in the rates of pregnancy complicated by obesity.

The findings of this research will be distributed to providers and populations who the results of this study can be of benefit, bring about awareness of the need for change, and to improve upon the health and well-being of the affected population. More research is needed to explore why obesity during pregnancy is overlooked and has become an acceptable norm according to the findings from the providers and participants in this study. The current trends and views of society may play an important role in understanding why pregnancy and obesity is not viewed as a health issue among affected populations and providers. A quantitative view of pregnant obese women versus pregnant women of normal weight who share the same characteristics is needed to understand current trends in pregnancy and obesity. Further studies in relationship to the link between obesity in early childhood and adulthood, may provide some insight into the increasing rates of pregnancy and obesity.

The participants in this study were 5 to 8 months pregnant, had a body mass index of 30 to 50, and between the ages 18 to 55. Further research is needed to explore women who are 1to 4 months gestation to determine early pregnancy body mass indexes and to

examine the number of women who are overweight or obese before the second trimester. Providers can use such findings to educate patients prior to conception.

Implications for Social Change

The implications for social change are to positively impact the health and well-being of pregnant obese women and their off-springs. Obesity is at alarming rates in the United States and around the world. The current rates of obesity continue to cause concern for current and future generations. Children born to obese mothers will at some point in their lifetime become obese. Obesity contributes to a poor quality of life, the risk of multiple complications and disease such as gestational diabetes mellitus, some forms of cancers, hypertension, preeclampsia, macrosomic infants, and kidney disease. Complications related to obesity can contribute to lifelong illnesses and conditions; shorten the life span, increase health care cost, underemployment, and social discrimination. In relationship to the health belief model, this study can be used to assist physicians and patients in developing program engagement designed to improve overall health conditions and to assist patients in understanding the perceived benefits of good health.

This study provides new information in relationship to the health belief model and the participants believed perceptions that they were not obese, or did not consider themselves to be obese, therefore they believed that they were healthy.

Limitations

There were several limitations in this study which may limit the representation of the phenomena. The participants in this study were European White, African American,

and one bi-racial participant. Other populations such as Hispanic, Pacific Islander, or Indian were not represented. All of the participants reside in Tennessee. The willing participants may not accurately reflect other geographic locations. The sample size of 12 was small, though common to qualitative research, may not represent the general population. The participants in this study were self-selected, while access to other pregnant women was not accessible. The data collected by the researcher was interpreted using a coding system, thus the development of additional themes may not have been completely representative of the phenomena.

Researcher Experience

In my perceptions and beliefs which were based upon the literature review, I assumed that pregnant obese women experienced stressful situations and might considered ending the pregnancy to avoid public shame, scrutiny, and disrespect. I kept notes in my journal about my personal biases and beliefs, even though I had not lived their phenomena. I have been of normal weight for my height throughout my lifetime with a body mass index of 22. My beliefs arose from my experience while I attended nursing school. I chose a pregnant obese woman for my obstetric rotation. While in the delivery room I witnessed poor provider and patient communication, the lack of a delivery choice, and the provider taking rapid invasive measures to complete the delivery as quickly as possible. The patient suffered severe pain and was not expecting the physicians' choice of delivery.

I kept notes throughout the research process and was able to set aside biases and personal beliefs. Rather, the participants in this research study were happy with

themselves and their pregnancy. While the participants experienced daily life stressors, they were not related to pregnancy and obesity. I discussed my thoughts with providers who were not connected to this study. Providers stated that they had more overweight and obese pregnant women than they realized. I bracketed beyond my beliefs and biases and ensured that I presented the structural interview questions as open-ended, leaving the ability for participants to express their personal experiences, their phenomena, without researcher influence or direction.

Summary and Conclusion

In summary, factors which impact the social and physiological well-being of pregnant obese women are based upon individual believed perceptions. Participants either did not consider themselves to be obese, or they did not believe that their weight posed a problem to their health or the health of the unborn child. Pregnant obese women in this study were aware of the barriers they faced such as unemployment, scrutiny, discrimination, family and public shame, and life stressors. However, the participants in this study were acceptant of being obese and happy with their lives. When providers do not discuss health problems such as obesity, pregnant women do not believe that they are at risk. In this study, participants seemed to rely heavily on what providers did or did not tell them about their health. Providers failed to realize the influence that they have on their patients, thus missed opportunities to educate their patients on ways to improve their health after their deliveries, and over their life time. Even if many of them assumed that they were unhealthy, they did not communicate such beliefs or express any concerns. The insight gained in this study from the participants could be used to assist providers,

future patients, communities, employers, and society in effective ways to educate and manage pregnant obese women. Such insight could improve upon the health, well-being and longevity of generations for years to come.

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Appendix A: Description of the Study

A Qualitative Study of Factors Which Impact of the Social and Physiological Well-being of Obese Pregnant Women

A Research Study

Who: Obese pregnant women who have a BMI of 30 to50, and who are at 20 to 32 gestational weeks. Participants should be willing to privately discuss their feelings about obesity and pregnancy, discrimination, scrutiny, shame, and health care treatment.

Objective: This study is designed to learn more about the lived experiences of obese pregnant women, the social and physiological issues that they face to include such factors as: public scrutiny, discrimination, and health care treatment.

Eligibility: Participants should be between the ages of 18 to 55 years of age, have a body mass index of 30 to 50, reside in Tennessee, and are at 20 to 32 gestational weeks.

When: Following the obtained informed consent, participants will meet individually with the researcher for 1 to 2 hours for an audio-recorded interview. Participants will be asked semi-structured questions.

Where: Individuals interested in participating in this study may contact Stephanie Morgan Frye at xxx-xxx-xxxx, or xxxxxxxx.xxxxxxxxxx@waldenu.edu to ask further questions or to arrange a date and time to complete the informed consent and the interviews.

Your interest in this study is greatly appreciated, your participation in this study is voluntary and participants will be compensated.

Please be informed that all information will be kept confidential. You may withdraw from this study at any time, even after the interviews have begun. If you have any questions, or if you wish to talk privately about your rights as a participant in this study, you may contact Dr. xxxxxxx xxxxx (anonymously if you wish). He is the Walden University Representative. His phone number is 1-800-xxx-xxxx, extension xxxx.

Appendix B: Semi-structured Research Questions

1 Please tell me what you have been told by your provider about your health and the health of your unborn child. What education were you given?

2 Please tell me about the education you received from your provider about some of the medical conditions and diseases often associated with obesity and pregnancy.

3 Would you explain your understanding of the meaning of being overweight or being obese? Do you know what we mean when we say the acronym for body mass index? Have you ever been told what your body mass index is?

4 Can you describe a time when you felt ashamed or embarrassed to communicate with your provider because of your weight gain?

5 Please tell me about your labor and deliver preferences. What discussion did you have with your provider regarding your delivery preferences?

6 Would you please tell me about any discussion with your provider regarding weight gain during this pregnancy. Were you told how much weight you should gain?

7 Please tell me about a time when you felt shame, scrutiny, or disrespected when in public.

8 Do you believe that public criticism and discrimination contributes to over eating? Do you have feelings of stress at times which causes you to eat more often?

9 When you feel stressed what kind of foods do you prefer to eat? Are you more likely to eat foods high in carbohydrates when you feel stressed? Examples of some of the foods high in carbohydrates are: potatoes, bread, pizzas, rice, cereal, and pastries. Were you given a healthy food guide?

10 Please tell me about the ways in which your family, friends, and your boss have been supportive or non-supportive of you since the beginning of this pregnancy. Has your pregnancy affected your job performance?

11 Please describe your feelings about the treatment that obese pregnant women receive in relation to the treatment from providers for pregnant women who are not obese. Are there any differences that you noticed and would like to share?

12 Do you believe that obesity during pregnancy is an expected norm?

13 Are there any experiences which have caused you distress during your pregnancy?

Appendix C: Peer-Reviewed Journals

New England Journal of Medicine

Journal of Maternal-Fetal and Neonatal Medicine

American Journal of Hypertension

Midwifery

Journal of Clinical Investigation

COPD

Supplements

Ethnicity and Disease

Academic Pediatrics

Medical Decision-Making

BMC Public Health

Journal of Individual Psychology

Rural and Remote Health

An International Journal of Obstetrics and Gynecology

Journal of Obesity

Journal of Women's Health

Journal of Perinatal Education

British Journal of Midwifery

British Journal of Midwives

Journal of Obstetrics and Gynecology and Neonatal Nursing

Australian and New Zealand Journal of Obstetrics and Gynecology

Obstetrics and Gynecology

Person-Centered Experiential Psychotherapies

Patient Education and Counseling

Sexual & reproductive Healthcare

BMC Research Notes

Women's Health Issues

American Journal of Psychotherapy

PLOS ONE

Journal of South Dakota State Medical Association

Journal of Medical Internet Research

Obesity Reviews

Society of Behavioral Medicine

BJOG: An International Journal of Obstetrics and Gynecology

Maternal Health

Academic Pediatrics

Nursing Times

Proceedings of the Nutrition Society

Nutrition and Dietetics

BMC Pregnancy and Childbirth

Appendix D: Consent Form

If you are between 18 to 55 years of age, are at 20 to 30 gestational weeks (5 months to 8 months) and have a body mass index of 30 to 50, you are invited to take part in this research study related to the factors which impact the social and physiological well-being of obese pregnant women. The study is being conducted by a researcher named Stephanie Morgan Frye who is a doctoral student at Walden University.

Background Information

The purpose of this study is to learn more about the social and physiological factors faced by obese pregnant women, the care and treatment received, and the impact of their maternal health and overall well-being.

Study Procedures

1 You are eligible for this study and if you agree to participate in the study and will be asked to:

2 Read the 'Consent Form.' If you are in agreement with the terms, a signed copy of this agreement will be given to you for your records.

3 You will be asked to participate in an audio-recorded interview, 13 questions will be asked which will last about 1to 2 hours.

4 The interviews will be conducted in a private room or in a hospital waiting room according to the participant's preference.

5 Here are some examples of the questions that the researcher seeks to understand:

- What have obese pregnant women experienced regarding their health, pregnancy, and care and treatment?
- What knowledge do obese pregnant women have regarding health implications related to being obese and pregnant?
- What views do obese pregnant women have regarding the health of the unborn child?

Voluntary Nature of the Study

This study is voluntary. Everyone will respect your decision to participate or not in this study. Your providers and their staff will not treat you differently and your care will not be hindered if you choose not to be in the study. If you decide to join the study now, you can still change your mind even if you have already started the interview. You have the right to stop at any time.

Risks and Benefits of Being in the Study

Being in this type of study may or may not involve you being upset about your past experiences and treatment while pregnant. This study will involve no risk of safety or harm to the well-being of you or your unborn child. Benefits include the contribution of knowledge and awareness of the needs, care, and concerns of obese pregnant women.

Payment

Participants who agree to participate in the study will receive a $25.00 gift card upon completion of the interview.

Privacy

Any information you provide will be kept strictly confidential. None of your personal identifiable information will be used on anything else which could identify you. All data will be kept in a secured safe location and in the computer under a secret password. The data will be maintained for a period of at least 5 years as required by Walden University.

Contacts and Questions

You may contact the researcher (Stephanie Morgan Frye) at anytime. After leaving a message she will return your call, or you can send an email. She can be reached at (xxx) xxx-xxxx or xxxxxxxxx.xxxxxxxxxx @ waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. xxxxxxx xxxxx, a Walden University Representative who can discuss this with you. His telephone number is 1-800-xxx-xxxx, ext xxxxxxx.

Consent Process

I have read the above information and feel that I understand the study well enough to make a decision about my involvement. "I consent", I understand that I am agreeing to the terms described above.

Printed Name of Participant ____

Date of Consent ____

Participant's Signature ____

Researcher's Signature ____

Appendix E: Reproduction Permission

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October 18, 2013 **Reference #: 10181300**

Stephanie Morgan Frye
401 Edencrest Court
Antioch, TN 37013

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Thank you,

Barbara Murphy
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Appendix F: Site of Cooperation

Medical Director
Tennessee Maternal-Fetal Medicine

April 3, 2014

Dear Ms. Morgan Frye,

Based upon review of your research proposal, I give permission for you to conduct the study entitled "Factors Which Impact the Social and Physiological Well-being of Obese Pregnant Women" within this organization. As part of this study, I authorize you to invite members of my organization for participation. Individual participation in this study will be voluntary and at their own discretion. We reserve the right to withdraw from the study at any time if our circumstances change.

I understand that the data collected for this study will remain confidential and may not be provided to anyone outside of the research team without the permission from the Walden University IRB.

Sincerely,

4/3/14
Date

Obstetrics - Gynecology

Obstetrics & Gynecology

March 15, 2014

Dear Ms. Morgan Frye,

Based upon review of your research proposal, I give permission for you to conduct the study entitled "Factors Which Impact the Social and Physiological Well-being of Obese Pregnant Women" within this organization. As part of this study, I authorize you to invite members of my organization for participation. Individual participation in this study will be voluntary and at their own discretion. We reserve the right to withdraw from the study at any time if our circumstances change.

I understand that the data collected for this study will remain confidential and may not be provided to anyone outside of the research team without the permission from the Walden University IRB.

3/15/14
Date

Obstetrics & Gynecology

March 15, 2014

Dear Ms. Morgan Frye,

Based upon review of your research proposal, I give permission for you to conduct the study entitled "Factors Which Impact the Social and Physiological Well-being of Obese Pregnant Women" within this organization. As part of this study, I authorize you to invite members of my organization for participation. Individual participation in this study will be voluntary and at their own discretion. We reserve the right to withdraw from the study at any time if our circumstances change.

I understand that the data collected for this study will remain confidential and may not be provided to anyone outside of the research team without the permission from the Walden University IRB.

3/15/14
Date