

**An Analysis of Physical Wellness During Pregnancy**

Mary Reynolds-Licciardello

Department of Community Care and Counseling, Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

School of Behavioral Sciences

Liberty University

2023

**An Analysis of Physical Wellness During Pregnancy**

Mary Reynolds-Licciardello

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

School of Behavioral Sciences

Liberty University, Lynchburg, VA

2023

APPROVED BY:

Tracy N. Baker, Ph.D., Committee Chair

Mollie Evans Boyd, Ed.D., Committee Member

### **Abstract**

There is a lack of proper physical wellness increasing in society. This qualitative phenomenological study explored physical wellness during pregnancy using the theoretic framework of Social Cognitive Theory to show perceptions and lived experiences of women who are pregnant or who have been pregnant in the past three years. Three research questions were the focus of this qualitative study. RQ1: what aspects of physical wellness are important to women who are pregnant? RQ2: what are women's physical wellness experiences during pregnancy? RQ3: how are women who are pregnant educated about physical wellness? Ten women in central Florida who are pregnant or have been pregnant in the past three years were used for the sample size. Open-ended semi structured interview questions were used to collect data. The interview was conducted over virtual Teams meeting. The data collected was analyzed by using thematic analysis method for identifying, analyzing, and reporting patterns within data. The results from this study described similar women's perceptions and experiences of physical wellness during pregnancy. This study is significant because it brings awareness to the importance of physical wellness during pregnancy. This study also adds to the gap in the literature on physical wellness during pregnancy.

*Keywords:* phenomenology, pregnancy, wellness, physical wellness, nutrition, rest, habits, exercise

**Copyright Page**

## **Dedication**

I greatly dedicate this manuscript to my beautiful family, the loves of my life.

### **Acknowledgements**

I would like to acknowledge my Lord and Savior Jesus Christ. I would like to especially say thank you to my husband for the endless support and my children for the motivation to complete my doctoral degree. I am deeply grateful for the unconditional love and strength my parents have given me. I would also like to sincerely thank Dr. Baker for walking by my side through this journey. Dr. Baker has been a phenomenal committee chair, and I am extremely blessed that our paths have crossed.

## Table of Contents

Abstract .....	3
Copyright Page .....	4
Dedication.....	5
Acknowledgements.....	6
List of Tables .....	12
List of Abbreviations .....	13
CHAPTER ONE: INTRODUCTION.....	14
Overview.....	14
Background .....	15
Historical .....	16
Social.....	16
Theoretical.....	17
Situation to Self.....	17
Problem Statement.....	18
Purpose Statement .....	19
Significance of Study.....	19
Research Questions .....	20
Definitions.....	21
Summary .....	22

CHAPTER TWO: LITERATURE REVIEW .....24

    Overview.....24

    Theoretical Framework.....24

        Social Cognitive Theory .....24

    Related Literature .....27

    Wellness .....27

        Spiritual .....29

        Social.....30

        Mental .....31

        Physical .....32

    Physical Wellness During Pregnancy.....32

        Harmful Habits .....34

            Smoking.....35

            Cannabis.....35

            Alcohol .....37

        Rest .....37

        Nutrition .....40

        Exercise .....43

        Depression.....46

        Gestational Diabetes Mellitus .....47



Gestational Weight Gain.....	48
Self-esteem.....	50
Gap.....	51
Summary .....	54
CHAPTER THREE: METHODS.....	56
Overview.....	56
Research Design .....	56
Research Questions .....	58
Settings.....	58
Participants.....	59
Procedure .....	60
The Researcher’s Role.....	60
Data Collection.....	61
Interviews .....	62
Data Analysis .....	65
Trustworthiness .....	66
Credibility.....	67
Dependability and Confirmability .....	67
Transferability .....	68
Ethical Considerations .....	68

	10
Summary .....	69
CHAPTER FOUR: FINDINGS.....	71
Overview.....	71
Participants.....	71
Kate .....	72
June .....	73
Sarah.....	74
Torrie.....	74
Macy.....	75
Taylor .....	76
Lilly.....	76
Kallie.....	77
Kasey.....	78
Luna .....	78
Results.....	79
Theme Development .....	79
Research Question Responses .....	91
CHAPTER FIVE: CONCLUSION.....	96
Overview.....	96
Summary of Findings .....	96

	11
Discussion .....	98
Empirical Literature .....	99
Theoretical Literature.....	103
Implications.....	104
Theoretical Implications.....	105
Empirical Implications .....	105
Practical Implications.....	107
Delimitations and Limitations.....	108
Christian World View.....	109
Recommendations for Future Research.....	109
Summary .....	110
References .....	112
Appendix A: Recruitment Flyer .....	139
Appendix B: Criteria Questions.....	140
Appendix C: Consent .....	141
Appendix D: Interview Questions .....	144
Appendix E: IRB Approval.....	145

**List of Tables**

Table 1. Pre-Criteria.....	72
Table 2. Themes and Sub-Themes.....	80
Table 3. Taking Care of The Body .....	82
Table 4. Lack of Motivation.....	85
Table 5. Lack of Education Given By Physician.....	88
Table 6. Research Questions Responses .....	92

### **List of Abbreviations**

Social Cognitive Theory (SCT)

The World Health Organization (WHO)

American College of Obstetricians and Gynecologists (ACOG)

Obstetrician Gynecologist (OBGYN)

## CHAPTER ONE: INTRODUCTION

### Overview

The lack of physical wellness during pregnancy is increasing in society. Wellness is about preventing diseases rather than waiting for them to arise (Kirkland, 2014). The four dimensions of wellness are social, spiritual well-being, mental and physical (Stoewen, 2017). Depending on the development of the individual, one dimension may be more distinguished than the others (Stoewen, 2017). The purpose of this study is to explore the perceptions and lived experiences of physical wellness during pregnancy from women in central Florida who are pregnant or women who have been pregnant in the past three years through three research questions. RQ1: what aspects of physical wellness are important to women who are pregnant? RQ2: what are women's physical wellness experiences during pregnancy? RQ3: how are women who are pregnant educated about physical wellness?

In the United States, an estimated six million women become pregnant yearly (Finer & Henshaw, 2006). Physical activity during pregnancy has been broadly researched in the literature (Okafor & Goon, 2020). However, when 9,345 women were surveyed, only 52% of the women participated in physical activity when pregnant, and once entered to the third trimester, the number decreased significantly to 13% (Walasik et al., 2020). Physical wellness is promoted by proper care of the body through physical exercise, correct nutrition, and adequate amounts of rest as well as abstaining from harmful habits such as drug use and alcohol abuse (Kohl & Cook, 2013). When all components of physical wellness are present in one's lifestyle, they create a positive effect on a person's overall quality of life (Stoewen, 2017). Proper physical wellness during pregnancy has been found to reduce the risk of depression, gestational diabetes, and to help pregnant women from gaining an excessive amount of weight (Ferrari & Joisten, 2022).

Even though data supports the relation between proper physical wellness and positive health outcomes, participation rates are low (Grenier et al., 2020). A main component of this problem is lack of education given by the physician (Bauer et al., 2010).

This chapter highlights the background to physical wellness during pregnancy. It also summarizes the researcher's role for examining the phenomenon, suggests the problem statement, provides clarification of the purpose statement, and provides the significance of the study. Three research questions focus on the underlying problem and purpose statement to analyze the research of physical wellness during pregnancy. Finally, a list of terms that are incorporated into the research are defined to bring clarification to the study.

### **Background**

While there are numerous women who are pregnant in society, many of them are not participating in proper wellness. Because of their lack of physical wellness many expectant women are experiencing depression, gestational diabetes, and excessive weight gain (Ferrari & Joisten, 2022). Regardless of numerous pieces of literature that advocate for a healthy lifestyle, participation rates for physical activity and nutritional guidelines during pregnancy are not high (Grenier et al., 2021). A key factor of this dilemma is lack of knowledge instructed by the physician (Bauer et al., 2010). Therefore, it is critical to address physical wellness during pregnancy for women. Researchers and healthcare providers should educate women on the benefits of physical wellness during pregnancy and encourage physical wellness before, during, and after birth (Downs et al., 2012). In pursuing to understand the issue, it is essential to explore it in detail. The background is discussed from historical, social, and theoretical contexts to explain this issue.

## **Historical**

Since the start of organized medicine, a public health goal has been to improve maternal wellness (Institute of Medicine, 1990). However, wellness was not always supported during pregnancy (Smith & Campbell, 2013). Throughout history, pregnancy was viewed as an illness and women were to be confined and immobile (Hammer et al., 2000). In the United States during the early to mid-twentieth-century, prenatal care aided to reform pregnancy by having physicians' instruction a healthy lifestyle (Howard, 2020). However, a barrier described in recent literature about physical wellness during pregnancy was a lack of education about the subject from healthcare providers (Vanstone et al., 2017).

## **Social**

During pregnancy, women who are expecting not only experience physiologic and hormonal changes, but psychological changes as well including the thought that one may not be able to handle the new stage of life (Maharlouei, 2016). According to Maharlouei (2016) women who are pregnant and have experienced emotional support from their spouse, family, and even the social networks are less likely to have peripartum complications. For many expecting mothers, pregnancy is a highly awaited and exciting part of life, but it can also trigger stress and anxiety about what is to come (Caro & Fast, 2020). Glazier and colleagues (2004) explain that women who reported lower amounts of social support showed stronger relations with stress. Health care providers are given a platform to educate communities on family support to help minimize postpartum complications such as mental health issues (Maharlouei, 2016). This study will add to literature because social environment is an essential part of wellness. The quality and quantity of social relationships affects mental, behavioral and physical health (Umberson et al., 2010). The goal of physical wellness is to maintain physical independence and



quality of life through exercise, healthy eating and positive lifestyle choices (Armbruster & Gladwin, 2001).

### **Theoretical**

The theory that guides this study is the Social Cognitive Theory (SCT) founded by psychologist Albert Bandura in 1977. The theory's foundation is that learning is affected by cognitive, behavioral, and environmental factors (Bandura, 1991). SCT emphasizes that learning phenomena can occur by personal experiences, observing other people's behavior and consequence of it (Bandura, 1977;1986). Bandura's four key aspects of observational learning are: attention, retention, reproduction, and motivation (Bandura, 1977; Wood & Bandura, 1989).

This study is based off perceptions and lived experiences of physical wellness during pregnancy from women who are pregnant or who have been pregnant in that past three years. Parental behaviors are key factors for a successful pregnancy (Nguyen et al., 2022). In society, unhealthy habits are common while healthy behaviors are less popular (Nguyen et al., 2022). The World Health Organization (2016) recommends that health behaviors such as healthy diet, physical activity, daily intake of food supplements, and avoidance of substance use should be discussed for a healthy pregnancy.

### **Situation to Self**

The interest for this study is to explore physical wellness during pregnancy in depth. This study gives personal meaning because I have been pregnant twice within the past two years. I believe that physical wellness played a meaningful role for my mind, body, and soul during my pregnancy journeys. This study allows women to share their perceptions and lived experiences with physical wellness during pregnancy through conducted interviews. Therefore, the paradigm for this study is interpretive research. The philosophical assumption that I bring to the study is

epistemological. Conducting a qualitative study means that evidence and knowledge is based off the perceptions and lived experiences from their actions and behaviors.

### **Problem Statement**

The problem is that while there are numerous pieces of literature supporting healthy physical wellness during pregnancy, there are still women not following the guidelines (ACOG, 2020). The target population for this study is women from central Florida who are pregnant or who have been pregnant in the past three years. The absence of physical wellness during pregnancy is increasing in society. Expecting mothers report getting little to no guidance on how to benefit from wellness guidelines from health care providers (Vanstone et al., 2017). Bauer et al. (2010) surveyed 93 physicians about the education they were giving their pregnant patients about physical activity. Many physicians agreed that exercise during pregnancy yielded positive results for new mothers (Bauer et al., 2010). However, not all physicians were instructing ACOG guidelines or promoting up to date information on exercise during pregnancy (Bauer et al., 2010).

According to ACOG (2020), when a woman is expecting, it is the perfect time for change towards a healthier lifestyle. This is because patients are more likely to be compliant when it comes to weight control, increase body movement and eating nutritious foods if doctors are promoting it correctly (Nawaz et al., 2000). Understanding why pregnant women are not following the guidelines and how to motivate them to live a healthier lifestyle is an important focus of future research (Downs et al., 2012). This study contributes to solving the problem by explaining that healthcare providers are not always sharing the proper wellness information and the importance of that information to their pregnant patients. Greiner et al. (2021) conducted a qualitative study with focus groups of healthy pregnant women examining the likelihood of

attaining optimal gestational weight gain through a physical activity and nutrition intervention received at the beginning of pregnancy, compared to standard prenatal care. Results showed that women who are pregnant had neglected participation in a healthy lifestyle because of difficulties with guidelines, lack of knowledge and resources in pregnancy, outdated beliefs and values of the women and their peers and ineffective counseling from care providers (Greiner, 2021). In addition, prenatal behaviors have an impact in the success of wellness during pregnancy (Nguyen et al., 2022).

### **Purpose Statement**

The purpose of this phenomenological study is to discover the perceptions and lived experiences of physical wellness during pregnancy from women who live in central Florida that are pregnant or who have been pregnant in the last three years. Previous literature involving the amount of physical wellness during pregnancy is as low as 3% (Smith & Campbell, 2013). Prenatal physical wellness has transformed from a potential risk to endorsing it for healthy lifestyle benefits (Davenport, 2020). The health of mother and baby is dependent on physical wellness and the subject should be promoted by physicians (Budler & Budler, 2022).

### **Significance of Study**

The significance of the study to healthcare professions is that it creates mindfulness of physical wellness during pregnancy. The study explores perceptions and lived experiences of physical wellness during pregnancy from women in central Florida who are pregnant or who have been pregnant in the past three years. The research being conducted can shed light on the importance of physical wellness and the benefits it brings to expectant mothers. Exercise and nutrition can bring a positive experience of wellness to pregnancy by increasing energy, self-control, endurance, and the likelihood to continue exercise in the postpartum period (Ezmerli,

2000). This is important because when used properly, physical wellness can decrease depression, gestational diabetes, and excessive weight gain (Ferrari & Joisten, 2022). Women planning a pregnancy or that are pregnant, should be encouraged to adopt or sustain a healthy lifestyle (ACOG, 2020).

This study is targeted to create greater recognition so that more women are knowledgeable of the significance of physical wellness during pregnancy. It is critical to bring attention to the subject, so women can know the current guidelines and get proper education about physical wellness from their physician. Greiner et al. (2021) found that women reported a lack of in-depth counseling from their physician about nutrition and physical activity in pregnancy what behaviors are needed to change or be modified (Greiner et al., 2021). Physicians should be up to date on current guidelines and the literature that is representing the data (Bauer et al., 2010). The theoretical and practical implications of this study are that it can help bring awareness to the importance of physical wellness during pregnancy and identify the role that healthcare providers play when promoting physical wellness. Another goal for this study is to contribute to the increasing amount of literature on the topic of physical wellness during pregnancy. The gap found during this research is that while there are multiple pieces of literature supporting healthy physical wellness during pregnancy, there are still women not following the guidelines (ACOG, 2020).

### **Research Questions**

This study explores the perceptions and lived experiences of physical wellness during pregnancy of women in central Florida who are pregnant or who have been pregnant in the last three years using three research questions. RQ1: what aspects of physical wellness are important to women who are pregnant? Physical wellness is promoted by proper care of the body through

physical exercise, correct nutrition, and adequate amounts of rest as well as abstaining from harmful habits such as drug use and alcohol abuse (Kohl & Cook, 2013). Prenatal behaviors towards physical wellness play a significant role in the success of pregnancy (Nguyen et al., 2022).

RQ2: what are women's physical wellness experiences during pregnancy? It is essential to gain knowledge and understanding of women's experiences during pregnancy (Modh et al., 2011). This is because a women's experience of being pregnant can help improve the chances of a healthy pregnancy, labor, and birth (Bonillas & Feehan, 2008),

RQ3: how are women who are pregnant educated about physical wellness? According to Ghiasi (2021) healthcare providers were the most used information source by women during pregnancy, followed by informal source such as family, friends and internet. Rezaee (2022) conducted a cross-sectional study that showed women that are pregnant used online information in their health decisions and shared their experiences with others; they had a moderate trust in online health information. Barriers of receiving information include feeling ashamed or embarrassed to talk about pregnancy-related issues, long waiting times at clinic to see a health provider, and lack of adequate information resources (Ghiasi, 2021).

### **Definitions**

1. *Phenomenology*- is structured to explore people's lived experience and their perception of the meanings of this experience (Rutberg & Bouikidis, 2018).
2. *Wellness*- is a complete combination of physical, mental, social, and spiritual wellbeing (Stoewen, 2017).
3. *Physical Wellness*- is being attentive to the body by taking care of one's wellness to be healthy for an entire lifetime (Stoewen, 2017).

4. *Pregnancy*- is the term used to describe the period in which a fetus develops inside a woman's womb or uterus (U.S. Department of Health and Human Services, 2017).
5. *Rest*- is common to all humanity and is a physical, mental, and spiritual human need (Bernhofer 2016).
6. *Habit*-used to predict and explain behavior (Gardner, 2015).
7. *Nutrition*- is defined as the manner of an individual that takes in and utilizes nutrients (American Society for Parenteral and Enteral Nutrition, 2012; DiMaria-Ghalili, et al., 2014)
8. *Exercise*- “is subcategory of physical activity that is planned, structured, repetitive, and purposefully focused on improvement or maintenance of one or more components of physical fitness” (Dasso, 2019; CDC, 2017, p. 46).

### **Summary**

Absence of physical wellness during pregnancy is becoming more prominent in society. Previous literature involving the amount of physical wellness during pregnancy is as low as 3% (Smith & Campbell, 2013). Proper physical wellness during pregnancy has been found to reduce the risk of depression, gestational diabetes, and to help pregnant women from gaining an excessive amount of weight (Ferrari & Joisten, 2022). Even though data supports the relation between proper physical wellness and positive health outcomes, participation rates are low (Grenier et al., 2021). Hence, this study explores perceptions and lived experiences of physical wellness during pregnancy from women who live in central Florida that are pregnant or who have been pregnant in the last three years. Absence of proper physical wellness during pregnancy can have a major impact on the body and mind. The consequences of poor wellness could be prevented by educational information that should be given in depth by the healthcare provider.

This study also addresses the gap in the literature by contributing to the research topic, methodological information, results from the analysis and finally discussion of interpretation and results.

## **CHAPTER TWO: LITERATURE REVIEW**

### **Overview**

Even with numerous supportive literature that relates the correlation between proper physical wellness during pregnancy and positive health outcomes, participation rates are low (Grenier et al., 2021). Healthcare workers take part in a pivotal role in healthy lifestyle promotion, as they are key professionals in contact with women throughout their pregnancy (Bahri Khomami et al., 2021). Yet, Payne et al. (2005) identified the need for up-to-date educational material for health professionals and their patients that are pregnant. The target population of this study is women in central Florida who are pregnant or women who have been pregnant in the past three years.

This provides an in-depth review of the literature related to physical wellness during pregnancy. First the theoretical framework of Social Cognitive Theory is discussed. The principles and beliefs of this theory are examined, outlining the underlying assumptions and characteristics. In the next section, wellness is discussed including spiritual, social, mental, and physical. Following this section, physical wellness during pregnancy is discussed and broken into four sections involving rest, harmful habits, nutrition, and exercise. finally, is an examination of why pregnant women are not following guidelines and how to motivate them to live a healthier lifestyle.

### **Theoretical Framework**

#### **Social Cognitive Theory**

The theory guiding the framework of this research is Bandura's Social Cognitive Theory (1977). SCT emphasizes that learning phenomena can occur by personal experiences, observing other people's behavior and consequence of it (Bandura, 1977; 1986). Views of Social Cognitive



Theory also highlight the importance of self-efficacy in human behavior (Schunk & DiBenedetto, 2020). There are contributing factors such as human motivation, attitude and action that affect an individuals' thought process (Stajkovic & Luthans, 1998). An individual that self-reflects and is goal-oriented produces self-efficacy and chooses to put themselves in conditions that they believe will benefit their learning behavior (Schunk & DiBenedetto, 2020).

Wood and Bandura (1989) explain that the four key aspects of observational learning are: attention, retention, reproduction, and motivation. Attention is the process when an individual chooses to observe and take in information from the ongoing modeled behavior (Wood & Bandura, 1989). Retention involves restructuring information in the form of perceptions and storing the information into memory (Wood & Bandura, 1989). Reproduction is acting out behavior that was observed and motivation is what ignites the learner's attention, practice, and retention (Wood & Bandura, 1989). CST takes into consideration individual's prior behavior, cognitions, social environment, and physical environment when predicting future behavior (Wong & Monaghan, 2020). Action for change is taken by an individual when people feel they are capable of the desired outcome behavior (Wong & Monaghan, 2020).

The Social Cognitive Theory explains that observational learning is a complex practice and individuals are in charge of their own behaviors (Bandura, 2001). Based on this concept, Bandura (2001) has identified several factors essential for learning including human agency, self-regulation, and self-efficacy. The focus of human agency is the will to initiate actions for given purposes (Bandura, 1997). Human agency has three modes: personal, proxy, and collective (Bandura, 1997). Learners can decide to engage in learning and make their own behavior change (Bandura, 2001). Self-regulation is individual thoughts, feelings, and actions that are routinely altered to accommodate personal goals (Zimmerman, 2000). According to Bandura (1991), self-

regulation functions through psychological subfunctions such as self-monitoring subfunction, judgmental subfunction, and self-reactive influences. Self-efficacy is a main component in self-regulation and plays a role in an individual's belief in their own capabilities to control actions or experiences in their lives (Bandura, 1997). These beliefs are centered on an individual's feelings, motivations, and resources (Wood & Bandura, 1989). Enactive mastery experiences, observational experiences, social persuasions, and physiological and psychological states are the four components of an individual's self-efficacy (Bandura, 1997). Behavior modeling is one of the primary behaviors change strategies through which humans observe the actions and consequences of the behaviors of other individuals, and eventually develop the needed knowledge and skills to take part in the modeled behavior (Oyibo et al., 2018).

The Social Cognitive Theory is in connection to this study because the data that is being collected is from women's perceptions and lived experiences of physical wellness during pregnancy. Social Cognitive Theory is often used when focusing on diet, physical activity, or weight loss (Wong & Monaghan, 2020). In relation to wellness behavior, self-efficacy, self-regulation, and outcome expectation are key factors that shape an individual's actions (Oyibo et al., 2018).

The Social Cognitive Theory focuses on the socio-structural and personal factors of health (Banura, 1998). Moosavinasab et al. (2018) studied the association between Social Cognitive Theory and physical activity during pregnancy. Moosavinasab et al. (2018) explains that social norms, behavior, and environment should be used to examine physical activity during pregnancy. Torkan et al. (2018) conducted a cross-sectional study on 192 pregnant women about nutritional behavior during pregnancy. The results showed that self-regulation, self-efficacy, outcome expectations, social support were defining factors in educational programs for pregnant

women for nutritional behavior (Torkan et al., 2018). Thus, the idea of nutritional counseling is needed for the improvement of nutritional behavior during pregnancy (Torkan et al., 2018).

## **Related Literature**

### **Wellness**

Wellness is defined as a modern phrase with ancient roots (Baker, 2022). A holistic approach to wellness originated in Greek, Indian and Chinese societies (Baker, 2022). These ancient cultures had methods of medicine that focused on an individual as a whole and involved the balance of mind, body, and spirit (Strohecker, 2015). These societies stressed living a healthy lifestyle with wellness habits that included balanced diet, exercise, proper sleep, moderation in all things, ethical behavior, promotion of positive thoughts and emotions, and the importance of one's spiritual nature, through prayer and meditation (Strohecker, 2015). In the twentieth century wellness was described from a more scientific standpoint (Baker, 2022). There was advanced knowledge of infectious disease and effective treatments to cure illnesses (Baker, 2022).

The word wellness became popular in the United States after World War II, giving Americans an idea about health, morality, and responsibility (Kirkland, 2014). Religious and spiritual movements such as New Thought and Christian Science were based on the concept that an individual's bodily health stems from their own achievement of a proper state of mind (Miller 2005). Wellness was tied to the idea that health was promoted through lifestyle change (Miller, 2005).

Malnutrition, unhealthy diet, smoking, alcohol consuming, drug abuse, stress are the demonstrations of living an unhealthy lifestyle (Farhud, 2015). In the United States there are ample amounts of research that explain major health problems that require the adjusting of an individual's behavior and daily lifestyle habits for change (Ulmer, 1984). An individual's

lifestyle has a substantial influence on one's physical and mental health (Farhud, 2015). Putting an individual's health and well-being first can sometimes be challenging (Stoewen, 2017).

Human behavior is what an individual does and, how they do it, and whether they will succeed (Stoewen, 2017). Although individuals know what is best for the body, it is easy to go back to unhealthy ways (Stoewen, 2017). Two factors that influence wellness the most are: self-regulation and habits. (Stoewen, 2017).

Habit-based intervention is an emerging strategy to help reduce obesity (Cleo, 2020). The goal for habit-intervention is to allow an individual to form habits with an automatic response for healthy behaviors and develop self-regulatory skills during habit-formation development (Kliemann et al., 2017). Kliemann et al. (2017) conducted a study on 537 obese patients using randomized habit-based advice for weight loss (10 Top Tips; 10TT). Results suggest that a habit-based intervention can improve self-regulatory and habit skills formation, which are important aspects of weight loss interventions (Kliemann et al., 2017).

In the 1940s, the World Health Organization defined wellness as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO, 1947; Kitko, 2001). The World Health Organization is discovering that beyond physical, mental, and social dimensions of health, there is a spiritual aspect (Dhar et al., 2011). Wellness is not just one of these things: physical, mental, social, and spiritual well-being, but a combination of all four. Roscoe (2009) explains that when it comes to wellness, the idea is usually reviewed in terms of several dimensions. Wellness is hardly seen by itself, but several factors are composed as a whole (Meiselman, 2016). To have a positive outlook on the effects of physical and psychological changes caused by aging, health care cost, and quality of life, it is essential to

provide a holistic approach that provides all dimensions of wellness (Armbruster & Gladwin, 2001).

### **Spiritual**

“Spirituality may be related to satisfaction with life in that spiritual people may be able adequately able to explain events, feel close to God, see beauty in the world, find comfort in their religious beliefs, and feel their lives have purpose, to name a few possibilities” (Cohen, 2002, p. 288). Spirituality connects to an individual’s mental health, well-being, and allows for a higher quality of life (Koenig, 2004). Over the last two decades, physicians have started to incorporate the mind-body partnership in wellness (Dossey, 2001). Ayurveda, an ancient healing system of India explains that emotional, mental, and spiritual health must be accomplished to master wellness (Dhar et al., 2011). Spiritual well-being has been linked to lower blood pressure, decreased depression, and increased self-confidence (Dhar et al., 2011). It is also valuable for an individual’s perception of joy (Gomez & Fisher, 2003). Although there is no standard tool on spiritual health, there are numerous research studies correlating the relationship between spiritual practices and health (Dhar et al., 2011). A cross-sectional study was created on spirituality, health, knowledge, and attitude among doctors of North India. A major finding of the research was that 93.48% of the physicians believe that stress is handled better by a spiritual individual (Dhar et al., 2011).

There is an incline of evidence found that suggests spirituality improves health (Coyle, 2002). According to Puchalski, (2001) healthcare providers have tried to balance their care by going back to medicine’s more spiritual foundations. Spiritual or compassionate care allows the physician to treat the patient as a whole (physically, emotionally, socially, and spiritually) (Puchalski, 2001). Daaleman et al. (2001) used a qualitative study that utilized focus groups to

identify and describe elements of patient-reported, health-related spirituality. Result showed that patients illustrate life scheme and positive intentionality as main agents in their description of spirituality in healthcare settings (Daaleman et al., 2002).

## **Social**

Social wellness involves developing and maintaining healthy relationships (Stoewen, 2017). An individual should enjoy spending time with friends and intimate partners (Stoewen, 2017). One should gain joy in caring about others, and letting others care about her; this includes family, friends, co-workers, church, and community (Stoewen, 2017). The social dimension of wellness is at its highest when one can contribute to the human and physical surroundings by communicating in synch with others (Kitko, 2001). Individuals must respect one another, opinions, and beliefs (Kitko, 2001). Upholding intimacy with others also falls into the category of social wellness (Kitko, 2001). Deep and meaningful close relationships are key factors when it comes to human flourishing (Feeney & Collins, 2015). Every stage of life is influenced by close and caring relationships regarding health and wellness (Feeney & Collins, 2015).

The quality and quantity of social relationships affects mental, behavior and physical health (Umberson et al., 2010). Strong sociocultural relationships affect an individual's outlook toward health and lifestyle choices (Ulmer, 1984). Thoughts, feelings, and actions of an individual are formed by the environment in which that person is raised and educated in (Ulmer, 1984). Thus, an individual's beliefs toward personal health are important because they reflect the individual's social perceptions (Ulmer, 1984). Tay et al. (2013) conducted a quantitative study on how social relationships are linked with different types of health habits such as healthy diet, physical activity, smoking, alcohol abuse, management of chronic illness, and suicide/self-injury. The results revealed that it was evident that social support was an essential component for health

and that having fewer social relationships related to poor management of chronic illness, increase in self-injurious behaviors and a higher risk for mortality (Tay et al., 2013). Kiernan et al. (2012) organized a randomized controlled behavioral weight management trial that assessed the psychometric properties, initial levels, and predictive validity to measure the social support and disruption from friends and family when trying to live a healthy lifestyle. Results showed that healthy eating and physical activity are more successful when strong social support is present (Kiernan et al., 2012).

## **Mental**

The World Health Organization (2004) defines mental well-being as individuals' ability to develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their community. Emotional well-being has an influence on every part of wellness, including social, mental, and physical (Haack & Mullington, 2005). There are a large-scale of factors that influence mental health including social support or social excursion, income, housing, and stress (Manderscheid et al., 2010). Recent literature suggests that physical health and biological functioning are correlated to positive mental health (Manderscheid et al., 2010). While there are numerous studies exploring the effects of stress on mental health, many topics focus on specific stressors, such as war or illness (Reutter & Bigatti, 2014). However, the general population is more likely to be stressed by day-to-day worry (Reutter & Bigatti, 2014).

In recent years, the correlation between nutrition and mental health has received increased societal attention (Firth et al., 2020). Being stressed because of day-to-day worry may result in over or under eating (AlAmmar et al., 2020). Certain foods can have specific nutrients and other active substances that affect an individual's mood (Ottley, 2000). AlAmmar et al.

(2020) explains that the choices of food one eats can enhance or weaken one's mood. Personal food choices, appetite, and the desire to eat are controlled by one's mood (AlAmmar et al., 2020). Stressed individuals may show an increased need to eat unhealthy foods, however, an individual's mood can be positively impacted by healthy foods such as vegetables, fruits, protein (AlAmmar et al., 2020). Roberts (2008) conducted a longitudinal naturalistic study of 71 healthy women. Results showed when chronic stress was present, women had changes in food choices such as an intake of saturated fatty acids and non-milk extrinsic sugars (Roberts, 2008).

### **Physical**

Physical health is the overall form of a person's physical body, including soundness, healthiness and or lack of health (McCloughen et al., 2012). Physical wellness is promoted by proper care of the body through physical exercise, correct nutrition, and adequate amounts of rest as well as abstaining from harmful habits such as drug use and alcohol abuse (Kohl & Cook, 2013). It means educating oneself, identifying symptoms of disease, getting regular medical checkups, and protecting oneself from injuries and harm (Kohl & Cook, 2013).

Physical wellness is probably the most popular dimension of wellness (Kitko, 2001). It allows an individual to work towards inner and outer endurance, flexibility, and strength (Kitko, 2001). Proper nutrition and self-care allow the inner body to take care of itself, such as function of every organ without fail (Kitko, 2001). Outer body care consists of working out and stretching (Kitko, 2001). Exercise has been used as treatment and prevention for many diseases (Gualdi-Russo & Zaccagni, 2021). Therefore, it is important to promote physical activity to prevent preventable diseases (Gualdi-Russo & Zaccagni, 2021).

### **Physical Wellness During Pregnancy**



The purpose of this paper is to specifically focus on the topic of physical wellness during pregnancy. The goal of physical wellness is to maintain physical independence and quality of life through exercise, healthy eating, and positive lifestyle choices (Armbruster & Gladwin, 2001). Pregnancy is a crucial time when maternal nutrition and lifestyle choices have a large influence on mother's and baby's wellness (Kaiser & Allen, 2002). Appropriate physical wellness during pregnancy has been found to reduce the risk of depression, gestational diabetes, and to help pregnant women from gaining an excessive amount of weight (Ferrari & Joisten, 2022). Refining the wellness of mothers, infants, and children is essential to the health of the next generation (Kaiser & Allen, 2002).

Routine physical wellness should be promoted in all aspects of life, including pregnancy, to support healthy outcomes (ACOG, 2020). Wellness supports self-efficacy for an individual (Stoewen, 2017). Actions associated with a healthy weight and lifestyle behaviors are believed to be crucial for a successful pregnancy (Soltani et al., 2017). Wellness actions during pregnancy include eating, resting, exercising, and staying away from harmful habits such as cigarette smoking, and other substance use that affects the health of an expecting mother and her fetus (Auerbach et al., 2014). Nutrition and physical activity are of great importance in relation to the short- and long-term birth outcomes, which has been increasingly showcased in literature (Soltani et al., 2017).

A new approach to women's wellness during pregnancy is emerging. Instead of focusing on the care of women based on their pregnancy condition or desires, health promotion and disease prevention should be included through all stages of life (Moos, 2003). The Institute of Medicine (1985) published a report on preventing low birth weight in hopes to change the data of reproductive care (Moos, 2003). The Institute of Medicine (1985) wrote:

Only casual attention has been given to the proposition that one of the best protections available against low birthweight and other poor pregnancy outcomes is to have a woman actively plan for pregnancy, enter pregnancy in good health with as few risk factors as possible, and be fully informed about her reproductive and general health. (p. 119).

Walker and Tinkle (1996) explains that there is a link between women's general health and childbearing considerations (Moos, 2003). Both authors propose women have structure for health evaluation and health care throughout life (Moos, 2003). There are two parts to this proposal. The first part incorporates the study of biology, sociology, and psychology of women's health as a whole. The second part combines relations between pregnancy and women's health throughout the life span. According to Walker and Tinkle (1996), the second dimension is accomplished through the promotion of proper wellness, disease prevention, and the management of chronic illness (Moos, 2003).

The American College of Obstetricians and Gynecologists (2000a) made recommendations that routine care should emphasize health promotion and disease prevention. Periodic assessments are an excellent opportunity to counsel patients about wellness (ACOG, 2000a). Routine assessments should include screening, evaluation, and counseling based on age and risk factor (ACOG, 2000a). Topics of counseling should include fitness, nutrition, health promotion, lifestyle behaviors and learning how to decrease psychosocial stressors (Moos, 2003). Women who start their pregnancy with proper physical wellness (exercise, good nutrition, rest, nonsmoking) should be educated to keep those healthy habits (ACOG, 2020). Women who do not have an active lifestyle with proper nutrition should be educated to take pregnancy as an opportunity to change their daily habits (ACOG, 2020).

### **Harmful Habits**

## ***Smoking***

Smoking tobacco during pregnancy contributes to numerous negative consequences throughout life not only for mother, but baby as well (Gould et al., 2020). Babies can suffer from increased respiratory problems, cancers, neurodevelopmental and behavioral problems, as well as increased long-term risks of non-communicable diseases. The effects linked to maternal smoking during pregnancy can happen directly and indirectly (Shea & Steiner, 2008). Direct affects can occur through the placenta to the fetus and indirectly by affecting the placental tissues and umbilical artery blood flow. Nicotine has a 15% higher concentration when introduced to the placenta compared to maternal blood (Andriani & Kuo, 2014). Smoking during pregnancy decreases birthweight and significantly increases the risk of preterm birth. “If these smoking behaviors in female adults during pregnancy increase, the continued rise will inevitably lead to a further increase in the already high burden of birth outcomes on their children” (Andriani & Kuo, 2014, p. 2).

Women that smoke while pregnant participate in the largest treatable risk factor for wellness during pregnancy (Gould et al., 2020). Smoking cessation should be given within the first 20 weeks of pregnancy to have an impact on health risks related to smoking (Prabhu et al., 2010). Healthcare providers should promote behavioral counseling and prescriber training to expecting mothers who are smoking (Gould et al., 2020).

## **Cannabis**

Cannabis use during pregnancy has become more popular over the years. Because of the increased use of cannabis, physicians are exposed more to women that use the drug while pregnant (Gérardin et al., 2011). “In a state with legalized recreational cannabis, pregnant and postpartum women reported continuing daily cannabis use during pregnancy for personal,

individualized reasons to take care of themselves and their baby” (Barbosa-Leiker et al, 2022 p. 472). There is much research that indicates dangerous effects of cannabis use during pregnancy, breastfeeding, and postpartum (Metz & Borgelt, 2018). Gérardin et al. (2011) organized a study that assessed practices of detection and care for women that use cannabis while pregnant. Results disclosed that only 51.4% of physicians questioned their patients about cannabis use and 68.1% of physicians did not feel educated on the subject to explain the risk factors about cannabis use during pregnancy (Gérardin et al., 2011). Lack of early detection of cannabis use during pregnancy represents a public health problem and preventative measures must be taken.

Legalization of cannabis is happening worldwide, and the absence of knowledge regarding the harm caused in the pregnant and lactating population has become obvious (Badowski & Smith, 2020). Maternal risks of cannabis use are of a concern because of the mode of ingestion and its addictive potential. Tetrahydrocannabinol is a fat-soluble molecule excreted in human breast milk and could be correlated with impaired motor development in breast feeding infants. According to Brown et. al (2017) from 2002 to 2014 cannabis use while pregnant had increased by 62%. Cannabis use is highest in the first trimester (6.44%) compared to the second and third (Volkow et al., 2017). Many women use marijuana during pregnancy to help reduce nausea and vomiting, anxiety, and chronic pain (Metz & Borgelt, 2018). Although there is a link between cannabis use and nausea during pregnancy, it remains poorly defined (Badowski & Smith, 2020). There are safer options for coping with nausea and vomiting when expecting that have been proven to be effective, with fewer side effects.

Marijuana is considered dangerous during pregnancy because it crosses the placenta and passes into breast milk (Metz and Borgelt, 2018). Using marijuana while expecting can result in fetal and neonatal exposure. Women who are expecting should be counseled by their physician

regarding the risks of cannabis use during pregnancy, breastfeeding and postpartum (Badowski & Smith, 2020). Expecting mothers should be promoted to abstain from harmful habits and harm reduction options should be offered to those not able to quit.

### ***Alcohol***

In the late 1970s, after observations of infants born from alcoholic mothers in France and the United States, alcohol was confirmed to cause malformations of embryos (Lemoine et al., 2003). The mother and fetus contain an equal concentration when alcohol crosses the placenta, which can cause damaging effects on baby if heavy drinking occurs while pregnant (Nykjaer et al., 2014). Drinking while pregnant is linked with fetal alcohol syndrome which causes growth retardation, birth defects, neurodevelopmental problems, and low birth weight (Henderson et al., 2006). According to the National Institute for Health and Care Excellence (2010) drinking alcohol during pregnancy, especially in the first three months, should be avoided due to the increased risk of a miscarriage (Nykjaer et al., 2014).

Albertsen et al. (2004) conducted a study that was supported within the Danish National Birth Cohort, which is a continuous nationwide study of pregnant women and their offspring. Data was collected by means of computer-assisted telephone interviews and blood samples from expecting mothers. Albertsen et al. (2004) concluded that birth outcomes of more than 40,000 pregnancies showed that an alcohol consumption of seven or more drinks per week during pregnancy was correlated with an increased risk of preterm delivery.

### **Rest**

Rest is common to all humanity and is a physical, mental, and spiritual human need (Bernhofer 2016). Sleep allows the body and brain to rest and replenish (Stickgold & Walker, 2007). Sleep is thought to be closely associated with the body's physical and emotional well-

being (Haack & Mullington, 2005). Behavioral and educational involvements for healthy sleep are valuable for guaranteeing proper sleep and routine lifestyle habits (Tanaka & Tamura, 2016). Sleep education increases motivation, quality of sleep, arousal levels and daytime concentration (Tanaka & Tamura, 2016).

According to Warland et al. (2018) adult humans sleep for approximately one third of their lives, and the fetus is asleep for one third of its gestation. Pregnancy, childbirth, and early motherhood emotionally and physically affect a woman's sleep (Lee, 1998). Hormonal alterations, growth of the fetus, and a newborn sleep schedule all impact sleep disruptions (Lee, 1998). These disruptions fluctuate differently each trimester of pregnancy as well as postpartum by catering to an infant's needs (Lee, 1998). During pregnancy the placenta's function is to increase secretion of many steroid hormones, including estrogen, progesterone, and prolactin (Lee, 1998). With the rapid increase in progesterone during the first trimester, sleepiness or sleep problems and morning sickness should be common symptoms (Lee, 1998).

Research shows that ninety-two percent of women report restless sleeping (Mindell & Jacobson, 2000). Shifts in sleep routines, decrease in sleep duration are complaints commonly reported in association with the physical changes during pregnancy (Pien & Schwab, 2004). Restless sleeping increases tremendously during pregnancy and following childbirth (Hedman et al., 2002). Night waking, difficulty falling asleep and waking too early are usual sleep issues during pregnancy (Kempner et al., 2012). Because decreased sleep quality has become normative in a healthy pregnancy, pregnant women have become more susceptible to clinical insomnia (Meers & Nowakowski, 2022). The International Classification of Sleep Disorders (2000) report explains that the existence of either insomnia or excessive sleepiness that arises during pregnancy can be termed Pregnancy-associated sleep disorder. Women who have had healthy

sleep habits before becoming pregnant will observe change in sleep over the course of pregnancy (Kempler et al., 2012). Warland et al., 2018 conducted a meta-analysis study that collected, evaluated, and presented the available research evidence that has investigated the impact of maternal sleep on fetal outcomes. The study linked fetal outcomes associated with four main areas of maternal sleep: sleep disordered breathing, sleep duration, sleep quality, and sleep position (Warland et al., 2018). Results showed that factors occurring during maternal sleep such as obstructive sleep apnea, sleep disruption and sleep position may have a negative effect on the fetus, resulting in altered growth (Warland et al., 2018).

Long stretches of sleep are decreased at night for new mothers, resulting in daytime fatigue (Goyal et al., 2007). New mothers have an inclined rate of sleep deprivation after birth; therefore, there are many physical, psychological, and emotional lifestyle changes that occur (Kempler et al., 2012). It has been proposed that depression during the post-partum period is higher compared to other times in a women's life due to sleep deprivation (Björnsdótti et al., 2012). Shockingly, there are few studies that have researched the association between sleep and postpartum depression (Björnsdótti et al., 2012). There is a need for programs that focus on sleep during the prenatal term (Stremmler et al., 2006). Studies have proven that there is a strong correlation between sleep disturbance and depression during postpartum (Goyal et al., 2007). Kempler et al. (2012) conducted a study of 214 first time mothers in a cluster randomized controlled trial. Results reveal that depressed mothers and non-depressed mothers experience different sleep patterns (Kempler et al., 2012). Depressed mothers get lower sleep quality, sleep disturbance and daytime sleepiness (Kempler et al., 2012). Programs should be recommended that give education for parents-to-be to prepare for the physical parts of childbirth and parenthood (Kempler et al., 2012).

## **Nutrition**

Nutrition during pregnancy is one of the vital factors for a healthy nine months (Torkan et al., 2018). Healthy nutrition when expecting is critical for normal growth and development of the fetus (Lucas et al., 2014). The nutritional requirements of expecting mothers increase during pregnancy to prepare the body for delivery and breastfeeding (Jouanne et al., 2021). With a few expectations, nutrition recommendations are similar before and during pregnancy (Williamson, 2006). The expectations include specific guidelines include taking folic acid supplements to help reduce the risk of neural tube defects and avoidance of certain foods to reduce the risk of food poisoning from harmful bacteria (Williamson, 2006). Vitamins, minerals, and omega-3 fatty acids play a crucial part in nutrition for pregnant women (Jouanne et al., 2021). The American Dietetic Association (2008) promotes a safe, healthy, and balanced diet that focuses on key nutrients such as folate, iron, calcium and vitamin D.

Adequate water intake is essential for human life (Montgomery, 2002). Yet, dietary advice about fluid intake during pregnancy is limited in comparison to information on folic acid (Derbyshire, 2007). Pregnant and breastfeeding women should be encouraged to increase their intake of water to meet their nutritional needs (Montgomery, 2002). Keeping hydrated will keep an individual cool, help control swelling, prevent constipation, and carry away waste products from mother to baby (Health Canada, 2021).

A healthy, balanced diet is necessary to support optimal growth and development of the fetus and the physiological changes that occur during pregnancy (Forbes et al., 2018). For neurologic and musculoskeletal fetal development, a daily prenatal vitamin with at least 400 mcg of folic acid and 30 mg of elemental iron should be taken (Caro & Fast, 2020). Woman who are pregnant need the correct amount of iron so the baby can develop properly (Health Canada,



2021). Foods that are rich in iron are tofu, fish, eggs, whole grain foods, lentils, lean meats, and poultry (Health Canada, 2021). Women who are underweight should gain 28 to 40 lbs. during pregnancy (Caro & Fast, 2020). Women who are at a normal weight should gain 25 to 35 lbs., and those who are overweight or obese should gain 11 to 20 lbs. during pregnancy (Caro & Fast, 2020). Omega-3 fatty acids should be encouraged and included in a well-balanced diet and unpasteurized foods such as raw milk and soft cheese should be avoided (Caro & Fast, 2020). Two-hundred milligrams of caffeine should be the maximum intake and artificial sweeteners should be avoided. The amount of iron absorbed by the body decreases if one drinks coffee or tea with meals (Health Canada, 2021; Caro & Fast, 2020).

An increase in dental caries may also occur while pregnant due to several physiological changes, eating habits and oral hygiene practices (Hashim & Akbar, 2014). Dentists should be included with health care providers to clarify the safety and importance of dental treatment during pregnancy (Hartnett et al., 2016) Many health professionals are informed of the importance of oral health, but often they do not address it as part of their treatment for prenatal, or well woman care (Hashim & Akbar, 2014). Hashim and Akbar (2014) found that 95.4% of gynecologists had knowledge about the correlation between oral health and pregnancy and that 85.2% recommended dental visits for their patients. It is highly recommended that gynecologists should inform and promote expecting mothers about the connection between gum disease and adverse pregnancy outcomes (Hashim & Akbar, 2014). All health care providers including physicians, dentists and dental hygienists need basic training to understanding nutritional knowledge to effectively assess dietary intake and provide appropriate guidance, counseling, and treatment to their patients (DiMaria-Ghalili, 2014).

According to the American Journal of Clinical Nutrition (2003) nutrition is the foundation of preventive medicine, and the responsibility of every physician. Yet, most women in the United States do not participate in healthful nutrition or maintain a healthy weight during pregnancy (Marshall et al., 2021). The intake of junk food and lack of nutritious dense foods have affected physical wellness during pregnancy in a poor outcome (Torkan et al., 2018) Despite the importance of this issue and interventions regarding nutrition during pregnancy, unhealthy nutritional habits and its consequences are still seen in pregnant women (Torkan et al., 2018).

Rates are low for women following the proper guidelines suggested by Health Canada (2021). This could be the conclusion of the guidelines not being explained properly through health care providers (Grenier et al., 2020). Women who are expecting may acquire nutritional knowledge from several types of sources (Lucas et al., 2014). However, the accuracy of this information is concerning (Lucas et al., 2014). According to May (2014) Healthcare providers knowledge of nutrition and promotion of it can positively impact dietary behaviors of women who are expecting. Nutrition counseling is necessary for all expecting mothers because their nutritional status affects their pregnancy and the newborn baby (Grenier et al., 2020). Nutritional counseling should be personalized and based off women's access to food, socio-economic status, race, ethnicity, and cultural food choices, as well as body mass index is a recommended counseling approach to improve nutritional status of pregnant women (Greiner et al., 2020; Kaleem et al., 2020). Nutrition counseling shows a positive effect on nutritional status of pregnant women and must be an essential part of prenatal care for all pregnant women (Kaleem et al., 2020). Encouragement of self-motivation and self-regulation, increased coping skills, and

adaptation to the surrounding environment provide an opportunity for changing the foundation of bad nutritional habits (Torkan et al., 2018)

## **Exercise**

Guidelines regarding prenatal physical exercise during pregnancy have changed significantly throughout the years. Throughout history women who were pregnant were instructed not to exercise to avoid strangling or squashing the baby (Hammer et al., 2000). In 2018, the U.S. Department of Health and Human Services Physical Activity Guidelines for Americans advocated for women who are pregnant or in the post-partum period to participate in at least 150 minutes of moderate intensity aerobic activity per week (ACOG, 2020). These guidelines were made to prevent complications that may occur during pregnancy (Di Pietro et al., 2019). Women who are expecting without complications should be promoted to perform aerobic and strength-conditioning exercises before, during, and after pregnancy (ACOG, 2020).

Routine exercise contributes positively to an individual's physical and psychological health (Poudevigne & O'Connor, 2006). The American College of Obstetrics Gynecology (2020) explains that exercise is physical activity consisting of structured, and repetitive bodily movements done to improve one or more components of physical wellness. Physical activity is a crucial factor for a healthy lifestyle, and obstetrician–gynecologists and other care providers should promote expecting mothers to continue or to initiate exercise as an essential component of ideal health (ACOG, 2020). A physician must assess a woman's risk level before clearing the expecting mother for physical activity (Hinman et al., 2015). Healthy expecting mothers participating in proper physical activities have minimal risks, although some modification to exercise routines may be needed to fit the normal anatomic and physiologic adjustments made for fetal requirements (ACOG, 2020).

Aerobic exercise has been found to be helpful during pregnancy and can be accomplished in various forms such as: stationary bicycling, jogging, walking, stair climbing, treadmill use, water exercise, swimming, and an aerobic dance class (Prather et al., 2012). High risk activities that can cause abdominal trauma or imbalance should be avoided (ACOG, 2020). Women who have a routine vigorous-intensity aerobic activity or who were physically active before pregnancy should proceed with activities during pregnancy and the postpartum period (ACOG, 2020). Pregnant women who were inactive before pregnancy should follow a steadier progression of physical activity (ACOG, 2020).

In healthy women, the benefits of exercise overshadow the risks and therefore, there is no reason that women who are healthy and cleared by a physician should not exercise (Ezmerli, 2000). It is important for women to understand that pregnancy does not give permission to be bed ridden (Artal & O'Tool, 2003). Pregnancy is not about being immobile; it is a crucial time for uncomplicated engagement in physical activities (Artal & O'Tool, 2003). Lynch et al. (2003) put together an observational study to explore whether inactive pregnant women participating in a swimming program would improve maternal fitness without disrupting the fetus. Results provided evidence that a structured swimming program for inactive pregnant women would increase maternal exercise without any harm to mother or fetus (Lynch et al., 2003).

Prenatal yoga has been shown to benefit women who suffer from anxiety, depression, stress, low back pain, and sleep disturbances (Babbar & Shyken, 2016). Holden et al. (2019) conducted a randomized controlled trial investigating the correlation of prenatal yoga and maternal well-being. Results showed that Pregnancy Symptom Inventory scores improved by a 3.1-point difference at 12 weeks in yoga compared to control, adjusted for baseline gestational

age (Holden et al., 2019). Thus, the ongoing claims that yoga improves a pregnant woman's overall well-being are supported (Holden et al., 2019).

For expecting mothers, pregnancy is a period when the body goes through significant changes such as increased blood volume and heart rate, weight gain, and shift in the center of mass (Di Pietro et al., 2019). Routine physical exercise plays a necessary role in wellness and is positively connected with a reduced risk of depression, gestational diabetes, and too much weight gain (Harrison, et al., 2011). Additional benefits of regular physical exercise include improved emotional well-being, positive body image and decrease risk of complications during labor (Harrison et al., 2011). Harmful health consequences of physical inactivity may be particularly important problems among pregnant women (Poudevigne & O'Connor, 2006). Bed rest is the most extreme type of physical inactivity and is prescribed by a physician in twenty percent of pregnancies (Poudevigne & O'Connor, 2006).

According to the National Health and Nutrition Examination Survey, between 2007 and 2014 only 23% to 29% of pregnant women through all stages of pregnancy met the minimum exercise guidelines (Hesketh & Evenson, 2018). Effective promotion of exercise among pregnant women is dependent on the identification of both exercise barriers and facilitators (Petrov Fieril et al., 2014). Absence of time and energy have been reported as obstacles to committing to a physical activity routine while pregnant (Marquez et al., 2009). Social support, access to resources, information, proper diet, scheduling are also barriers for routine exercise (Field, 2012). Bauer et al. (2010) conducted a cross-sectional 31-question pen and paper survey to explore healthcare provider's knowledge, beliefs, and practices regarding exercise during pregnancy. Results revealed that 99% of physicians and midwives believed that exercise during pregnancy would help improve physical wellness, but 60% of doctors were not up to date with

the American College of Obstetricians and Gynecologists guidelines for exercise during pregnancy (Bauer et al., 2010). According to May et al. (2014) successful interventions are needed to promote physical activity among women who are pregnant. May et al., (2014) surveyed 238 women who were pregnant and 31 obstetric healthcare providers to link the connection between healthcare providers educating about exercise to pregnant patients and patients' exercise behaviors. Results revealed that interventions should motivate healthcare providers to promote exercise to patients that are pregnant but should also be aware of other health behaviors (May et al., 2014).

### ***Depression***

Depression disorders have become a common health worry around the world (Robledo-Colonia et al., 2012). For many years, psychiatry and associated fields have been concerned about anxiety and depression during pregnancy and the postpartum period (Dunkel-Schetter & Tanner, 2012). The change to parenthood is an extremely vulnerable time for a mothers' mental health and approximately 9–21% of women experience depression and/or anxiety (McLeish & Redshaw, 2017). Pregnancy is linked with increased symptoms of depression, fatigue, reduced body image, and increased bodyweight (Poudevigne & O'Connor, 2006). Common signs of depression such as change in sleep, energy, and appetite, may be misinterpreted as normal experiences when expecting (Marcus, 2009). Depression affects 10–50% of women who become pregnant and increases with low socioeconomic status (De Tyche et al., 2005).

Eighteen percent of women who have symptoms for major depressive disorder during pregnancy or postpartum will seek treatment (Marcus, 2009). The effects of untreated prenatal depression are difficult to identify when determining the difference between continued maternal depression and anxiety, paternal mood symptoms, postpartum caregiving, and other

environmental factors (Stewart, 2011). Inadequate weight gain, underutilization of prenatal care, increased substance use, and premature birth are some of the negative outcomes associated with depression during pregnancy (Marcus, 2009).

Most pregnant women prefer psychotherapy instead of medication for the treatment of depression and recurrence of depression (Dimidjian & Goodman 2014). Non-based medicine treatment can be used to help prevent depression for pregnant women who want to decrease fetal exposure from prescribed drugs (Stewart, 2011). Routine exercise is a way of developing a healthy psychological well-being decreasing depression symptoms (Da Costa et al., 2003; Poudevigne & O'Connor, 2006). Depression during pregnancy declines by nearly 70% by incorporating physical movement (ACOG, 2020). Poor mental health and absence of physical activity increase the threat of pregnancy complications (Mourady et al., 2017). Performing physical activity when expecting can be a safe preventive care for mother and baby (Kołomańska et al., 2019). Being active during pregnancy can impact the entire nine months by reducing stress and increasing the mother's overall quality of life (Kołomańska et al., 2019). Women who exercise before and/or during pregnancy have a decreased chance of developing depression compared to non-active women (Kołomańska et al., 2019).

### ***Gestational Diabetes Mellitus***

During pregnancy energy requirements are increased through exercise, which involves a higher amount of carbohydrate intake (Artal & O'Toole, 2003). Although the food intake is increased, women should still be eating nutritious food to uphold a healthy weight (Artal & O'Toole, 2003). According to the American Diabetes Association (2004), gestational diabetes mellitus is a disorder of glucose metabolism that affects 7% of all pregnancies in the United States and is one of the most common complications when expecting. During normal

pregnancies, a progressive increase in insulin resistance occurs, the insulin resistance decreases the maternal acceptance of glucose into the muscle cells, and as a result there is an increase in maternal blood glucose concentrations to make sure there is enough glucose supply for fetal growth and development (Buchanan & Xiang, 2005). One of the most popular remedies to prevent gestational diabetes mellitus during pregnancy is enhanced physical activity (Mishra & Kishore, 2018). Physical activity has had a positive impact on glucose homeostasis through its direct or indirect effect on insulin sensitivity (Tobias et al., 2011). Specific exercise guidelines for gestational diabetes mellitus were recently created for management of the disease (Padayachee & Coombes, 2015) The guidelines for gestational diabetes mellitus affected woman, instruct expecting mothers to perform aerobic and resistance exercise for thirty-sixty minutes three times a week (Padayachee & Coombes, 2015). Today's literature explains that exercising before and during pregnancy may signify an importance for preventing and treating gestational diabetes mellitus (Dempsey et al., 2004). Dempsey et al., 2004, conducted a study that explored the correlation between physical activity performed during the year before and during the first twenty weeks of pregnancy. Results showed that lean women, as well as overweight women who exercised before and/or during pregnancy experienced a significant decrease in risks of gestational diabetes mellitus (Dempsey et al., 2004).

### ***Gestational Weight Gain***

Physical exercise when expecting supports wellness and may prevent excessive gestational weight gain (ACOG, 2020). Postpartum weight retention and long-term obesity are linked with gestational weight gain (Stengel et al., 2012). Physical activity can be a significant factor in lifestyle behavior that helps women maintain recommended body mass index and gestational weight gain. (Lott, 2019). Enhancing exercise and weight management before



pregnancy may develop higher activity amounts during pregnancy (Santo et al., 2017). Even though the Physical Activity Guidelines Advisory Committee (2008) has acknowledged the safety and benefits of physical activity for pregnant women and their fetus, it is unclear whether mothers to be getting the appropriate educational information by their physicians for a healthy lifestyle during pregnancy (Stengel et al., 2012). A qualitative study by Lott (2019) that examined the perceptions of women who are pregnant about physical activity and the information received about gestational weight gain (Lott, 2019). Results showed that physical activity and counseling will help with the reduction of gestational weight gain, however; the study also revealed that 20% of pregnant women were not sufficiently counseled on the topic of physical activity (Lott, 2019).

A research study was conducted to link the association between physical activity level and weight gain during pregnancy (Haakstad et al., 2007). Results indicated that women who engaged in physical activity regularly did not gain as much weight as women who were inactive in the third trimester only (Haakstad et al., 2007). There is an increase percentage of women that surpass the recommended weight gain when expecting and have a low regular exercise routine (Haakstad et al., 2007). The Institute of Medicine and National Research Council (2009) set guidelines for gestational weight gain that suggest that women with normal prepregnancy weight gain 25 to 35 pounds during pregnancy, whereas overweight and obese women are advised to gain 15 to 25 pounds and 11 to 20 pounds (IOM & NRC, 2009). These guidelines give health care providers the opportunity to counsel their patients; however, whether expecting mothers are receiving appropriate education regarding gestational weight gain and the importance of physical activity during pregnancy is uncertain (Stengel et al., 2012).

### *Self-esteem*

Self-esteem is believed to be associated with physical and mental health-related behaviors (Oguz-Duran & Tezer, 2009). That is why the wellness movement encourages individuals to participate in a beneficial lifestyle by committing to being healthy (Shillingford and Shillingford-Mackin 1991; (Oguz-Duran & Tezer, 2009). Maternal self-esteem is a strong predictor of neonatal outcomes, the quality of mother-infant bond and maternal skills (Santos et al., 2017). Pregnancy is a unique time when a women's body rapidly increases in shape and size (Poudevigne & O'Connor, 2006). These physical changes of the body are associated with a decrease in self-esteem. Movements and sensations of the fetus connected to the woman's body experience could also affect self-esteem either negatively with distress, or positively with happiness. Physical self-esteem could be improved by practicing mental skills and physical activity in a way that highlights a pregnant woman's sense of experience. Forms of mental and physical skills include socialization, distraction, body awareness and self-efficacy (Santos et al., 2017).

The practice of physical activity before pregnancy is positively linked with greater self-esteem during pregnancy (Santos et al., 2017). Being physically active while pregnant tends to show a more positive mood, greater vitality, less depressive symptoms, greater self-esteem, and greater satisfaction with body image. (Santos et al., 2017). Goodwin et al. (2000) conducted a longitudinal study that correlates psychological benefits of exercise during pregnancy. Results revealed that women who are physically active during pregnancy are expected to have higher self-esteem about body image and have an increase feeling of well-being at a time of physical change (Goodwin et al., 2000). Wallace et al. (1986) also conducted a study that involved the connection of physical wellness and self-esteem during pregnancy. Results determined that

physical activity during pregnancy is linked to an increase of self-esteem and a decrease in discomfort scores (Wallace et al., 1986).

### **Gap**

The gap found during this research is that while there are multiple pieces of literature supporting healthy physical wellness during pregnancy, there are still women not following the guidelines (ACOG, 2020). Sixty percent of women during pregnancy are not active (Poudevigne & O'Connor, 2006). Even though data supports the relation between positive health outcomes and proper physical wellness, participation rates are low (Grenier et al., 2020). According to the National Health and Nutrition Examination Survey, between 2007 and 2014 only 23% to 29% of pregnant women through all stages of pregnancy met the minimum exercise guidelines (Hesketh & Evenson, 2018). A serious component of this problem is lack of physical wellness education given by the health care providers (Bauer et al., 2010). A barrier described in literature about physical activity was lack of education about the subject (Vanstone et al., 2017). Expecting mothers report getting little to no guidance on how to benefit from the guidelines (Vanstone et al., 2017). According to ACOG (2020) when a woman is expecting, it is the perfect time for change towards a healthier lifestyle. This is because of enhanced motivation and numerous doctor appointments. Patients are more likely to be compliant when it comes to weight control, increased body movement and eating nutritious foods if their doctor takes the time to promote it (Nawaz et al., 2000). It is possible that expecting mothers are not getting clear information from their providers about prevention opportunities (Grenier et al., 2020). Understanding why pregnant women are not following the guidelines and how to motivate them to live a healthier lifestyle is an important focus of future research (Downs et al., 2012).

Pastuszak et al. (1999) provided research on the benefits folic acid taken during pregnancy and that more women were likely to take folic acid if counseled by their physician. Results showed that many fetuses will avoid exposure to low level of folic acid if healthcare professionals counsel expecting women on the benefits of the supplement (Pastuszak et al., 1999). Seventy-one percent of women took folic acid when recommended by their physician (Pastuszak et al., 1999). Health care professionals play a pivotal part when it comes to providing information and support for wellness (Vanstone et al., 2017). Barriers such as lack of knowledge and resources, outdated beliefs and values of the women and their peers, and ineffective counseling provide a disengagement of physical activity and nutrition recommendations (Grenier et al., 2020). Unfortunately, physical wellness is not an in-depth conversation between expecting mothers and most physicians. Out of 211 women recruited from a private clinic, only 63% of patients discussed prenatal exercise with their doctors and of those conversations, 50% were initiated by the patient (Krans et al., 2005). Healthcare providers should be up to date on the current recommendations for maternal physical activity and the research that supports the guidelines (Bauer et al., 2010).

Many pieces of literature and websites continue to provide outdated advice, which makes it hardly surprising that women report receiving little and/or conflicting information regarding physical activity during pregnancy (Clark and Gross, 2004). According to Lucas (2014) healthcare providers are not regularly helping women who are expecting to make an educated decision about nutrition. This is an important public health issue that is being poorly addressed in the literature (Lucas et al., 2014). The few available studies indicate that women who are expecting do not receive proper education about nutrition to make knowledgeable decisions (Lucas et al., 2014).

Health promotion is getting a large amount of awareness regarding the leading role it plays in educating the population (Ahmadi & Roosta, 2015). Health promotion describes health education, disease prevention and rehabilitation services (Groene, O., & Jorgensen, 2005). Behavioral change will only happen if the information, education, and advice are supported by norms, rules, and cultures (Groene, O., & Jorgensen, 2005). Therefore, health promotion interventions in organizations must acknowledge these underlying issues (Groene, O., & Jorgensen, 2005).

Physicians, when trained, supported, and motivated, can proudly take on the role as health promoters (Malta et al., 2016). Communication has an impact on accomplishment of health care services and promotion to the community (Kreps, 2009). However, when communication is used poorly, the best healthcare, promoting behaviors, health policies are not being practiced (Kreps, 2009). It is evident that physicians need to inform and educate patients about health risks factors and to create an effective method to promote personal health care (Ulmer, 1984). Santos et al. (2017) conducted a study over the amount of exercise participation from women who were pregnant, and the education given by physicians about physical activity. Results revealed that few women who are pregnant abide by the national guidelines for physical activity during pregnancy and that while most pregnant women did report receiving wellness advice, there were still 25% that did not (Santos, 2017).

An essential upgrade of World Health Organization is a plan for “Health for All”, focusing on health promotion (Sonmezer et al., 2012). Women who are pregnant should aim to accomplish a comfortable, healthy pregnancy (Frayne & Hauck, 2017). The variety of counseling available for women that are pregnant ranges from management of early pregnancy to

postpartum period (Frayne & Hauck, 2017). This puts physicians in a distinctive position to help educate their patients through all stages of a pregnancy (Frayne & Hauck, 2017).

### **Summary**

The literature has been studied concerning physical wellness during pregnancy that is connected to this phenomenon. The main areas observed for this study were areas of wellness, physical wellness, and physical wellness during pregnancy. Avoiding harmful habits, rest, nutrition, and exercise were also explored. The theoretical framework of Social Cognitive Theory was explained within which this study was formed. The role of healthcare professionals was also explored to emphasize the significance of education of wellness.

The goal of this study was to bring awareness to the gap in the literature to show the importance of physical wellness during pregnancy. Physical wellness during pregnancy has been the topic of numerous pieces of literature. However, much of this research has been focused on why physical wellness during pregnancy is important, but further research is needed on the topic of why expecting mothers are not following wellness guidelines. Despite the numerous pieces of literature supporting healthy physical wellness during pregnancy, there are still women not engaging in a healthy lifestyle. As such, there is a clear need to capture the perspectives and lived experiences about physical wellness of pregnant women or women who have been pregnant in the past three years. Although pregnancies are common among women, not every pregnancy is the same; hence the need to obtain their pregnancy journey from a varied perspective.

Chapter Three outlines the methodology for this study. The logic for choosing a qualitative phenomenological approach is described, as well as the methods for collecting and

analyzing the data. The procedures, setting and criteria for selection of the participants are described in detail.

## **CHAPTER THREE: METHODS**

### **Overview**

The goal of this study was to explore the perceptions and lived experiences of physical wellness during pregnancy from women in central Florida who are pregnant or women who have been pregnant in the past three years through three research questions. RQ1: what aspects of physical wellness are important to women who are pregnant? RQ2: what are women's physical wellness experiences during pregnancy? RQ3: how are women who are pregnant educated about physical wellness? Physical wellness is promoted by proper care of the body through physical exercise, correct nutrition, and adequate amounts of rest as well as abstaining from harmful habits such as drug use and alcohol abuse. Despite the numerous pieces of literature supporting healthy physical wellness during pregnancy, there are still women not engaging in a healthy lifestyle. A main component of this problem is lack of education given by the physician (Bauer et al., 2010). Understanding why pregnant women are not following the existing guidelines and how to motivate them to live a healthier lifestyle is an important focus of future research (Downs et al., 2012).

This chapter explains the study's qualitative phenomenological design. Three research questions are stated. The study's setting, sampling method, participants, procedure of recruitment, criteria for inclusion, and the role of the researcher are also discussed. The method of data collection and data analysis are incorporated, and finally, trustworthiness and ethical considerations are clarified.

### **Research Design**

Qualitative research contributes to an understanding of the human condition in different contexts and perceived situations (Bengtsson, 2016). It considers views that value socially



framed realities in which individuals or groups function to offer a detailed understanding of realistic issues (Korstjens & Moser, 2017). Phenomenology is structured to explore a person's perceptions of the meanings of the experience (Rutberg & Bouikidis, 2018). Individual perceptions are constructed by their social, cultural, historical, and individual contexts (Korstjens & Moser, 2017). A phenomenological study allows the participants to speak candidly about their experiences of pregnancy and how physical wellness affected their journey. Although pregnancy is common in society, each pregnancy and how one views physical wellness during pregnancy is different. It is essential that each woman in central Florida is given the opportunity to speak about physical wellness during pregnancy and how it affected their lifestyle. The study is intended to "do no harm" but to collect relevant personal information and focus on their lived experiences.

The specific phenomenology approach to this study is transcendental phenomenology based on principles founded by Edmund Husserl (Husserl, 1931; Moerer-Urdahl & Creswell, 2004). The phenomenon comes from the subject and how experience is developed (Davidsen, 2013). The researcher is to stand apart, and not allow any bias to advise the perceptions offered by the participants (Davidsen, 2013). The researcher can achieve the transcendental by bringing no definitions, expectations, assumption, or hypotheses to the study (Davidsen, 2013). The researcher must come to the interview with a blank slate and use participants' perceptions and lived experiences to form an understanding of the real meaning of the phenomenon (Neubauer et al., 2019). The phenomenon of physical wellness during pregnancy had been experienced by the researcher, so she involved herself in journaling, bracketing and used an external auditor to deal with any bias that surfaced while the study was being conducted.

### **Research Questions**

Physical wellness is promoted by proper care of the body through physical exercise, correct nutrition, and adequate amounts of rest as well as abstaining from harmful habits such as drug use and alcohol abuse (Kohl & Cook, 2013). This study explores the perceptions and lived experiences of physical wellness during pregnancy of women in central Florida who are pregnant or who have been pregnant in the last three years using three research questions. RQ1: What aspects of physical wellness are important to women who are pregnant? RQ2: What are women's physical wellness experiences during pregnancy? RQ3: How are women who are pregnant educated about physical wellness? These research questions help address the gap in the literature by addressing how view physical wellness during pregnancy and what information was given to them on the subject by their healthcare provider.

### **Settings**

Interviews were conducted via Microsoft Teams to make sure all participants have an equal experience. While using Microsoft Teams, participants were asked to be in a confidential location, so no information could become public. Interviews should take place in the participants' home or a quiet environment, like a conference room (Rutberg & Bouikidis, 2018). Based on the personal information given by the participant, it is important for their privacy to be protected. The signed informed consent was assessed and checked with participants, thus ensuring that they had reviewed the form and felt confident with the terms they had signed. All forms were signed before the interview took place and returned to the researcher by taking a picture of the document and sending it through text message or email. Participants were assured of confidentiality and the right not to answer certain questions. The participants were aware that at any point, they had the right to opt out of the study. The participants were informed that the

use of an audio recorder would be played during the interview and that they would have a chance to review their transcripts to confirm that their perceptions and lived experiences were being told clearly. The audio recorder, field notes and flash drive were secured in a locked filing cabinet that only the researcher has access to.

### **Participants**

This study recruited ten participants that were 18 years or older, from central Florida and that were pregnant or had been pregnant in the past three years. Behavioral and neurobiological evidence has shown that intermediate- and short-term memory allows information to exist more clearly (Greene et al., 2000). An extremely large number of articles, book chapters, and books recommend guidance and suggest anywhere from 5 to 50 participants as adequate (Dworkin, 2012). Participants were selected through an online social media platform (Instagram). Criterion sampling was used to determine if the participants are fit for the study. Criterion sampling involves selecting cases that meet a pre-established criterion. Participants should have common experiences, but vary in traits (Moser & Korstjens, 2018). For this study, three criteria questions were used. CQ1: Are you 18 years or older? CQ2: Do you live in central Florida? CQ3: Are you pregnant or have been pregnant in the past three years? Ten participants will be selected who are female in central Florida that are pregnant or who have been pregnant in the past three years. The common experience was if the participants were pregnant or had been pregnant in the past three years. Different accounts on social media (Instagram) were searched looking for participants that met the criteria. A private message was sent to the social media (Instagram) account owner. A recruitment form was sent to see if the participants were interested in participating in the study. Once the social media account owners wanted to participate, the researcher sent the criteria questions through the same private social media message. When the participants met the pre-

criteria, the researcher asked for the participant's email. An informed consent paper was emailed to the participant. The participant signed the document and returned it through email or sent a picture through text message. Once the informed consent was received, the interviews were scheduled. After the interviews were conducted, the researcher transcribed the interviews, and analyzed the data based on the pregnant women's personal experiences. The interviewee received a ten-dollar Starbucks gift card via text message for participating.

### **Procedure**

Approval of the Institutional Review Board (IRB) was granted from Liberty University. The researcher emailed potential participants explaining the intent of the study and the criteria needed for the participant to be allowed into the research. The outgoing documentation had enough detail that was relevant and sufficient for the participant to have a clear and educated decision. Both phone number and email for researcher were included in the correspondence. This allowed potential participants to obtain contact information of the researcher for any questions that arose about the study. Once participants were found and agreed to the study, a preliminary survey was sent to them to see if they met the predefined criteria for the study. Once the participants met the criteria, an informed consent was emailed to them to review and sign the document before the interview was scheduled.

### **The Researcher's Role**

It is significant to the study for the researcher to start off by expressing her world view (Austin & Sutton, 2014). Proper physical wellness during pregnancy is the foundation to a healthy pregnancy. The researcher's interest for this study was ignited while finding out she was pregnant with my second child during the topic selection stage of her dissertation. Thus, her desire was to conduct this study to explore physical wellness during pregnancy in depth. This

study allows women to share their perceptions and lived experiences about physical wellness during pregnancy. It is important to set aside one's own bias and experiences since the researcher is one-year post-partum. Respondent validation, constant comparisons across participant accounts, representing deviant cases and outliers, prolonged involvement, or persistent observation of participants are all ways of reducing bias in a research study (Smith & Noble, 2014). The interviewer needs to be conscious of how her role may affect the conversation between the interviewer and interviewee (McGrath et al., 2019). In the interview the researcher should not be viewed as someone biasing the data, but rather listening and probing for deeper details when needed (McGrath et al., 2019). The interviewer's previous knowledge and experiences may play an important part in understanding the perceptions of the participant (McGrath et al., 2019).

### **Data Collection**

Data was collected over March 2023-April 2023. Guided interviews were the primary form of data collection for this study. This kind of interview lets research design a list of general questions, which are then used during interviews (Aborisade, 2013). A guided interview allows the ability to find new themes and effective data analysis (Patton, 1990). The process of data collection through interviews will involve the generation of large amounts of information (Sutton & Austin, 2015). Data was collected through semi-structured and open-ended interview questions. Open questions provide broad boundaries allowing the interviewee to answer in their own words about the topic being asked (Roulston, 2010). To deepen the focus, the researcher connected certain information using the probing technique. For example, if any participants mentioned the words "eating healthy", probes were used to explore what foods they perceived to be healthy in their lived experiences. Probing can help further exploration that incorporates the

interviewee's words to create questions that provide further description (Roulston, 2010). During the interview participants shared their perceptions and lived experiences about physical wellness during pregnancy and discussed how the topic affected their lives. Lived experiences that are unique to the participant allow the researcher to gain insight on how different phenomena of interest are experienced and perceived (McGrath et al., 2019).

## **Interviews**

Each interview for this study was approximately one hour. Interviews provide rich data and give the most direct and straightforward approach regarding a particular phenomenon (Barrett & Twycross, 2018). Different questions work better in certain parts of the interview. Open-ended questions create an atmosphere where the participant is encouraged to think aloud (Hammer & Wildavsky, 2018). Questions One and Two are to introduce and build a relationship with the participant. Researchers should open the interview with a few "easy" questions to make the interviewee comfortable and to familiarize her with the subject of the interview (McGrath et al., 2019). Building a connection with the participants is the foundation of a detailed interview. Rapport is also crucial during the interview, allowing the participant to bring thick, detailed information about the perceptions and experiences during the heart of the study (McGrath et al., 2019).

Questions Two through Nine are the core questions of the interview. Keeping the questions general allows the participants to take the questions in the direction of their lived experiences. This leaves room for concepts or perceptions to emerge from the data that had not been thought of yet. Questions Two through Nine are also big and expansion questions. Qualitative research questions focus on detail of unexpected data from the participants and writing big, expansive questions gives the participants an opportunity to take the researcher's

question in several directions (Jacob & Furgerson). Jacob & Furgerson (2012) explains that when big questions are presented to the participants, the participants could say things that the researcher did not think of. It is often those things that become one of the most essential parts of the study. Question Ten implies that the interview is closing and gives the chance for the interviewee to add in any information. A question like “Is there anything more you would like to add?” can be a suitable closing question (McGrath et al., 2019).

#### Interview Questions:

1. Please tell me about yourself, as if we just met one another.
  - a. Are you married, single or widowed?
  - b. How many children do you have?
2. Please describe your knowledge of wellness.
3. Please describe your knowledge of physical wellness.
4. Please describe your pregnancy/pregnancies.
5. Please describe your nutrition during pregnancy.
  - a. What foods did you eat?
  - b. What did you drink to keep hydrated?
  - c. What supplements did you take?
6. Please describe your sleep during pregnancy.
  - a. Did anything keep you up at night?
7. Did you have to change any of your daily habits once you became pregnant?
  - a. How did that make you feel?
8. Please describe your physical activity during pregnancy.
  - a. Please describe the activities you participated in.

9. Please describe the promotion of physical wellness given by your physician during pregnancy.

10. Is there anything more that you would like to add?

The subjects in these questions are common factors of pregnancy that women experience. The participants may examine the impact of the phenomenon and how it impacted their lives. From doing so, emotions may arise from the participants. These questions also studied how significant women's perceptions and lived experiences were affected by physical wellness during pregnancy.

Before the interview began, the researcher introduced herself and thanked the participants for being involved in the study. The researcher stated the purpose of the study, outlined the interview process, and explained that the participant can opt out of the study at any point without any consequences. The participants were asked if they have any questions regarding the study. Approaching interviewees with an open mind will build trust in the study. Explaining clearly why one might be interested in their specific point of view will make the participant feel more comfortable (McGrath et al., 2019) Participants were notified that a pseudonym will replace their real names in any part of the study while documenting their perceptions and lived experiences. Participants were given the option to pick the pseudonym of their choice.

The researcher explained that the interviews were audio-recorded, and that the agreement was in the informed consent document. The researcher explained that the interview would be audio-recorded. Field notes were taken to capture the clarity of the content of the interview. Field notes allow the researcher to document impressions, behaviors, and nonverbal cues (Sutton & Austin, 2015). Notes do not need to be formal, but they should be kept secure for privacy in a small notebook (Sutton & Austin, 2015). Once the interview had ended, the participants were



given the opportunity to add any additional information that they felt described their perceptions and lived experiences of physical wellness during pregnancy. To maintain confidentiality, data that was gathered from the interview and recorder was stored on a flash drive that was secured in a locked filing cabinet that only the researcher has access to. The information on the flash drive was uploaded to a password-locked computer. Only the researcher had access to the computer, password and filing cabinet.

### **Data Analysis**

The data analysis used for this study will be thematic analysis (Braun & Clarke, 2006). Bracketing was used to set aside bias and judgement (Sorsa et al., 2015). It is described as two types of researcher engagement: with data and with new findings (Fischer, 2009). Thematic analysis identifies, analyzes, and reports patterns within data through codes and themes. It minimally organizes and describes the data set in rich detail (Braun & Clarke, 2006). This allowed the researcher to become familiar with the information and identify any patterns.

Once the interviews were conducted, the researcher reviewed and coded the data. The researcher also had transcripts sent to a professional transcription service to assure the correct content was perceived. The researcher was given signed permission from participants that the data was allowed to be sent to a professional transcription service. The transcriptionist signed a non-disclosure statement to provide confidentiality. After receiving the transcripts from the professional service, the researcher studied the transcribed data by comparing the audio recording to the transcripts. The researcher sent the transcripts to participants for member checking.

Coding features data that appear interesting and meaningful. It may be certain words or phrases that are used by different participants, and these can be drawn together to allow an

opportunity to focus findings in a more meaningful manner (Austin & Sutton, 2014). Words, phrases, or pieces of text will be given meaningful names that exemplify what the participants are saying (Austin & Sutton, 2014). Codes will be basic and in shorter text and themes will be longer phrases or sentences (Austin & Sutton, 2014). For example, a theme would be generalized by picking up the word exercise and a code would be more specific, such as walking or yoga. Once the themes and codes were identified, they were reviewed thoroughly. The data should support the themes chosen. Themes should relate to one another and the overall research questions. The write-up of the data included the results of the thematic analysis. The researcher synthesized the data by linking the themes back to the research questions.

To maintain confidentiality, data that was gathered from the interview, the recorder and flash drive were secured in a locked filing cabinet to which only the researcher had access. The information from the participants was uploaded to a password-locked computer. Only the researcher had access to the computer, password and filing cabinet. Liberty University requires data to be deleted after three years. Data will be deleted from computer, audio recorder and field notes with be shredded after three years.

### **Trustworthiness**

“Trustworthiness or rigor of a study refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study” (Connelly, 2016, p. 435). To ensure trustworthiness the following were incorporated into the study: credibility, dependability, confirmability, and transferability. As the researcher discussed the results, participants will be quoted to confirm the trustworthiness of the study.

## **Credibility**

“Credibility of the study, or the confidence in the truth of the study and therefore the findings, is the most important criterion” (Connelly, 2016, p. 435). This notion is comparable to internal validity in quantitative research (Connelly, 2016). A technique used to establish credibility for this study was member-checking. Member-checking is when data, analytic categories, interpretations, and conclusions are checked with whom the data were originally obtained from (Lincoln & Guba, 1986) This is believed to be the most crucial technique for establishing credibility (Lincoln & Guba, 1986) In this study, to assure credibility of the data being collected, participants were asked to review their transcripts and have the opportunity to make any modifications needed. This allowed the participant to check the content to ensure the researcher captured the experiences reported. Threats regarding credibility in qualitative studies include researcher bias, reactivity, and respondent bias (Lincoln & Guba, 1986).

Another form of credibility in this study is triangulation. Triangulation can deepen research as it provides a selection of datasets to explain different aspects of a phenomenon of interest (Noble & Heale, 2019). In this study, triangulation was used through literature review, interviews, and a demographic survey that participants completed.

## **Dependability and Confirmability**

“Dependability refers to the stability of the data over time and over the conditions of the study” (Connelly, 2016, p. 435). It indicates that the findings are steady and could be repeated (Lincoln & Guba, 1986). Confirmability is the extent to which the findings of a study are formed by the participant and not by researcher bias, motivation, or interest (Lincoln & Guba, 1986). Detailed notes are taken throughout the study to record any decisions and analysis (Connelly, 2016). For this study dependability and confirmability were achieved by utilizing services from

an external audit. The audit was performed by a professor at a local university with methodological expertise. External audits are a way of assessing trustworthiness and dependability from a methodological standpoint (Greene et al., 1998). It also assesses the confirmability by reviewing the data, analysis, interpretations and reviewing whether the findings represent the data correctly (Greene et al., 1998).

### **Transferability**

“The nature of transferability, the extent to which findings are useful to persons in other settings, is different from other aspects of research in that readers determine how applicable the findings are to their situations” (Connelly, 2016, p. 435). In qualitative research, the researcher is aware that there are few participants. The research is in depth and may or may not be transferable. A thick description is used for this study. To enable transferability the methods and time frames for the collection of information in the original study must be entirely explained through the complete duration of the field study (Stahl & King, 2020). By describing a phenomenon in adequate detail an individual can begin to evaluate the extent to which the conclusions drawn are transferable to other times, settings, situations, and people (Lincoln & Guba, 1986). This researcher confirmed that the methodology and findings for this study were explained in depth to help the reader decide whether the findings from this study will be transferable to other populations and contexts.

### **Ethical Considerations**

Qualitative research entails an individual or the things that individuals generate during the interview such as documents or notes (Austin & Sutton, 2014). As a result, the research should be used in an ethical manner that places the safety, security, and needs of participants as a priority throughout the study (Austin & Sutton, 2014). This is to protect the participant and the

validity of the study. Qualitative research involves dedication to participant's experiences which can be complex and unpredictable (Reid et al., 2018). There can be challenge of thinking and acting ethically as a qualitative researcher. "These include striving to maintain integrity and altruism, upholding autonomy in gaining consent and access, balancing protection of vulnerable participants with paternalism, managing multiple roles and power relations and avoiding harm in dissemination of findings" (Reid et al., 2018, p. 74).

It was clearly stated that participants will speak anonymously and that pseudonyms will be used in place of their real names for privacy (Crenshaw, 2014). Also, the researcher explained that bias and beliefs regarding the phenomenon will not affect the data being collected.

The nature and purpose of this study were explained to participants in detail. An informed consent form was sent through email. The informed consent was signed and sent back to the researcher before the interview was conducted. Pseudonyms were used to protect the privacy of recorded information from the participants. To diminish the bias of the researcher, reflexive journaling and bracketing were used to discard any assumptions made about the phenomenon. To maintain confidentiality, data that was gathered from the interview, recorder and flash drive was secured in a locked filing cabinet that only the researcher had access to. The information on the flash drive was uploaded to a password-locked computer. Only the researcher had access to the computer, password and filing cabinet. Liberty University requires data to be deleted after three years. Data will be deleted from computer, recorder, and field notes with be shredded after three years.

### **Summary**

A qualitative study was proposed to cover the research topic of physical wellness during pregnancy. The reason for choosing the phenomenological method was explained and discussed.

A phenomenology study was a fitting approach to collect data about the perceptions and lived experiences of the participants regarding physical wellness during pregnancy. Research questions were used to collect data, and the setting of the interviews will be a private location selected by the participant through Teams. Participants were recruited through social media, following the approval of IRB. The researcher's role in the study of physical wellness during pregnancy was recorded and it was explained that data was collected through interviews using semi-structured questions. Transcendental phenomenology was used to collect data analysis. Trustworthiness was provided by the researcher by member checking and using an external auditor. The ethical issue of confidentiality was shared with each of the participants and taken into consideration by the researcher. Results from the analysis will be discussed in the following chapter.

## **CHAPTER FOUR: FINDINGS**

### **Overview**

The purpose of this phenomenological study is to discover the perceptions and lived experiences of physical wellness during pregnancy from women who live in central Florida that are pregnant or who have been pregnant in the last three years. Three themes experienced by pregnant or women that had been pregnant in the past three years (a) taking care of the body, (b) lack of motivation for proper wellness, (c) lack of education given by the physician. Therefore, it was deemed crucial to study physical wellness during pregnancy. This research was important to healthcare professions because it reminded healthcare workers of the need for proper education of physical wellness during pregnancy. It also highlighted the pivotal role that healthcare workers can play in women's wellness during pregnancy. Chapter Four outlines the findings of the research study. This chapter is divided into two sections. The first section contains details of the participants which were presented in a private social media message. The pre-determined criteria questions that were used were: (a) Are you 18 years or older? (b) Do you live in central Florida? (c) Are you pregnant or have been pregnant in the past three years? Details from the participants were also collected through an audio recorded interview using Teams. The second section explores the participant's perceptions and lived experiences of physical wellness during pregnancy.

### **Participants**

There were ten individuals who participated in this study. All participants met the pre-established criteria: they were 18 years or older, lived in central Florida and were pregnant or had been pregnant in the past three years. Pseudonyms were given to each participant and

participant's children to maintain confidentiality throughout the research and the data collection process (see Table 1).

**Table 1**

*Pre-Criteria*

Participants	Over the age of 18	Lives in central Florida	Pregnant or had been pregnant in the past three years
Kate	X	X	X
June	X	X	X
Sarah	X	X	X
Torrie	X	X	X
Macy	X	X	X
Taylor	X	X	X
Lilly	X	X	X
Kallie	X	X	X
Kasey	X	X	X
Luna	X	X	X

**Kate**

Kate is 26 and an academic adviser at the University of Florida. Kate was 24 weeks pregnant, and her due date was midsummer in July. Kate's pregnancy has had no complications. She had morning sickness in her first trimester and slowly regained an appetite. In her first trimester she ate whatever food she could keep down. Her main source of nutrition was plain



toast. Once her nausea started to subside in the second trimester, she was able to eat more nutritious foods like oatmeal and fruits. Kate tried to walk for exercise because her job required her to be non-mobile. Kate explained that a daily habit she had to stop once she became pregnant was an excessive daily amount of caffeine.

Kate explained that her doctor visits had been short and to the point. Her doctor asked how she was feeling and when she answered fine, the focus shifted to the baby. The concentration was on the baby for the remainder of the appointment and no questions were specifically asked about her physical wellness. She also shared that she had not had many questions about wellness, but when the subject was brought up, she was the one to engage in the conversation.

## **June**

June is 40 years old and has two children. Her son is almost eight, and her daughter is almost a year and a half. June explained that both of her pregnancies were healthy, but she did have gestational diabetes with her daughter. June explained the struggle of having gestational diabetes and the emotional and physical toll it played during her pregnancy. She shared her poor experience with the doctors and how it took seeing a nutritionist to educate her on the proper foods she should be putting into her body. June explained that it took almost into her third trimester to get an appointment for a nutritionist. She took it upon herself to cut out sugar and carbs to get her sugar count down. When her doctor visits showed that her sugar was too high, the doctor made her feel guilty and did not guide her in the right steps. When June finally started to see a nutritionist, she finally had a sense of relief and felt educated on what foods work for her body.

June also shared that she had to find a lot of information on gestational diabetes on her own due to the long delay of the nutritionist availability. While Google was where she started her searching, it was not giving her emotional support and she started to get overwhelmed. June shared she finally found comfort in a Facebook group that was started by other women who had shared the same experience. While these women were not medical professionals, they made her feel heard and not so isolated during her pregnancy.

### **Sarah**

Sarah has three children. Colton is eight, Brad is five and Teddy is one and a half months old. Sarah stated that her last pregnancy was “a breeze” compared to her first two. Sarah shared the struggles of having poor wellness due to working full-time and trying to juggle a family. She would try to squeeze in a walk, but her busy schedule and family would often leave her too tired by the end of the day. Sarah explained that her day-to-day activity was her physical exercise. Sarah also shared that her nutrition was not the best. Working-full time left less time to meal prep. A lot of Sarah’s meals, especially at work, were fast food.

Sarah explained that education about physical wellness was not given by her physician during her pregnancy appointments. She feels that if it had been brought up and made important, she would have tried harder for proper wellness during her pregnancy. Sarah’s doctor would ask how she was doing and then move on to checking the baby’s heartbeat. Sarah shared that all her pregnancy visits were like that, so she assumed that was a normal way of how things went.

### **Torrie**

Torrie has a total of six children, four girls and two boys. During her fifth pregnancy, Jackie delivered her son. Unfortunately, Torrie had the hardest moment of her life when she discovered she had a stillbirth pregnancy. Torrie explained that that all her pregnancies were

healthy, but her fifth. A couple years later, Torrie became pregnant with her second son, Phelix. The emotional trauma from losing her first son cast a cloud over her pregnancy. Torrie shared that she was constantly checking for movement. The emotional worry was constantly showering over her.

Torrie shared that she gained the most weight with this pregnancy. She had morning sickness and ate anything she could keep down. She would walk for exercise but was scared to do too much due to the fear tied with losing her previous child. She shared that when it came to doctor visits, her experience was very poor. She felt that the healthcare providers did not care about her and wanted to get her in and out of the office. She also concluded that since this was her sixth pregnancy, that the healthcare providers just assumed she knew what she was doing.

### **Macy**

Macy has a two-year-old son and was 30 weeks pregnant with another baby boy. Macy expressed that both her pregnancies were healthy, but she did have extreme nausea with both. Macy shared that her nutrition for her first pregnancy was strictly vegetarian. During her second pregnancy, she incorporated more protein from meat, which helped subside the nausea. She explained that she tried to eat as healthy as possible, but she ate a lot of cereal for meals.

Macy shared that her only form of exercise was her day-to day activities which included chasing her toddler and shopping. Macy reported the hardest part of pregnancy was getting a good night's sleep. Between her toddler waking up and the baby kicking, she was only getting five hours of sleep. Macy expressed that the only physical wellness advice her physician gave her was to continue doing the physical activities she was doing before she became pregnant. Her physician did not go into any detail about how much she should be exercising, eating or sleeping while pregnant.

**Taylor**

Taylor has one son, who just turned two. Taylor worked full-time and shared how exhausting it was to be pregnant and working. She would have to walk several flights of stairs at work, so she considered that to be her daily exercise. Taylor explained that she had an easy pregnancy with no morning sickness or nausea. Taylor shared that she did not change her nutritional habits once she became pregnant. The only thing that changed was her sleep schedule due to the discomfort from the baby and heartburn.

Taylor experienced severe heartburn and was prescribed medicine from her doctor. She shared that her heartburn would keep her up at night. The heartburn was Taylor's biggest discomfort during pregnancy. She explained that she would have to use pillows to prop herself up to get in a comfortable sleeping position and even ended up sleeping in a recliner. Taylor shared that she did not have any education on heartburn from her physicians, other than the doctors prescribing her medication. Taylor also shared that her doctor did not go into detail about wellness. Taylor's doctor told her to eat healthy and move her body.

**Lilly**

Lilly has two sons Zack and Caleb. Lilly's first son was born in 2020 and her second son was born in 2021. Both of Lilly's pregnancies were healthy, but she did have gestational diabetes with her second pregnancy. Lilly explained that she ate as healthy as possible to control her gestational diabetes. Her main concern was staying away from sugar. She explained she would eat a lot of salads and protein shakes. Lilly kept active by walking with her family and chasing her toddler around but did not have a steady workout program. Lilly shared that being pregnant and taking care of another child took all her energy.

Lilly expressed her concern about poor service from her healthcare providers. Her physician quit the practice two weeks before she was supposed to give birth. It made her feel very uncomfortable with the situation and scared that she would not have a doctor to deliver her baby. Lilly also expressed that she was unhappy with the education and promotion of educational material she received during her pregnancy appointments. Lilly explained that she was already somewhat knowledgeable about eating healthy but would have liked more attention to the topic of wellness from her provider.

### **Kallie**

Kallie has two children, a four-year-old and a one-year-old. Kallie was very nauseous during her entire pregnancy. She shared that she would take two bites of her meal and would have to stop her stomach being upset. She also explained that her physical activity was put on hold when the doctors put her on bedrest by her second trimester. Kallie said this was most difficult because she could not work and had a family to take care of. This put a lot of emotional stress on her mind and body.

Kallie shared that she had many complications with her second pregnancy. She had many doctor's appointments since she was put on bedrest. Kallie did not go into detail of why she needed to be on bedrest but did share that the doctors did not want her to go into early labor. Kallie was referred out to a larger hospital that specialized in her complications. Kallie explained how frustrating it was to be put on bedrest and feared for the health of her baby. Kallie reported that her fear stemmed from lack of education given during her pregnancy appointments. Kallie can remember the physician asking if she did drugs or drank alcohol, but nothing further came from the conversation once she answered. Kallie shared her disappointment in the education that

was given to her by her physicians about wellness, especially since she had so many complications.

### **Kasey**

Kasey was currently pregnant with her first child at 30 weeks. Kasey is not married but has decided to be a single mom by choice. She shared her fears and excitement of taking on the role of motherhood by herself. Kasey's pregnancy has been healthy, but she shared she has been extremely tired and nauseous. Kasey shared that she tries to eat, but everything makes her sick. Due to her working full-time and being nauseous all day long, her physical wellness had not been the best. She tries to walk after work if she feels up to it but does not go very long because her feet will swell.

Kasey shared that her healthcare provider told her to continue physical activity if she had been doing that activity before becoming pregnant. She explained that her healthcare provider touched on physical wellness but did not go into detail about it. Kasey also shared that she would have liked to hear more about physical wellness during her appointments. She feels this would have helped motivate her to stay active.

### **Luna**

Luna is 29 years old and has a daughter that is two years old. Luna shared that she had a healthy pregnancy with no complications. Luna explained that once she became pregnant her daily exercise was walking in the neighborhood. Luna shared that she loved being pregnant and that she only had nausea in the first trimester. She would try to eat toast or crackers to help with her upset stomach. Once she came into her second trimester, her nausea went away and some of her energy came back. Her nutrition varied, but she did try and stay away from sweets, unless they were natural sugars from fruit.

Luna shared that she had never really thought about the information her health care provider gave her about physical wellness until the interview. She explained that once she got to thinking about it, her physician hardly went over any part of physical wellness. Her physician asked if she felt well and then went on to check the baby's heart rate. Luna stated that after the interview she was a lot more aware of what questions to ask her physician if she became pregnant again.

## **Results**

The findings from the participants' lived experiences and perceptions of physical wellness during pregnancy are showcased in this segment under the areas of Theme Development and Research Questions Responses. Themes and sub-themes emerged from the data based on the similarities that occurred between the participants' lived experiences and perceptions. Theme Development explains the steps taken during the data analysis and to share the development of the themes from the participants' lived experiences and perceptions. Research Question Responses explain the three research questions that drive this study with correlated responses from participants.

### **Theme Development**

The findings from the data gathered by perceptions and lived experiences of physical wellness during pregnancy are explained in this chapter. Bracketing was used to set aside bias and judgement during the research study. This was done by answering the same interview protocol as the participants. The audio interviews were sent to Rev, a professional transcriber company. After receiving the transcripts from the professional service, the transcripts were studied and compared to the audio recording. The transcripts were sent to participants for member checking. Once the transcriptions were approved by the participants, the interviews

were examined line by line to become familiar with the data. Themes which involved meaningful statements or quotes were searched for and highlighted in yellow. Codes were then selected from the statements or quotes and highlighted in blue. For example, a theme would be generalized by picking up the word food and a code would be more specific, such as carrots or celery. Once the themes and codes were identified, the data was reviewed thoroughly. The data supported the themes chosen and should support the overall research questions. The write-up of the data included the results of the thematic analysis. Data was synthesized by linking the themes back to the research questions. An overview of themes and codes is provided in Table 2.

**Table 2**

*Themes and Sub-Themes*

Themes	Sub-Themes
Taking care of the body	Eating healthy
	Exercising
Lack of motivation for proper for physical wellness	Full-time job
	Taking care of other children
	Morning sickness/nausea
Lack of education given by Physicians	No guidance
	Outside sources
	Just a body

***Taking Care of the Body***



This theme supports those aspects of physical wellness are important to women who are pregnant or have been pregnant in the past three years. Six out of ten participants defined physical wellness by eating healthy and exercising. Four out of ten participants defined physical wellness by only exercising. Zero out of ten participants mentioned rest or staying away from harmful habits when asked about physical wellness.

Macy expressed that “Wellness is keeping yourself healthy as possible and taking care of yourself physically and mentally.” Kate also explained that her view of physical wellness was, “I would guess would mostly be, just being active, taking care of your body, watching what you put into your body.” To conclude, even Sarah, who openly admitted that she had little knowledge about wellness, stated, “Honestly, I don’t know much about wellness. I know, you’re supposed to eat healthy, and exercise as much as you can.” Most women’s knowledge of physical wellness was not expanded on other than eating healthy and exercising.

**Table 3***Taking Care of the Body*

Participants	Exercise	Eating Healthy	Rest	Staying Away from Harmful Habits
Kate	X	X		
June	X	X		
Sarah	X			
Torrie	X	X		
Macy	X			
Taylor	X	X		
Lilly	X			
Kallie	X	X		
Kasey	X	X		
Luna	X			

**Eating Healthy.** Eating healthy is an important factor to women's wellness while pregnant. Six out of ten participants stated that eating healthy, or being aware of what they were putting into their body, was part of their knowledge of physical wellness during pregnancy. Luna gave a great example of being conscious of what she was putting into her body. Luna stated:

I craved sweets, which I know wasn't good. I tried to eat strawberries or apples, grapes instead of candy. But I did, you know, I'm not perfect, I ate candy during pregnancy. I

tried to eat as fresh as I could, like fresh veggies and fruits. I did try to eat more organic than I normally would, you know, before I got pregnant. So that was kind of different.

Kallie also explained how she tried her best to make a healthy food choice option.

Kallie stated, “I took a prenatal vitamin and for food, I tried to eat as healthy as possible, nothing too greasy, even if I craved it. I ate a lot of fruit because I did crave that too.” Lilly expressed that her knowledge of wellness was high and eating healthy was non-negotiable to her. Lilly stated:

With both pregnancies, my first, I did well, well both, I cooked a lot of salads. So, with my first, I did a lot of like shakes, protein shakes with a lot of yogurts and like protein yogurts and a lot of vegetables and a lot of salads. The second pregnancy was the same thing. Not as many protein shakes, but a lot of like, salad, and bowls. Like every day I had to have one.

Lilly also shared that she had gestational diabetes, so that affected her sugar intake. “I drank Diet Coke because I was diabetic. I couldn’t really eat or drink a lot of sugary stuff, so Diet Coke was my thing.” Lilly also shared that she had developed gestational diabetes halfway through her pregnancy, which affected her decisions of what foods to put in her body. Lilly stated:

I was taking prenatal vitamins throughout the pregnancy. After I was diagnosed with gestational diabetes, I was trying to keep a very low carbohydrate diet to keep my numbers in check without having to take medication. That was not fun. It was a lot of protein, cottage cheese with some berries for breakfast. And then, lunch would consist of like a low carb wrap with some lunch meat or an egg or something on it. And then dinner would be like a piece of protein, like a piece of chicken or some steak.

**Exercise.** All participants explained that physical wellness meant taking care of their body by exercising. Walking and day-day activities were their main source of exercise shared in the interviews. Kasey explained that even while working full-time, she tried to walk for exercise.

Kasey stated:

I can't say I'm back into walking or anything like that because I am so tired when I get home. On the weekends, I do try to walk some, it's not much, but I do try to get something in. But that's the extent of it. I mean, I don't even know, it's probably like a mile at the most.

Taylor shared that she was a gym member, but she used resources in her everyday life to keep herself active:

I was a gym member, but I definitely scaled down what I was doing at the gym, and I was walking a lot and I know it sounds terrible, but I have so many stairs at my work, and I had to keep going up and down stairs every day. So, I probably did ten flights of stairs a day. It was terrible, but it was, you know, it was keeping me healthy. So, I'll stick with that.

Torrie shared that after her still birth, her next pregnancy was constant worry, and exercise was included:

Prior to finding out that I was pregnant, I would go to the gym for probably half an hour to an hour. I was trying to work on getting rid of all the other kids' weight that I accumulated over the pregnancies. But being that I was so paranoid from my history of losing pregnancies, I just, once I did it, I think I started spotting and I was like, nope, I'm done. So, if I did anything I kind of just walked with the kid with my girls. And I

relatively stay active at work. I don't sit for most of the day. And it was more just maybe walking at the park or walking was probably what kept me active.

***Lake of Motivation for Proper for Physical Wellness***

This theme describes the lack of motivation presented by the participants. Participants shared that lack of motivation restricted them from doing daily habits, eating properly, and exercising. The three codes that were presented were working full-time, taking care of other children, and having morning sickness/ nauseaousness.

**Table 4**

*Lack of Motivation of Proper Physical Wellness*

Participants	Working Full-Time	Taking Care of Other Children	Morning Sickness/Nauseousness
Kate	X		X
June		X	
Sarah	X	X	
Torrie	X	X	X
Macy		X	X
Taylor	X		
Lilly		X	
Kallie	X	X	X
Kasey	X		X
Luna			

**Working Full-Time.** Six out of ten participants explained that lack of motivation for physical wellness came from working full-time. Kate explained that she works full-time as an academic advisor and most of her days consist of sitting. Kate shared:

At work I do have a standing desk and I need to use it more. We're pretty busy around this time with students coming in, so I don't stand when they're here. I've found that I'm sitting a whole lot more than I could be.

Kallie also explained that because she worked full-time, the only exercise she felt she had time for was going for a walk. "The beginning I just worked really, and I would go on walks and stuff around the neighborhood." Sarah also worked full-time and explained that her busy work life swelled her feet, which prevented her from doing physical activity other than day-to-day things. Sarah explained:

I didn't really do much, I was working full-time. I worked from beginning to the very end. So, I do have a desk job, but I was up on my feet a lot, which my feet swelled. They swelled up a lot, like really bad.

**Taking Care of Children.** Taking care of other children was another factor that was unfolded that explained why participants did not have the motivation for proper physical wellness. Six out of ten participants explained that taking care of other children suppressed their motivation for proper physical wellness. Lily explained that she is "horrible with physical wellness" and that one of the contributing factors was chasing around her toddler while pregnant was exhausting. "I was pregnant with my sons, I just walked around the neighborhood with my husband or like with the toddler, you're always running after your toddler." Lily also stated:

I've been doing a lot of running around chasing after my toddler. But with my son, Zack, I tried to go for walks, I really did, but I was always, pregnancy is very tiring, especially in the very beginning. And then at the very end I did a lot of sleeping.

Macy expressed how tiring it is to chase a toddler around while pregnant, especially when her sleeping habits have been interrupted due to pregnancy. "He keeps me up all night. He's moving around and I've had terrible heartburn at night." Sarah added that working full-time while pregnant and then coming home to other children that need love and attention can be rewarding but draining. "You're working full-time, you're exhausted by the you get off and you're pregnant, and you have to two other kids at home, too."

**Morning Sickness/Nauseousness.** Another factor that was repeated throughout the participants interviews was morning sickness and nauseousness would take away from adequate physical wellness. Five out of ten participants shared they experienced morning sickness or nausea. Kate shared that once she found out she was pregnant, she tried preparing for morning sickness by eating healthier options in her daily nutrition intake. "I really tried to like, take care of myself because wanted to maybe possibly get ahead of the potential morning sickness." Unfortunately, morning sickness took over and consumed most of her day. "There was nothing I could do to stop that, because I think around like seven, six and a half, seven weeks I started feeling sick, thankfully I wasn't throwing up, but I was, I felt horrible all day long." Macy admitted that her morning sickness was so severe that she ate anything she could keep down. "I was just so nauseous all the time. I ate whatever I could stomach." Torrie explained that her last pregnancy was very "textbook" because she had intense morning sickness. "I had morning sickness, day and night, I ate all the time to try to help with the morning sickness." Torrie explained that with this pregnancy she was able to stomach taking a prenatal vitamin that helped

subside the morning sickness. “Normally for my pregnancies, I can’t stomach any of the prenatal vitamins, but this time I was able to stomach it, which I think made a big difference.”

**Table 5**

*Lack of Education Given by Physicians*

Participants	No Guidance	Outside Resources	Just a Body in Line
Kate	X		
June	X	X	X
Sarah	X		
Torrie	X		X
Macy	X		
Taylor	X		
Lilly	X		
Kallie	X	X	X
Kasey	X		
Luna	X		

*Lack of Education Given by Physicians*

The last theme for this study is the lack of education given by physicians. Ten out of ten participants made at least one statement about the lack of promotion that was given by their physician. Participants stated that they were given little to no education about physical wellness during pregnancy. Codes developed throughout the interviews were identified as “no guidance”, “outside resources” and “feeling like just a body in line.”



**No Guidance.** Every participant expressed that they had little to no guidance of proper physical wellness when consulting with their physician while pregnant. One of the main responses from participants was that their physician told them to keep doing what they were doing before pregnancy. Macy shared that she considered her daily exercise to be shopping. “They basically told me to continue to do what I was doing before, and before I was just shopping and just kind of just continued to do the same thing.” When Luna was asked about the promotion of physical wellness given by her physician, the reality of lack of guidance given by her physician really sunk in. “Now that you say that you’re right. Like they never really, I didn’t realize that. They just kind of, you know, mentioned it and then that’s kind of it.” Kallie also expressed that there were no in-depth conversations about physical wellness. “They just said stay away from drugs. That’s about it.” Sarah expressed that her physician did not say anything specific other than saying away from exercises that would work her abdomen. Sarah reported:

They didn’t really promote my wellness, they told me that if you are going to exercise, not to do anything that has to do with the abdomen, but I wasn’t, I am not a very active person that works out that much.

Kate is six months pregnant and explained that her pregnancy appointments focus on only how the baby is doing. Kate stated:

I guess our appointments are a lot more related to how's it going, checking in on the baby and answering any questions that I have, which I haven’t really asked many questions about activity or nutrition, but they haven’t really asked me any questions like that. Like even in the beginning, they weren’t really asking.

Taylor expressed how the subject of proper physical wellness was not supported by her physician. She explained how the subject of proper physical wellness was more focused on

making sure she took her prenatal vitamin. Taylor mentioned in her interview that when it came to the topic of physical wellness, the physicians “Kind of moved on, touched on it, and moved on.”

**Outside Resources.** Because participants felt that they were not receiving proper physical wellness education from their physician, participants took it upon themselves to use outside resources. Kallie shared that her pregnancy was high risk and that she was on bed rest by 28 weeks. Her physician’s promotion of physical wellness, or lack thereof, made her use her own resources. “They pretty much because they didn’t bring it up. I didn’t bring it up, but I also did a lot of my own research.” When asked about her own research, Kallie shared that she would use pregnancy apps and Google for her educational information about pregnancy. June shared that she had gestational diabetes and that her physician would not give her information because they were not the specialists. June stated:

They wanted me to go see the specialist, so they told me they couldn’t give me any advice or information, so I went looking for myself. I found a Facebook group to join where other people had dealt with that and I was able to get a little bit more reassurance.

June was very knowledgeable about gestational diabetes. She explained that once she saw the specialist it did help, but most of her information came from Google and other moms from the Facebook group she joined. “It was more of a Google, but the specialist did help.”

**Just a Body.** Participants explained that when they were in for their routine checkups for their pregnancy, they felt like just a body waiting in line. Torrie shared that because it was her sixth pregnancy, that the doctors assumed she knew all the information needed for a healthy pregnancy. Torrie stated:

I will say that there was actually no promotion of it. I don't know if they felt because they had had so many pregnancies that they didn't need to tell me, but when it came to my care I just showed up. I was just a body, like there was really no, how's this going? Or if you ever would voice a concern, there was very minimal input from them. So yeah, it wasn't probably the best factor at that point.

Kate expressed that her appointments were straight to the point. "I haven't gotten too much information from them about being physically active. I feel like our appointments are very cut and dry." Lilly shared that her gestational diabetes played a major factor in how her physician treated her. Lilly stated:

My OBGYN dropped me to a specialist. They're like, okay, you're diabetic, we can't take care of you. Yeah. And then they would send me to a nutritionist and then a specialist and that's it. Okay. And then when my second, the doctor literally quit, like I had a question for him, and I messaged him and when I called because he never got back to me. Oh, he, he just upped and walked and left. So, I didn't even have a physician to give birth to my son. So, I was like, they were looking for, it was like a month before me giving birth and I was like, y'all need to figure this out.

### **Research Question Responses**

This section explores the answers to the research questions that formed the study. The three research questions are: (a) What aspects of physical wellness are important to women who are pregnant? (b): What are women's physical wellness experiences during pregnancy? (c): How are women who are pregnant educated about physical wellness? Table two summarizes the research questions and the themes and sub themes that emerged from these questions.

**Table 6***Research Question Responses*

Research Questions	Themes/Sub-Themes
1.) What aspects of physical wellness are important to women who are pregnant?	A. Taking care of the body I. Eating healthy II. Exercise
2.) What are women's physical wellness experiences during pregnancy?	B. Lack of motivation for proper for physical wellness I. Full-time job II. Taking care of other children III. Morning sickness/nausea
3.) How are women who are pregnant educated about physical wellness?	C. Lack of education given by Physicians I. No guidance II. Outside sources III. Just a body

*Research Question One*

The first research question is, "What aspect of physical wellness are important to women who are pregnant?" The response to this question was answered by the theme of taking care of the body. Eating healthy and exercise were the sub-themes associated with this question. The theme taking care of the body showed that participants felt that it was important to take care of their body during pregnancy, but their knowledge was limited to only two of the four parts of

physical wellness. Two participants added that taking care of the body is not only physical, but mental as well. Participants also mentioned that putting things into their body and exercising should be done in moderation while pregnant.

The first sub theme was eating healthy. All participants had general knowledge of eating health. Participants that were diagnosed with gestational diabetes had more education on the subject due to being referred to see a nutritionist by their physician. Exercise was the second sub-theme, and it was revealed that most participants were knowledgeable of exercise but did not know what kind of exercise to be doing or the length of time they should be exercising in a day. None of the participants expressed the importance of exercise during pregnancy other than to “not gain too much weight.”

### ***Research Question Two***

The second research question is, “What are women’s physical wellness experiences during pregnancy?” The response to this question was answered by the theme of lack of motivation to have proper physical wellness. This theme showed that participants want to experience proper wellness during pregnancy but have barriers that stand in the way of reaching their physical wellness goals while pregnant.

The sub-themes for this research question were having a full-time job, taking care of other children and morning sickness/nausea. Participants shared that having a full-time job, taking care of other children, or even both, would drain any energy they had left to try and exercise. Sleeping was another part of wellness in which participants expressed they fell short. Current pregnant participants indicated that they were receiving poor sleep due to the baby kicking or to experiencing unbearable heartburn. Participants also stated that morning sickness

would take over their day and that although they would pack a healthy breakfast, they would end up eating crackers or toast.

### ***Research Question Three***

The third research question is, “How are women who are pregnant educated about physical wellness?” The response to this question is answered through the theme of lack of education given by physicians. This theme was presented in all ten of the participants interviews. This theme showed that participants felt their physicians could have expanded more on the subject of physical wellness and what needed to be done to obtain the proper physical wellness during pregnancy.

The sub-themes found were no guidance, using outside sources, and feeling just like a body. Kate shared her dissatisfaction in her doctor’s office experience while currently pregnant. “I’ve been a little disappointed.” She shared that her doctors’ appointments have been quick and only about how the baby is doing. Torrie stated:

I will say there was actually no promotion of it. I don’t know if they felt it was because I had so many pregnancies that they didn’t need to tell me, but when it came to my care, I just showed up. I was just like a body, there was not really, like, how’s it going? Or if I did my voice a concern, there was very minimal input.

### **Summary**

This chapter explored the findings of the perceptions and lived experiences of women that were pregnant or that had been pregnant in the past three years. There were ten participants in this study that identified as being 18 years or older, lived in central Florida and were pregnant or had been pregnant in the past three years. Responses from the participants were collected by semi-structured open-ended questions during the Teams audio recorded interviews. Data was

collected, analyzed, and organized. Themes and sub-themes emerged from the data and were presented in the “Theme Development” section. The first research question, “What aspect of physical wellness are important to women who are pregnant?” revealed the themes of taking care of the body. The second research question, “What are women’s physical wellness experiences during pregnancy?” allowed examination of the theme lack of motivation of proper wellness. Finally, the third research question “How are women who are pregnant educated about physical wellness?”, presented the theme lack of education given by physician. Chapter Five will discuss the findings and implications, limitations and delimitations, a Christian worldview, and a proposal for more study.

## **CHAPTER FIVE: CONCLUSION**

### **Overview**

The purpose of this study was to expand the understanding and importance of physical wellness during pregnancy. This study informs women who are pregnant and healthcare providers how critical physical wellness is during pregnancy. This chapter also presents a summary of the findings found in the study. The findings are then examined in the context of existing literature and the theoretical framework of physical wellness during pregnancy. The methodological implications are discussed during this chapter. This chapter also outlines the limitations and delimitations of the study as presenting the consideration of a Christian worldview. The final discussion within this chapter contains recommendations for future research.

### **Summary of Findings**

The focus of this study was to explore the lived experiences and perceptions about physical wellness from women who are pregnant or have been pregnant in the past three years. The specific phenomenology approach this study used was transcendental phenomenology based on principles founded by Edmund Husserl (Husserl, 1931; Moerer-Urdahl & Creswell, 2004). Three themes were found during the data analysis. The three themes were, taking care of the body, lack of motivation for proper physical wellness, and lack of education given by physician. The theme taking care of the body had two sub-themes which were eating healthy and exercise. The theme lack of motivation had three sub-themes which were having a full-time job, taking care of other children and morning sickness/nausea. The theme lack of education given by physician also had three sub-themes which were no guidance, outside sources and just a body. Three research questions guided the study. The three research questions are: Research question



one: What aspects of physical wellness are important to women who are pregnant? Research question two: What are women's physical wellness experiences during pregnancy? Research question three: How are women who are pregnant educated about physical wellness? The research questions were answered through the themes and sub-themes that arose from the data.

### **Research Question One**

Research question one: What aspects of physical wellness are important to women who are pregnant? The response to this question was answered by the theme of taking care of the body. Eating healthy and exercise were the sub-themes associated with this question. The theme taking care of the body showed that participants felt that it was important to take care of their body during pregnancy, but their knowledge was limited to only two of the four parts of physical wellness. Two participants added that taking care of the body is not only physical, but mental as well. Participants also mentioned that putting things into their body and exercising should be done in moderation while pregnant.

### **Research Question Two**

Research question two: What are women's physical wellness experiences during pregnancy? The response to this question was answered by the theme of lack of motivation to have proper physical wellness. This theme showed that participants want to experience proper wellness during pregnancy but have barriers that stand in the way of reaching their physical wellness goals while pregnant.

The sub-themes for this research question were having a full-time job and taking care of other children and morning sickness/nausea. Participants shared that having a full-time job, taking care of other children, or even both, would drain any energy they had left to try and exercise. Sleeping was another part of wellness that participants expressed they fell short in.

Pregnant participants indicated that the poor sleep they were receiving was due to the baby kicking or unbearable heartburn. Participants also stated that morning sickness would take over their day and that although they would pack a healthy breakfast, they would end up eating crackers or toast.

### **Research Question Three**

Research question three: How are women who are pregnant educated about physical wellness? The response to this question is answered through the theme of lack of education given by physicians. This theme was presented in all of the participants' interviews. This theme showed that participants felt their physicians could have expanded more on physical wellness and what needed to be done to obtain the proper physical wellness during pregnancy. The sub-themes found were no guidance, using outside sources, and feeling like just a body in line. Participants shared their disappointment in the lack of education given by their physician.

### **Discussion**

This section relates the findings of the study, i.e., the theoretical and empirical literature reviewed from Chapter Two. The findings from this study support the importance of proper physical wellness during pregnancy, thus extending the body of literature on the topic. It also highlights the pivotal role that healthcare workers can play in women's wellness during pregnancy. This study provides a growing amount of evidence to the theories of proper physical wellness during pregnancy confirming the significance of physical wellness during pregnancy. The research is crucial for healthcare professions because it informs the need for proper education of physical wellness during pregnancy and the consequences that can occur if it is not taken seriously.

## **Empirical Literature**

The themes, taking care of the body, lack of motivation and lack of education given by physicians arose from this study. These themes directly align with the previous literature discussed in Chapter Two. The quality of proper wellness reflects the health of mother and baby. Pregnancy is a crucial time when maternal nutrition and lifestyle choices have a large influence on mother's and baby's wellness (Kaiser & Allen, 2002). Appropriate physical wellness during pregnancy has been found to reduce the risk of depression, gestational diabetes, and to help pregnant women from gaining an excessive amount of weight (Ferrari & Joisten, 2022).

### **Taking Care of the Body**

Research question one was, "What aspect of physical wellness are important to women who are pregnant?" It was answered by the theme of taking care of the body. This aligned with the existing literature which correlated with many parts of women's lives when dealing with physical wellness during pregnancy. Physical wellness is promoted by proper care of the body through physical exercise, correct nutrition, and adequate amounts of rest as well as abstaining from harmful habits such as drug use and alcohol abuse (Kohl & Cook, 2013). When all components of physical wellness are present in one's lifestyle, it creates a positive effect on a person's overall quality of life (Stoewen, 2017). The theme of taking care of the body was followed by the sub-themes of eating healthy and exercise that are steady with these findings.

### ***Eating Healthy***

Nutrition during pregnancy is one of the vital factors for a healthy nine months (Torkan et al., 2018). Healthy nutrition when expecting is critical for normal growth and development of the fetus (Lucas et al., 2014). Several participants stated the importance of eating healthy during their pregnancy journey. For example, June was diagnosed with gestational diabetes, so it was of

high importance that her nutrition was on point to prevent her from having to take prescribed medication during her pregnancy. June explained, “I was trying to keep a very low carbohydrate diet to keep my numbers in check without having to take medication.”

The nutritional requirements of expecting mothers increase during pregnancy to prepare the body for delivery and breastfeeding (Jouanne et al., 2021). With a few expectations, nutrition recommendations are similar before and during pregnancy (Williamson, 2006). The expectations include specific guidelines such as taking folic acid supplements to help reduce the risk of neural tube defects and avoidance of certain foods to reduce the risk of food poisoning from harmful bacteria (Williamson, 2006). Almost all participants shared that they took a prenatal vitamin during their pregnancy. For example, Kate shared, “The prenats that I take are by First Form. That's a company that I really love and trust.”

Pregnant and breastfeeding women should be encouraged to increase their intake of water to meet their nutritional needs (Montgomery, 2002). Luna shared that drinking water was a valuable part of her nutrition during her pregnancy. Luna explained, “I drank water every day to keep hydrated, I drank about, let me see, 96 oz.” Kallie also explained that water was her drink of choice during pregnancy, “For hydration, I just drank lots of water in occasionally Liquid, liquid IVs.”

While eating healthy was a sub-theme of the research, most of participants did not know why they should be eating healthy, or the underlying side effects of poor physical wellness during pregnancy. Nutrition counseling is necessary for all expecting mothers because their nutritional status affects the mother's pregnancy and the newborn baby (Grenier et al., 2020). Nutritional counseling should be personalized and based off women's access to food, socio-economic status, race, ethnicity, and cultural food choices. Using a body mass index is a

recommended counseling approach to improve nutritional status of pregnant women (Greiner et al., 2020; Kaleem et al., 2020).

### ***Exercise***

In 2018, the U.S. Department of Health and Human Services Physical Activity Guidelines for Americans advocated for women who are pregnant or in the post-partum period to participate in at least 150 minutes of moderate intensity aerobic activity per week (ACOG, 2020). Yet, when interviewing participants many of the women shared that they rely on day-today activities for physical exercise. Again, participants knew exercising was good for the body, but did not know what kind of exercise or what guidelines to complete. Torrie was going to the gym, but eventually relied on the stairs at her job for physical activity, “I have so many stairs at my work, and I had to keep going up and down stairs every day.” Routine physical exercise plays a necessary role in wellness and is positively connected with a reduced risk of depression, gestational diabetes, and to help pregnant women from gaining too much weight (Harrison, et al., 2011). Additional benefits of regular physical exercise include improved emotional well-being, positive body image and decrease risk of complications during labor (Harrison et al., 2011).

### **Lack of Motivation**

Research Question two was, “What are women’s physical wellness experiences during pregnancy?” It was answered by the theme *lack of motivation*, a common theme among the participants. Sub-themes included, working full-time, other children and having morning sickness/nausea. Many participants explained that their poor wellness habits were created by obstacles like being too tired from work, other children or not feeling well. Kate shared that in the beginning of her pregnancy she was not getting the correct amount of protein she needed from being so nauseous. She then went on to explain that once her nausea went away in her

second trimester, she could eat better choices of food, which gave her more energy. A healthy, balanced diet is necessary to support optimal growth and development of the fetus and the physiological changes that occur during pregnancy (Forbes et al., 2018). Kate stated:

I really still tried to eat well, but I didn't want any meat at all. I really lacked protein in the beginning. I can't even remember what I was eating, but it was very minimal. So that went on from about six or seven weeks until about 13 weeks. During that time, I just wasn't able to eat like I had intended to when I first became pregnant. When I was getting into my second trimester, I started feeling much better and I started being able to eat the foods I used to eat again. I got my energy back by February and now I've just continued to feel really good.

While sleep is an important part of wellness, none of the participants mentioned it when describing their perception of physical wellness. Sleep is thought to be closely associated with the body's physical and emotional well-being (Haack & Mullington, 2005). Hormonal alterations, growth of the fetus, and a newborn sleep schedule all impact sleep disruptions (Lee, 1998). When asked about rest during pregnancy, Macy explained that her baby keeps her up all night by moving around. She also shared that her toddler is up frequently and disrupts her sleep schedule. Long stretches of sleep are decreased at night for new mothers, resulting in daytime fatigue (Goyal et al., 2007). New mothers have an inclined rate of sleep deprivation after birth; therefore, there are many physical, psychological, and emotional lifestyle changes that occur (Kempler et al., 2012).

### **Lack of Education Given by Physicians**

Research question three was, "How are women who are pregnant educated about physical wellness?" The theme lack of education given by physicians also had three sub-themes, no

guidance, outside sources and just a body. Health promotion is getting a large amount of attention regarding the leading role it plays in educating the population (Ahmadi & Roosta, 2015). Health promotion describes health education, disease prevention and rehabilitation services (Groene, O., & Jorgensen, 2005). Behavioral change will only happen if the information, education, and advice are supported by norms, rules, and cultures (Groene, O., & Jorgensen, 2005). Healthcare providers should be educating women that are pregnant not only on the benefits of physical wellness, but the consequences that could occur if they do not comply.

June was diagnosed with gestational diabetes early in her pregnancy. She expressed her experience as being “really interesting to say the least.” June stated:

I felt like I wasn't supported at all. I was just told I had this diagnosis, and I was supposed to go to a nutritionist and a specialist, but the nutritionist and specialists weren't available until I was about eight months pregnant. So, there was a lot of time where I was just told, I wasn't even shown how to, but just told to take my blood sugar and write it down. I would go into my regular doctor, and they would look just look at the numbers and, and I don't know, I felt like I really wasn't supported at all. If there was a higher number, I would show them what I would eat in a day to get that number and, and they wouldn't even listen to me.

Torkan (2018) explains that self-regulation, self-efficacy, outcome expectations, and social support are defining factors in educational programs for women that are pregnant. Patients are more likely to be compliant when it comes to weight control, increased body movement and eating nutritious foods if their doctor takes the time to promote it (Nawaz et al., 2000).

### **Theoretical Literature**

The theory that guided this study was the Social Cognitive Theory (SCT) founded by psychologist Albert Bandura in 1977. The theory's foundation is that learning is affected by

cognitive, behavioral, and environmental factors (Bandura, 1991). This study supports existing theories on physical wellness during pregnancy. The themes taking care of the body, lack of motivation for proper physical wellness and lack of education given by my physicians correlate with Social Cognitive theory.

### ***Social Cognitive Theory***

The Social Cognitive Theory is connected to this study because the data that is being collected is from women's perceptions and lived experiences of physical wellness during pregnancy. Social Cognitive Theory is often used when focusing on diet, physical activity, or weight loss (Wong & Monaghan, 2020). SCT emphasizes that learning phenomena can occur by personal experiences, observing other people's behavior and consequence of it (Bandura, 1977;1986). Bandura's four key aspects of observational learning are: attention, retention, reproduction, and motivation (Bandura, 1977; Wood & Bandura, 1989). An individual's lifestyle has a substantial influence on one's physical and mental health (Farhud, 2015). Putting an individual's health and well-being first can sometimes be challenging (Stoewen, 2017). Human behavior is what an individual does and, how they do it, and whether they will succeed (Stoewen, 2017). Although individuals know what is best for the body, it is easy to go back to unhealthy ways (Stoewen, 2017). Two factors that influence wellness the most are: self-regulation and habits. (Stoewen, 2017). Because physical wellness during pregnancy can be presented through education by healthcare providers and driven by motivation, women should be informed how crucial physical wellness should be during pregnancy.

### **Implications**

Appropriate physical wellness during pregnancy has been found to reduce the risk of depression, gestational diabetes, and to help pregnant women from gaining an excessive amount



of weight (Ferrari & Joisten, 2022). Implications were found during the findings of the study.

The findings from this study have implications for healthcare providers. These implications are explored from the context of theoretically, empirically, and practically.

### **Theoretical Implications**

This study has theoretical implications for researchers studying the Social Cognitive Theory related to physical wellness during pregnancy. Women that are pregnant or that have been pregnant, are not getting the proper education about the significance of physical wellness during pregnancy. The World Health Organization (2016) recommends that health behaviors such as healthy diet, physical activity, daily intake of food supplements, and avoidance of substance use should be discussed for a healthy pregnancy. These topics should not only be discussed by healthcare providers, but discussed in depth about the consequences that can occur if physical wellness is not modeled properly. Serious health issues can affect not only the mother, but baby as well. Behavior modeling is one of the primary behaviors change strategies through which humans observe the actions and consequences of the behaviors of other individuals, and eventually develop the needed knowledge and skills to take part in the modeled behavior (Oyibo et al., 2018). The Social Cognitive Theory points out that learning the phenomena can occur by personal experiences, observing other people's behavior and consequence of it (Bandura, 1977;1986). Thus, this study adds to the body of literature that shows how SCT is the foundation of physical wellness during pregnancy.

### **Empirical Implications**

This study had empirical implications as well. For those performing research on physical wellness during pregnancy, this study examined the physical component of wellness that affected women who were pregnant or that had been pregnant in the past three years. It was discovered

that women who were pregnant were not educated or informed in detail about the importance of nutrition, exercise, rest or staying away from harmful habits. Most participants knew general knowledge but were not educated about physical wellness as a whole. The goal of physical wellness is to maintain physical independence and quality of life through exercise, healthy eating, and positive lifestyle choices (Armbruster & Gladwin, 2001). Pregnancy is a crucial time when maternal nutrition and lifestyle choices have a large influence on mother's and baby's wellness (Kaiser & Allen, 2002). When participants were asked what their knowledge of physical wellness was, most participants responded with "taking care of the body." When the participants were asked what taking care of the body meant to them, they responded with "eating healthy and exercising." Wellness supports self-efficiency for an individual (Stoewen, 2017). Actions associated with a healthy weight and lifestyle behaviors are believed to be crucial for a successful pregnancy (Soltani et al., 2017). Wellness actions during pregnancy include eating, resting, exercising, and staying away from harmful habits such as cigarette smoking, and other substance use that affects the health of an expecting mother and her fetus (Auerbach et al., 2014). Nutrition and physical activity are of great importance in relation to the short- and long-term birth outcomes, which has been increasingly showcased in literature (Soltani et al., 2017).

The significance of the study to society is that it creates mindfulness of physical wellness during pregnancy. The study explores perceptions and lived experiences of physical wellness during pregnancy from women in central Florida who are pregnant or who have been pregnant in the past three years. The research that was conducted can shed light on the importance of physical wellness and the benefits it brings to expecting mothers. A positive experience of physical wellness during pregnancy can increase energy, self-control, endurance, and the

likelihood to continue exercise in the postpartum period (Ezmerli, 2000). This study helps fill the gap in the literature on physical wellness during pregnancy.

### **Practical Implications**

This study has practical implications for health care professionals. It can help bring awareness to the importance of physical wellness during pregnancy and the role that healthcare providers play when promoting physical wellness. It was stated that women did not get the help or education they needed during their pregnancy from their physician. As stated previously, a participant was diagnosed with gestational diabetes early in her pregnancy and did not see a specialist until she was eight months pregnant. This left her feeling helpless and seeking information from outside sources. June explained:

The doctors didn't have any information for me, they couldn't give me information because that was not their specialty for dealing with gestational diabetes. They wanted me to go see the specialist, so they told me they couldn't give me any advisory information and so I went looking for myself. I found a Facebook group to join in where other people had had dealt with that and I was able to get a little bit more reassurance.

Many pieces of literature and websites continue to provide outdated advice, which makes it hardly surprising that women report receiving little and/or conflicting information regarding physical activity during pregnancy (Clark & Gross, 2004). According to Lucas (2014) healthcare providers are not regularly helping women who are expecting to make an educational decision about nutrition. This is an important public health issue that is being poorly studied in literature (Lucas et al., 2014). The few available studies indicate that women who are expecting do not receive proper education about nutrition to make knowledgeable decisions (Lucas et al., 2014).

### **Delimitations and Limitations**

A delimitation for this study was that the participants selected had to be pregnant or had been pregnant in the past three years. “Delimitations are in essence the limitations consciously set by the authors themselves” (Theofanidis & Fountouki, 2019, p. 157). Since information was requested about physical wellness during pregnancy, the data could not be collected on women that had not experienced pregnancy. Another delimitation was that the participant had to be 18 years or older. Since data was collected on a potential sensitive topic, participants had to be adults who could give informed consent about sharing their lived experiences and perceptions about physical wellness during pregnancy.

It was sensible that the participants lived in central Florida to narrow down the geographic area which was a delimitation. This study was also delimited to be a qualitative phenomenological study as it was believed the data would be captured best through lived experiences and perceptions from women who are pregnant or had been pregnant in the past three years. Delimitations arise from specific choices from the researcher (Simon & Goes, 2013). Among these choices of objectives and questions, variables of interest, the choice of theoretical viewpoint that were adopted, qualitative, methodology, and choice of participants (Simon & Goes, 2013). The decision to eliminate certain pursuits are likely based on measures that are not feasible (Simon & Goes, 2013).

“Limitations of any particular study concern potential weaknesses that are usually out of the researcher’s control, and are closely associated with the chosen research design, statistical model constraints, funding constraints, or other fact” (Theofanidis & Fountouki, 2019, p. 156). A limitation for this study was that the participants were only female. The male perception of physical wellness during pregnancy was not studied. Another limitation was that the researcher

had been pregnant in the past three years. The researcher bracketed her feelings and assumptions on the topic of physical wellness during pregnancy before and during the study to eliminate unfairness.

### **Christian World View**

The Bible shares that children are a reward from Him and should be raised and nurtured with love. The Bible is clear that children are to be seen as a blessing. James 1:17-18 states:

Every good gift, every perfect gift, comes from above. These gifts come from the Father, the creator of the heavenly lights, in whose character there is no change at all. He chose to give us birth by his true word, and here is the result: we are like the first crop from the harvest of everything he created.

### **Recommendations for Future Research**

The current study was dedicated on capturing the lived experiences and perceptions of physical wellness from women that are pregnant or that had been pregnant in the past three years that live in central Florida. This study adds significant value to the current literature on physical wellness during pregnancy; however, it is necessary to conduct future research. Since this study was focused on women only located in central Florida, having women from other geographic areas would be beneficial by providing different perspectives on the phenomenon. Different geographic regions practice different, culture, religion, and traditions, which would add diverse findings to the data. Future research should explore the training that healthcare providers are receiving about physical wellness during pregnancy. Also, the attitudes of the physicians and their perspective on promotion of physical wellness during pregnancy would bring value to future research.

## Summary

The goal of this transcendental phenomenology study was to explore the perceptions and lived experiences of physical wellness during pregnancy from women in central Florida who are pregnant or women who have been pregnant in the past three years through three research questions. Research question one: What aspects of physical wellness are important to women who are pregnant? Research question two: What are women's physical wellness experiences during pregnancy? Research question three: How are women who are pregnant educated about physical wellness?

Three themes were found during the data analysis. The three themes were, *taking care of the body*, *lack of motivation for proper physical wellness*, and *lack of education given by physician*. The theme *taking care of the body* had two sub-themes which were *eating healthy* and *exercise*. The theme *lack of motivation* had three sub-themes which were *having a full-time job*, *taking care of other children* and *morning sickness/nausea*. The theme *lack of education given by physician* also had three sub-themes which were *no guidance*, *outside sources* and *just a body*. The findings from this study show how crucial proper physical wellness is to mother and baby. The findings also show the lack of education about physical wellness given by physicians to women that are pregnant.

These implications were explored theoretically, empirically, and practically. This study has implications for health care professionals and women who may become pregnant. The study can help bring awareness to the importance of physical wellness during pregnancy and the role that healthcare providers play when promoting physical wellness. It is crucial that healthcare providers are trained properly to promote and educate women about the significance of proper physical wellness during pregnancy. Physicians should be up to date on current guidelines and

the literature that is representing the data (Bauer et al., 2010). Physical wellness can bring a positive experience to pregnancy by increasing energy, self-control, endurance, and the likelihood to continue exercise in the postpartum period (Ezmerli, 2000). This is important because when used properly, physical wellness can decrease depression, gestational diabetes, and excessive weight gain (Ferrari & Joisten, 2022). It is crucial that healthcare providers become more familiar with physical wellness guidelines so they can provide information to women about physical wellness during pregnancy. One consideration would be to have the first pregnancy appointment dedicated to counseling women on physical wellness and how it can impact mother and baby. Topics of counseling should include fitness, nutrition, health promotion, lifestyle behaviors and learning how to decrease psychosocial stressors (Moos, 2003). The health of mother and baby is dependent on physical wellness and the subject should be promoted by physicians (Budler & Budler, 2022). The findings of this study bring profound information that creates awareness to be created surrounding the significance of physical wellness during pregnancy. It is the hope that as awareness is created, education about physical wellness during pregnancy is not only promoted by healthcare workers but explained comprehensively to expecting mothers to enhance the health and quality of life of mother and baby.

## References

- Ahmadi, A., & Roosta, F. (2015). Health knowledge and health promoting lifestyle among women of childbearing age in Shiraz. *Women's Health Bulletin*, 2(3), 1-4.
- Albertsen, K., Andersen, A. M. N., Olsen, J., & Grønbaek, M. (2004). Alcohol consumption during pregnancy and the risk of preterm delivery. *American journal of epidemiology*, 159(2), 155-161.
- Aborisade, O. P. (2013). Data collection and new technology. *International Journal of Emerging Technologies in Learning (iJET)*, 8(2), 48-52.
- AlAmmar, W. A., Albeesh, F. H., & Khattab, R. Y. (2020). Food and mood: The corresponsive effect. *Current Nutrition Reports*, 9(3), 296-308.
- American College of Obstetricians and Gynecologists (ACOG). (2002) Committee opinion number 267: Exercise during pregnancy and the postpartum period. *Obstetrics and Gynecology*. 99(1), 171–173.
- American College of Obstetricians and Gynecologists (ACOG). (2020) Committee number 804: Exercise during pregnancy and the prenatal period. *Obstetrics and Gynecology*. 145(4), 178-188.
- American College of Obstetricians and Gynecologists. (2000a). Primary and preventive care: Periodic assessments (Committee Opinion #246, Gynecologic Practice Committee). Washington, D.C.
- American Diabetes Association. (2004) Gestational diabetes mellitus. *Diabetes Care*, 27(1), 88–



- American Dietetic Association. (2008). Position of the American dietetic association: Nutrition and lifestyle for a healthy pregnancy outcome. *Journal of the American Dietetic Association*, 108(3), 553–561.
- American Society for Parenteral and Enteral Nutrition Board of Directors and Clinical Practice Committee. (2012). Definition of terms, style, and conventions used in A.S.P.E.N. Board of Directors-approved documents. Available from: <http://www.nutritioncare.org/wcontent.aspx?id=4714>
- Andriani, H., & Kuo, H. W. (2014). Adverse effects of parental smoking during pregnancy in urban and rural areas. *BMC pregnancy and childbirth*, 14(1), 1-15.
- Armbruster, B., & Gladwin, L. A. (2001). More than fitness for older adults: a “whole-istic” approach to wellness. *ACSM's Health & Fitness Journal*, 5(2), 6-12.
- Artal, R., & O'Toole, M. (2003). Guidelines of the American College of Obstetricians and Gynecologists for exercise during pregnancy and the postpartum period. *British journal of sports medicine*, 37(1), 6-12.
- Auerbach, M. V., Lobel, M., & Cannella, D. T. (2014). Psychosocial correlates of health-promoting and health-impairing behaviors in pregnancy. *Journal of psychosomatic obstetrics and gynaecology*, 35(3), 76–83.
- Austin, Z., & Sutton, J. (2014). Qualitative research: Getting started. *The Canadian journal of hospital pharmacy*, 67(6), 436.
- Babbar, S., & Shyken, J. (2016). Yoga in pregnancy. *Clinical obstetrics and gynecology*, 59(3), 600-612.
- Badowski, S., & Smith, G. (2020). Cannabis use during pregnancy and postpartum. *Canadian family physician Medecin de famille canadien*, 66(2), 98–103.

- Bahri Khomami, M., Walker, R., Kilpatrick, M., de Jersey, S., Skouteris, H., & Moran, L. J. (2021). The role of midwives and obstetrical nurses in the promotion of healthy lifestyle during pregnancy. *Therapeutic advances in reproductive health, 15*, 26334941211031866.
- Baker, S. A. (2022). What Is Wellness Culture? In *Wellness Culture* (pp. 1-13). Emerald Group Publishing Limited.
- Bandura, A. (1998) Health promotion from the perspective of social cognitive Theory. *Psychology & Health, 13*(4), 623-649. DOI: 10.1080/08870449808407422
- Bandura, A. J. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual review of psychology, 52*(1), 1-26.
- Bandura, A. (1986). *Social foundations of thought and action: a social cognitive theory*. Englewood Cliffs, N.J.: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Macmillan.
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes, 50*, 248-287.
- Barbosa-Leiker, C., Burduli, E., Smith, C. L., Brooks, O., Orr, M., & Gartstein, M. (2020). Daily Cannabis Use During Pregnancy and Postpartum in a State with Legalized Recreational Cannabis. *Journal of addiction medicine, 14*(6), 467–474.
- Barrett, D., & Twycross, A. (2018). Data collection in qualitative research. *Evidence-Based Nursing, 21*(3), 63-64.

- Bauer, P. W., Broman, C. L., & Pivarnik, J. M. (2010). Exercise and pregnancy knowledge among healthcare providers. *Journal of women's health, 19*(2), 335–341.  
<https://doi.org/10.1089/jwh.2008.1295>
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open, 2*, 8-14.
- Bernhofer E. I. (2016). Investigating the concept of rest for research and practice. *Journal of advanced nursing, 72*(5), 1012–1022. <https://doi.org/10.1111/jan.12910>.
- Björnsdóttir, E., Janson, C., Gíslason, T., Sigurdsson, J. F., Pack, A. I., Gehrman, P., & Benediktsdóttir, B. (2012). Insomnia in untreated sleep apnea patients compared to controls. *Journal of sleep research, 21*(2), 131–138. <https://doi.org/10.1111/j.1365-2869.2011.00972.x>
- Bonillas, C. A., & Feehan, R. (2008). Normalizing the changes experienced during each trimester of pregnancy. *The Journal of perinatal education, 17*(1), 39–43.  
<https://doi.org/10.1624/105812408X266287>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77–101.
- Brown, Q. L., Sarvet, A. L., Shmulewitz, D., Martins, S. S., Wall, M. M., & Hasin, D. S. (2017). Trends in Marijuana Use Among Pregnant and Nonpregnant Reproductive-Aged Women, 2002-2014. *JAMA, 317*(2), 207–209. <https://doi.org/10.1001/jama.2016.17383>
- Buchanan, T. A., & Xiang, A. H. (2005). Gestational diabetes mellitus. *The Journal of clinical investigation, 115*(3), 485–491.
- Caro, R., & Fast, J. (2020). Pregnancy Myths and Practical Tips. *American Family Physician, 102*(7), 420-426.

Centers for Disease Control and Prevention. (2017). Glossary of terms.

1zxhttps://www.cdc.gov/nchs/nhis/physical\_activity/pa\_glossary.htm. Retrieved November 18, 2022.

Budler, L., & Budler, M. (2022). Physical activity during pregnancy: a systematic review for the assessment of current evidence with future recommendations. *BMC Sports Science, Medicine and Rehabilitation, 14*(1), 1-14.

Clarke, P. E., & Gross, H. (2004). Women's behavior, beliefs and information sources about physical exercise in pregnancy. *Midwifery, 20*(2), 133-141.

Cleo, G., Beller, E., Glasziou, P., Isenring, E., & Thomas, R. (2020). Efficacy of habit-based weight loss interventions: a systematic review and meta-analysis. *Journal of behavioral medicine, 43*(4), 519-532.

Cohen, A. B. (2002). The importance of spirituality in well-being for Jews and Christians. *Journal of happiness studies, 3*(3), 287-310.

Connelly, L. M. (2016). Trustworthiness in qualitative research. *Medsurg Nursing, 25*(6), 435.

Conrad P. & Kern R. (1994). The sociology of health and illness. *Critical perspectives.*, Third edition. New York: St. Martin's Press, 1990.

Coyle, J. (2002). Spirituality and health: towards a framework for exploring the relationship between spirituality and health. *Journal of advanced nursing, 37*(6), 589-597.

Crenshaw. J. W. (2014). *Research Design: Qualitative, quantitative, and mixed methods approach*. SAGE.

Da Costa, D., Rippen, N., Dritsa, M., & Ring, A. (2003). Self-reported leisure-time physical activity during pregnancy and relationship to psychological well-being. *Journal of psychosomatic obstetrics and gynaecology, 24*(2), 111–119.

<https://doi.org/10.3109/01674820309042808>

- Daaleman, T. P., Cobb, A. K., & Frey, B. B. (2001). Spirituality and well-being: exploratory study of the patient perspective. *Social Science & Medicine*, 53(11), 1503-1511.
- Dasso, N. A. (2019). How is exercise different from physical activity? A concept analysis. In *Nursing forum*. 54 (1), 45-52.
- Daidsen, A. S. (2013). Phenomenological approaches in psychology and health sciences. *Qualitative research in psychology*, 10(3), 318-339.
- Davenport, M. H. (2020). Exercise during pregnancy: A Prescription for Improved Maternal/Fetal Well-being. *ACSM's Health & Fitness Journal*, 24(5), 10-17.
- Dempsey, J. C., Butler, C. L., Sorensen, T. K., Lee, I. M., Thompson, M. L., Miller, R. S., ... & Williams, M. A. (2004). A case-control study of maternal recreational physical activity and risk of gestational diabetes mellitus. *Diabetes research and clinical practice*, 66(2), 203-215.
- Derbyshire, E. (2007). The importance of adequate fluid and fibre intake during pregnancy. *Nursing standard*, 21(24), 40-44.
- De Tyche, C., Spitz, E., Briançon, S., Lighezzolo, J., Girvan, F., Rosati, A., Thockler, A., & Vincent, S. (2005). Pre- and postnatal depression and coping: a comparative approach. *Journal of affective disorders*, 85(3), 323–326.
- Dhar, N., Chaturvedi, S., & Nandan, D. (2011). Spiritual health scale 2011: defining and measuring 4 dimensions of health. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 36(4), 275–282.  
<https://doi.org/10.4103/0970-0218.91329>

- DiMaria-Ghalili, R. A., Mirtallo, J. M., Tobin, B. W., Hark, L., Van Horn, L., & Palmer, C. A. (2014). Challenges and opportunities for nutrition education and training in the health care professions: intraprofessional and interprofessional call to action. *The American journal of clinical nutrition*, 99(5 Suppl), 1184S–93S.  
<https://doi.org/10.3945/ajcn.113.073536>
- Dimidjian, S., & Goodman, S. H. (2014). Preferences and attitudes toward approaches to depression relapse/recurrence prevention among pregnant women. *Behaviour research and therapy*, 54, 7-11.
- Dossey L., (2001) *Healing Beyond the Body, Medicine and the Infinite Reach of the Mind. Shambhala Publications.* p. 107.
- Downs, D. S., Chasan-Taber, L., Evenson, K. R., Leiferman, J., & Yeo, S. (2012). Physical activity and pregnancy: past and present evidence and future recommendations. *Research quarterly for exercise and sport*, 83(4), 485–502.
- Dunkel Schetter, C., & Tanner, L. (2012). Anxiety, depression and stress in pregnancy: implications for mothers, children, research, and practice. *Current opinion in psychiatry*, 25(2),141–148. <https://doi.org/10.1097/YCO.0b013e328350368>
- Dworkin, S.L., (2012). Sample Size Policy for Qualitative Studies Using In-Depth Interviews. *Archives of Sexual Behaviors* 41, 1319–1320. <https://doi.org/10.1007/s10508-012-0016-6>
- Ezmerli, N., (2000). Exercise in pregnancy. *Primary Care Update for OB/GYNS*, 7(6), 260-265.
- Farhud D. D. (2015). Impact of Lifestyle on Health. *Iranian journal of public health*, 44(11), 1442–1444.

- Ferrari, N., Joisten, C. Impact of physical activity on course and outcome of pregnancy from pre- to postnatal. *Eur J Clin Nutr* 75, 1698–1709 (2021). <https://doi.org/10.1038/s41430-021-00904-7>
- Feeney, B. C., & Collins, N. L. (2015). A new look at social support: A theoretical perspective on thriving through relationships. *Personality and Social Psychology Review*, 19(2), 113-147.
- Field, T. (2012). Prenatal exercise research. *Infant Behavior and Development*, 35(3), 397-407.
- Finer, L. B., & Henshaw, S. K. (2006). Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. *Perspectives on sexual and reproductive health*, 38(2), 90–96. <https://doi.org/10.1363/psrh.38.090.06>
- Firth, J., Gangwisch, J. E., Borsini, A., Wootton, R. E., & Mayer, E. A. (2020). Food and mood: how do diet and nutrition affect mental wellbeing?. *Bmj*, 369.
- Forbes, L. E., Graham, J. E., Berglund, C., & Bell, R. C. (2018). Dietary change during pregnancy and women's reasons for change. *Nutrients*, 10(8), 1032.
- Frayne, J., & Hauck, Y. (2017). Enjoying a healthy pregnancy: GPs' essential role in health promotion. *Australian family physician*, 46(1/2), 20-25.
- Gardner B. (2015). A review and analysis of the use of 'habit' in understanding, predicting and influencing health-related behaviour. *Health psychology review*, 9(3), 277–295. <https://doi.org/10.1080/17437199.2013.876238>
- Gérardin, M., Victorri-Vigneau, C., Louvigné, C., Rivoal, M., & Jolliet, P. (2011). Management of cannabis use during pregnancy: an assessment of healthcare professionals' practices. *Pharmacoepidemiology and drug safety*, 20(5), 464-473.

- Ghiasi A. (2021). Health information needs, sources of information, and barriers to accessing health information among pregnant women: a systematic review of research. *The journal of maternal-fetal & neonatal medicine: the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians*, 34(8), 1320–1330.  
<https://doi.org/10.1080/14767058.2019.1634685>
- Glazier, R. H., Elgar, F. J., Goel, V., & Holzapfel, S. (2004). Stress, social support, and emotional distress in a community sample of pregnant women. *Journal of Psychosomatic Obstetrics & Gynecology*, 25(3-4), 247-255.
- Goodwin, A., Astbury, J., & McMeeken, J. (2000). Body image and psychological well-being in pregnancy. A comparison of exercisers and non-exercisers. *Australian and New Zealand journal of obstetrics and gynaecology*, 40(4), 442-447.
- Gomez, R., & Fisher, J. W. (2003). Domains of spiritual well-being and development and validation of the spiritual well-being questionnaire. *Personality and Individual Differences*, 35, 1975–1991.
- Gould, G. S., Havard, A., Lim, L. L., The Psanz Smoking in Pregnancy Expert Group, & Kumar, R. (2020). Exposure to Tobacco, Environmental Tobacco Smoke and Nicotine in Pregnancy: A Pragmatic Overview of Reviews of Maternal and Child Outcomes, Effectiveness of Interventions and Barriers and Facilitators to Quitting. *International journal of environmental research and public health*, 17(6), 2034.  
<https://doi.org/10.3390/ijerph17062034>



- Goyal, D., Gay, C. L., & Lee, K. A. (2007). Patterns of sleep disruption and depressive symptoms in new mothers. *The Journal of perinatal & neonatal nursing*, 21(2), 123–129. <https://doi.org/10.1097/01.JPN.0000270629.58746.96>
- Greene, J. C., Doughty, J., Marquart, J. M., Ray, M. L., & Roberts, L. (1988). Qualitative evaluation audits in practice. *Evaluation Review*, 12(4), 352-375.
- Greene, A. J., Prepiscus, C., & Levy, W. B. (2000). Primacy versus recency in a quantitative model: activity is the critical distinction. *Learning & memory (Cold Spring Harbor, N.Y.)*, 7(1), 48–57. <https://doi.org/10.1101/lm.7.1.48>
- Grenier, L. N., Atkinson, S. A., Mottola, M. F., Wahoush, O., Thabane, L., Xie, F., Vickers-Manzin, J., Moore, C., Hutton, E. K., & Murray-Davis, B. (2021). Be Healthy in Pregnancy: Exploring factors that impact pregnant women's nutrition and exercise behaviours. *Maternal & child nutrition*, 17(1), e13068. <https://doi.org/10.1111/mcn.13068>
- Groene, O., & Jorgensen, S. J. (2005). Health promotion in hospitals-a strategy to improve quality in health care. *European Journal of Public Health*, 15(1), 6-8.
- Gualdi-Russo, E., & Zaccagni, L. (2021). Physical activity for health and wellness. *International Journal of Environmental Research and Public Health*, 18(15), 7823.
- Haack, M., & Mullington, J. M. (2005). Sustained sleep restriction reduces emotional and physical well-being. *Pain*, 119(1-3), 56-64.
- Haakstad, L. A., Voldner, N., Henriksen, T., & Bø, K. (2007). Physical activity level and weight gain in a cohort of pregnant Norwegian women. *Acta obstetrica et gynecologica Scandinavica*, 86(5), 559-564.

- Hammer, R. L., Perkins, J., & Parr, R. (2000). Exercise during the childbearing year. *The Journal of perinatal education*, 9(1), 1–14. <https://doi.org/10.1624/105812400X87455>
- Hammer, D., & Wildavsky, A. (2018). The open-ended, semistructured interview: An (almost) operational guide. *In Craftways* (pp. 57-101). Routledge.
- Harrison, A. L., Taylor, N. F., Shields, N., & Frawley, H. C. (2018). Attitudes, barriers and enablers to physical activity in pregnant women: a systematic review. *Journal of physiotherapy*, 64(1), 24-32.
- Harrison, C. L., Thompson, R. G., Teede, H. J., & Lombard, C. B. (2011). Measuring physical activity during pregnancy. *International Journal of Behavioral Nutrition and Physical Activity*, 8(1), 1-8.
- Hartnett, E., Haber, J., Krainovich-Miller, B., Bella, A., Vasilyeva, A., & Kessler, J. L. (2016). Oral health in pregnancy. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 45(4), 565-573.
- Hashim, R., & Akbar, M. (2014). Gynecologists' knowledge and attitudes regarding oral health and periodontal disease leading to adverse pregnancy outcomes. *Journal of International Society of Preventive & Community Dentistry*, 4(Suppl 3), S166–S172.  
<https://doi.org/10.4103/2231-0762.149028>
- Hedman, C., Pohjasvaara, T., Tolonen, U., Suhonen-Malm, A. S., & Myllylä, V. V. (2002). Effects of pregnancy on mothers' sleep. *Sleep medicine*, 3(1), 37–42.  
[https://doi.org/10.1016/s1389-9457\(01\)00130-7](https://doi.org/10.1016/s1389-9457(01)00130-7)
- Health Canada. (2011). *Health Canada: Eating well with Canada's food guide*.  
<https://www.canada.ca/en/health-canada/services/canada-food-guide/about/history-food-guide/eating-well-with-canada-food-guide-2007.htm>

- Henderson, J., Kesmodel, U., & Gray, R. (2007). Systematic review of the fetal effects of prenatal binge-drinking. *Journal of epidemiology and community health*, 61(12), 1069–1073. <https://doi.org/10.1136/jech.2006.054213>
- Hesketh KR., & Evenson KR., (2018). Prevalence of U.S. pregnant women meeting ACOG 2015 physical activity guidelines. *Am J Prev Med*. 2016; 41:387–389.  
doi: 10.1016/j.amepre.2016.05.023.
- Hinman, S. K., Smith, K. B., Quillen, D. M., & Smith, M. S. (2015). Exercise in Pregnancy: A Clinical Review. *Sports health*, 7(6), 527–531.  
<https://doi.org/10.1177/1941738115599358>
- Holden, S. C., Manor, B., Zhou, J., Zera, C., Davis, R. B., & Yeh, G. Y. (2019). Prenatal yoga f or back pain, balance, and maternal wellness: a randomized, controlled pilot study. *Global advances in health and medicine*, 8, 2164956119870984.
- Howard A. R. (2020). Changing Expectation: Prenatal Care and the Creation of Healthy Pregnancy. *Journal of the history of medicine and allied sciences*, 75(3), 324–343.  
<https://doi.org/10.1093/jhmas/jraa017>.
- Husserl E. (1931). *Ideas: General introduction to pure phenomenology*.  
Evanston, IL: Northwestern University Press.
- Institute for Health and Care Excellence NICE. (2010). Antenatal care. NICE
- Institute of Medicine (US) Committee on Nutritional Status During Pregnancy and Lactation.  
Washington (DC): *National Academies Press* (US); 1990.
- Institute of Medicine. (1985). Preventing low birth weight. *National Academy Press*.
- IOM (Institute of Medicine) and NRC (National Research Council), (2009).  
*The National Academies Press*, Washington, DC.

- International Classification of Sleep Disorders (2000), Revised: Diagnostic and Coding Manual. *American Academy of Sleep Medicine*. 14-7.
- Jacob, S. A., & Furgerson, S. P. (2012). Writing interview protocols and conducting interviews: tips for students new to the field of qualitative research. *Qualitative Report*, 17, 6.
- Jouanne, M., Oddoux, S., Noël, A., & Voisin-Chiret, A. S. (2021). Nutrient Requirements during Pregnancy and Lactation. *Nutrients*, 13(2), 692. <https://doi.org/10.3390/nu13020692>
- Kaiser, L. L., & Allen, L. (2002). Position of the American Dietetic Association: nutrition and lifestyle for a healthy pregnancy outcome. *Journal of the American Dietetic Association*, 102(10), 1479-1490.
- Kaleem, R., Adnan, M., Nasir, M., & Rahat, T. (2020). Effects of antenatal nutrition counseling on dietary practices and nutritional status of pregnant women: A quasi-experimental hospital based study. *Pakistan journal of medical sciences*, 36(4), 632–636. <https://doi.org/10.12669/pjms.36.4.1919>
- Kempler, L., Sharpe, L., & Bartlett, D. (2012). Sleep education during pregnancy for new mothers. *BMC Pregnancy and Childbirth*, 12(1), 1-10.
- Kiernan, M., Moore, S. D., Schoffman, D. E., Lee, K., King, A. C., Taylor, C. B., ... & Perri, M. G. (2012). Social support for healthy behaviors: scale psychometrics and prediction of weight loss among women in a behavioral program. *Obesity*, 20(4), 756-764.
- Kirkland, A. (2014). What Is Wellness Now?. *J Health Polit Policy Law*. 39(5), 957–970. doi: <https://doi.org/10.1215/03616878-2813647>
- Kitko, C. T. (2001). Dimensions of wellness and the health matters program at Penn State. *Home Health Care Management & Practice*, 13(4), 308-311.

- Kliemann, N., Vickerstaff, V., Croker, H., Johnson, F., Nazareth, I., & Beeken, R. J. (2017). The role of self-regulatory skills and automaticity on the effectiveness of a brief weight loss habit-based intervention: secondary analysis of the 10 top tips randomized trial. *International Journal of Behavioral Nutrition and Physical Activity*, *14*(1), 1-11.
- Koenig, H. G. (2004). Spirituality, wellness, and quality of life. *Sexuality, Reproduction and Menopause*, *2*(2), 76-82.
- Kohl, H. W., III, Cook, H. D., (2013). Committee on Physical Activity and Physical Education in the School Environment, Food and Nutrition Board, & Institute of Medicine (Eds.). *Educating the Student Body: Taking Physical Activity and Physical Education to School*. National Academies Press (US).
- Kołomańska, D., Zarawski, M., & Mazur-Bialy, A. (2019). Physical Activity and Depressive Disorders in Pregnant Women-A Systematic Review. *Medicina (Kaunas, Lithuania)*, *55*(5), 212.
- Korstjens, I., & Moser, A. (2017). Series: Practical guidance to qualitative research. Part 2: Context, research questions and designs. *European Journal of General Practice*, *23*(1), 274-279.
- Krans, E. E., Gearhart, J. G., Dubbert, P. M., Klar, P. M., Miller, A. L., & Replogle, W. H. (2005). Pregnant women's beliefs and influences regarding exercise during pregnancy. *Journal of the Mississippi State Medical Association*, *46*(3), 67-73.
- Kreps, G. L. (2009). Applying Weick's model of organizing to health care and health promotion: highlighting the central role of health communication. *Patient education and counseling*, *74*(3), 347-355.

- Lee, K. A. (1998). Alterations in sleep during pregnancy and postpartum: a review of 30 years of research. *Sleep medicine reviews*, 2(4), 231-242.
- Lemoine, P., Harousseau, H., Borteyru, J. P., & Menuet, J. C. (2003). Children of alcoholic parents--observed anomalies: discussion of 127 cases. *Therapeutic drug monitoring*, 25(2), 132–136. <https://doi.org/10.1097/00007691-200304000-00002>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Sage Publications.
- Lucas, C., Charlton, K. E., & Yeatman, H. (2014). Nutrition advice during pregnancy: do women receive it and can health professionals provide it? *Maternal and child health journal*, 18(10), 2465-2478.
- Maharlouei, N. (2016). The importance of social support during pregnancy. *Women's Health Bulletin*, 3(1), 1-1.
- Malta, M. B., Carvalhaes, M. A. D. B. L., Takito, M. Y., Tonete, V. L. P., Barros, A. J., Parada, C. M. G. D. L., & Benício, M. H. D. A. (2016). Educational intervention regarding diet and physical activity for pregnant women: changes in knowledge and practices among health professionals. *BMC pregnancy and childbirth*, 16(1), 1-9.
- Manderscheid, R. W., Ryff, C. D., Freeman, E. J., McKnight-Eily, L. R., Dhingra, S., & Strine, T. W. (2010). Evolving definitions of mental illness and wellness. *Preventing chronic disease*, 7(1), A19.
- Marcus, S. M. (2009). Depression during pregnancy: rates, risks and consequences. *Journal of Population Therapeutics and Clinical Pharmacology*, 16(1).

- Marquez, D. X., Bustamante, E. E., Bock, B. C., Markenson, G., Tovar, A., & Chasan-Taber, L. (2009). Perspectives of Latina and non-Latina white women on barriers and facilitators to exercise in pregnancy. *Women & health, 49*(6), 505–521.  
<https://doi.org/10.1080/03630240903427114>
- May, L., Suminski, R., Berry, A., Linklater, E., & Jahnke, S. (2014). Diet and pregnancy: health-care providers and patient behaviors. *The Journal of Perinatal Education, 23*(1), 50-56.
- McCloughen, A., Foster, K., Huws-Thomas, M. and Delgado, C. (2012), Physical health and wellbeing of emerging and young adults with mental illness: An integrative review of international literature. *International Journal of Mental Health Nursing, 21*: 274-288. <https://doi.org/10.1111/j.1447-0349.2011.00796.x>
- McGrath, C., Palmgren, P. J., & Liljedahl, M. (2019). Twelve tips for conducting qualitative research interviews. *Medical teacher, 41*(9), 1002-1006.
- McLeish, J., & Redshaw, M. (2017). Mothers' accounts of the impact on emotional wellbeing of organised peer support in pregnancy and early parenthood: a qualitative study. *BMC pregnancy and childbirth, 17*(1), 28. <https://doi.org/10.1186/s12884-017-1220-0>
- Meers, J. M., & Nowakowski, S. (2022). Sleep During Pregnancy. *Current Psychiatry Reports, 1*-5.
- Meiselman, H. L. (2016). Quality of life, well-being and wellness: Measuring subjective health for foods and other products. *Food Quality and Preference, 54*, 101-109.
- Metz, T. D., & Borgelt, L. M. (2018). Marijuana Use in Pregnancy and While Breastfeeding. *Obstetrics and gynecology, 132*(5), 1198–1210.  
<https://doi.org/10.1097/AOG.0000000000002878>

- Miller, J. W. (2005). *Wellness: The history and development of a concept*. Heft.
- Mindell, J. A., & Jacobson, B. J. (2000). Sleep disturbances during pregnancy. *Journal of obstetric, gynecologic, and neonatal nursing: JOGNN*, 29(6), 590–597.  
<https://doi.org/10.1111/j.1552-6909.2000.tb02072.x>
- Mishra, S., & Kishore, S. (2018). Effect of Physical Activity during Pregnancy on Gestational Diabetes Mellitus. *Indian journal of endocrinology and metabolism*, 22(5), 661–671.  
[https://doi.org/10.4103/ijem.IJEM\\_618\\_17](https://doi.org/10.4103/ijem.IJEM_618_17)
- Modh, C., Lundgren, I., & Bergbom, I. (2011). First time pregnant women's experiences in early pregnancy. *International journal of qualitative studies on health and well-being*, 6(2), 10.3402/qhw.v6i2.5600. <https://doi.org/10.3402/qhw.v6i2.5600>
- Moerer-Urdahl, T., & Creswell, J. W. (2004). Using Transcendental Phenomenology to Explore the “Ripple Effect” in a Leadership Mentoring Program. *International Journal of Qualitative Methods*, 3(2), 19–35.
- Montgomery, K. S. (2002). Nutrition Column: An update on water needs during pregnancy and beyond. *The Journal of perinatal education*, 11(3), 40-42.
- Moos, M.-K. (2003), Preconceptional Wellness as a Routine Objective for Women's Health Care: An Integrative Strategy. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 32: 550-556. <https://doi.org/10.1177/0884217503255302>
- Moosavinasab, M. S., Fahami, F., & Kazemi, A. (2018). The relationship between cognitive social theory and physical activity in pregnant women. *International Journal of pediatrics*, 6(11), 8527-8535.



- Moser, A., & Korstjens, I. (2018). Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *European journal of general practice*, 24(1), 9-18.
- Mourady D, Richa S, Karam R, Papazian T, Hajj Moussa F, et al. (2017) Associations between quality of life, physical activity, worry, depression and insomnia: A cross-sectional designed study in healthy pregnant women. *PLOS ONE* 12(5): e0178181. <https://doi.org/10.1371/journal.pone.0178181>
- National Institute for Health and Care Excellence. (2010). Antenatal care.
- Nykjaer, C., Alwan, N. A., Greenwood, D. C., Simpson, N. A., Hay, A. W., White, K. L., & Cade, J. E. (2014). Maternal alcohol intake prior to and during pregnancy and risk of adverse birth outcomes: evidence from a British cohort. *J Epidemiol Community Health*, 68(6), 542-549.
- Nawaz, H., Adams, ML., Katz, DL., (2000). Physician-patient interaction regarding diet, exercise and smoking. *Prev Med*, 31, 652-657.
- Neubauer, B. E., Witkop, C. T., & Varpio, L. (2019). How phenomenology can help us learn from the experiences of others. *Perspectives on medical education*, 8(2), 90–97. <https://doi.org/10.1007/s40037-019-0509-2>
- Nguyen, L. D., Nguyen, L. H., Ninh, L. T., Nguyen, H., Nguyen, A. D., Vu, L. G., Nguyen, H., Nguyen, S. H., Doan, L. P., Vu, T., Tran, B. X., Latkin, C. A., Ho, C., & Ho, R. (2022). Women's holistic self-care behaviors during pregnancy and associations with psychological well-being: implications for maternal care facilities. *BMC pregnancy and childbirth*, 22(1), 631. <https://doi.org/10.1186/s12884-022-04961-z>

- Noble, H., & Heale, R. (2019). Triangulation in research, with examples. *Evidence-based nursing, 22*(3), 67-68.
- Oguz-Duran, N., & Tezer, E. (2009). Wellness and self-esteem among Turkish university students. *International Journal for the Advancement of Counselling, 31*(1), 32-44.
- Okafor, U. B., & Goon, D. T. (2022). Uncovering Barriers to Prenatal Physical Activity and Exercise Among South African Pregnant Women: A Cross-Sectional, Mixed-Method Analysis. *Frontiers in public health, 10*, 697386.  
<https://doi.org/10.3389/fpubh.2022.697386>
- Ottley, C. (2000). Food and mood. *Mental Health Practice, 4*(4).
- Oyibo, K., Adaji, I., & Vassileva, J. (2018). Social cognitive determinants of exercise behavior in the context of behavior modeling: a mixed method approach. *Digital health, 4*, 2055207618811555. <https://doi.org/10.1177/2055207618811555>
- Padayachee, C., & Coombes, J. S. (2015). Exercise guidelines for gestational diabetes mellitus. *World journal of diabetes, 6*(8), 1033–1044.  
<https://doi.org/10.4239/wjd.v6.i8.1033>
- Patton, M. (1990). *Qualitative Evaluation and Research Methods*. Beverly Hills, CA: Sage.
- Pastuszak, A., Bhatia, D., Okotore, B., & Koren, G. (1999). Preconception counseling and women's compliance with folic acid supplementation. *Canadian family physician Medecin de famille canadien, 45*, 2053–2057.

Payne, J., Elliott, E., D'Antoine, H., O'Leary, C., Mahony, A., Haan, E., & Bower, C. (2005).

Health professionals' knowledge, practice and opinions about fetal alcohol syndrome and alcohol consumption in pregnancy. *Australian and New Zealand journal of public health*, 29(6), 558-564.

Petrov Fieril, K., Fagevik Olsén, M., Glantz, A., & Larsson, M. (2014). Experiences of exercise during pregnancy among women who perform regular resistance training: a qualitative study. *Physical therapy*, 94(8), 1135-1143.

Physical Activity Guidelines Advisory Committee (2008). *U.S. Department of Health and Human Services*, Washington, DC.

Physical Activity and Exercise During Pregnancy and the Postpartum Period: ACOG Committee Opinion, Number 804 (2020). *Obstetrics & Gynecology*, 135 (4), e178-e188 doi: 10.1097/AOG.0000000000003772

Pien, G. W., & Schwab, R. J. (2004). Sleep disorders during pregnancy. *Sleep*, 27(7), 1405-1417.

Poudevigne, M. S., & O'Connor, P. J. (2006). A review of physical activity patterns in pregnant women and their relationship to psychological health. *Sports medicine*, 36(1), 19-38.

Prabhu, N., Smith, N., Campbell, D., Craig, L. C., Seaton, A., Helms, P. J., Devereux, G., & Turner, S. W. (2010). First trimester maternal tobacco smoking habits and fetal growth. *Thorax*, 65(3), 235–240. <https://doi.org/10.1136/thx.2009.123232>

Prather, H., Spitznagle, T., & Hunt, D. (2012). Benefits of exercise during pregnancy. *PM&R*, 4(11), 845-850.

Puchalski, C. M. (2001). The role of spirituality in health care. In *Baylor University Medical Center Proceedings*. 14(4), 352-357.

- Reid, A. M., Brown, J. M., Smith, J. M., Cope, A. C., & Jamieson, S. (2018). Ethical dilemmas and reflexivity in qualitative research. *Perspectives on medical education*, 7(2), 69-75.
- Reutter, K. K., & Bigatti, S. M. (2014). Religiosity and spirituality as resiliency resources: Moderation, mediation, or moderated mediation? *Journal for the scientific study of religion*, 53(1), 56-72.
- Rezaee, R., Ravangard, R., Amani, F., Dehghani Tafti, A., Shokrpour, N., & Bahrami, M. A. (2022). Healthy lifestyle during pregnancy: Uncovering the role of online health information seeking experience. *PloS one*, 17(8), e0271989.
- Roberts, C. J. (2008). The effects of stress on food choice, mood and bodyweight in healthy women. *Nutrition Bulletin*, 33(1), 33-39.
- Robledo-Colonia, A. F., Sandoval-Restrepo, N., Mosquera-Valderrama, Y. F., Escobar-Hurtado, C., & Ramírez-Vélez, R. (2012). Aerobic exercise training during pregnancy reduces depressive symptoms in nulliparous women: a randomized trial. *Journal of physiotherapy*, 58(1), 9-15.
- Roscoe, L.J. (2009). Wellness: A review of theory and measurement for counselors. *Journal of Counseling and Development*, 87, 216-226.
- Roulston, K. (2010). Asking questions and individual interviews. In *Reflective interviewing: A guide to theory and practice* (pp. 9-32). SAGE Publications Ltd, <https://dx.doi.org/10.4135/9781446288009.n2>
- Rutberg, S., & Bouikidis, C. D. (2018). Focusing on the fundamentals: A simplistic differentiation between qualitative and quantitative research. *Nephrology Nursing Journal*, 45(2), 209-213.

- Santos, P. C., Ferreira, M. I., Teixeira, R. J., Couto, M. F., Montenegro, N., & Mota, J. (2017). *Physical activity and self-esteem during pregnancy.*
- Santo, E. C., Forbes, P. W., Oken, E., & Belfort, M. B. (2017). Determinants of physical activity frequency and provider advice during pregnancy. *BMC pregnancy and childbirth, 17*(1), 1-11.
- Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary Educational Psychology, 60*, 101832.
- Shea, A. K., & Steiner, M. (2008). Cigarette smoking during pregnancy. *Nicotine & Tobacco Research, 10*(2), 267-278.
- Shillingford, J. P., & Shillingford-Mackin, A. (1991). Enhancing self-esteem through wellness programs. *The Elementary School Journal, 91*(5), 457–466.
- Simon, M. K., & Goes, J. (2013). Scope, limitations, and delimitations.
- Smith, K. M., & Campbell, C. G. (2013). Physical activity during pregnancy: impact of applying different physical activity guidelines. *Journal of pregnancy, 2013*, 165617.  
<https://doi.org/10.1155/2013/165617>
- Smith, J., & Noble, H. (2014). Bias in research. *Evidence-based nursing, 17*(4), 100-101.
- Soltani, H., Smith, D., & Olander, E. (2017). Weight, Lifestyle, and Health during Pregnancy and Beyond. *Journal of pregnancy, .https://doi.org/10.1155/2017/4981283*
- Sonmezer, H., Cetinkaya, F., & Nacar, M. (2012). Healthy lifestyle promoting behaviour in Turkish women aged 18-64. *Asian Pacific journal of cancer prevention: APJCP, 13*(4), 1241–1245. <https://doi.org/10.7314/apjcp.2012.13.4.1241>

- Sorsa, M. A., Kiikkala, I., & Åstedt-Kurki, P. (2015). Bracketing as a skill in conducting unstructured qualitative interviews. *Nurse researcher*, 22(4), 8–12.  
<https://doi.org/10.7748/nr.22.4.8.e1317>
- Stahl, N.A., & King, J. R. (2020). Expanding Approaches for Research: Understanding and Using Trustworthiness in Qualitative Research. *Journal of Developmental Education*, 44(1) 26-28.
- Stajkovic, A. D., & Luthans, F. (1998). Social cognitive theory and self-efficacy: Goin beyond traditional motivational and behavioral approaches. *Organizational dynamics*, 26(4), 62-74.
- Stengel, M. R., Kraschnewski, J. L., Hwang, S. W., Kjerulff, K. H., & Chuang, C. H. (2012). “What my doctor didn't tell me”: Examining health care provider advice to overweight and obese pregnant women on gestational weight gain and physical activity. *Women's Health Issues*, 22(6), e535-e540.
- Stewart, D. E. (2011). Depression during pregnancy. *New England Journal of Medicine*, 365(17), 1605-1611.
- Stickgold, R., & Walker, M. P. (2007). Sleep-dependent memory consolidation and reconsolidation. *Sleep medicine*, 8(4), 331–343.  
<https://doi.org/10.1016/j.sleep.2007.03.011>
- Stoewen D. L. (2017). Dimensions of wellness: Change your habits, change your life. *The Canadian veterinary journal = La revue veterinaire canadienne*, 58(8), 861–862.

- Stremler, R., Hodnett, E., Lee, K., MacMillan, S., Mill, C., Ongcangco, L., & Willan, A. (2006). A behavioral-educational intervention to promote maternal and infant sleep: a pilot randomized, controlled trial. *Sleep*, 29(12), 1609–1615.  
<https://doi.org/10.1093/sleep/29.12.1609>
- Strohecker, J. (2015). A brief history of wellness.
- Sutton, J., & Austin, Z. (2015). Qualitative Research: Data Collection, Analysis, and Management. *The Canadian journal of hospital pharmacy*, 68(3), 226–231.  
<https://doi.org/10.4212/cjhp.v68i3.1456>
- Tanaka, H., & Tamura, N. (2016). Sleep education with self-help treatment and sleep health promotion for mental and physical wellness in Japan. *Sleep and biological rhythms*, 14(1), 89-99.
- Tay, L., Tan, K., Diener, E., & Gonzalez, E. (2013). Social relations, health behaviors, and health outcomes: A survey and synthesis. *Applied Psychology: Health and Well-Being*, 5(1), 28-78.
- Theofanidis, D., & Fountouki, A. (2019). Limitations And Delimitations In The Research Process. *Perioperative nursing (GORNA)*, E-ISSN:2241-3634, 7(3), 155–162.
- Tobias, D. K., Zhang, C., Van Dam, R. M., Bowers, K., & Hu, F. B. (2011). Physical activity before and during pregnancy and risk of gestational diabetes mellitus: a meta-analysis. *Diabetes care*, 34(1), 223-229.
- Torkan, N., Kazemi, A., Paknahad, Z., & Bahadoran, P. (2018). Relationship of social cognitive theory concepts to dietary habits of pregnant women. *Iranian journal of nursing and midwifery research*, 23(2), 125.

- Ulmer D. D. (1984). Societal influences on health and life-styles. *The Western journal of medicine*, 141(6), 793–798.
- Umberson, D., Crosnoe, R., & Reczek, C. (2010). Social relationships and health behavior across the life course. *Annual review of sociology*, 36, 139-157.
- U.S. Department of Health and Human Services, & Physical Activity Guidelines Advisory Committee. (2008) *Physical Activity Guidelines Advisory Committee Report*, Washington, DC. Retrieved from: <http://www.health.gov/PAGuidelines/Report/>  
<https://programs.coe.hawaii.edu/medt/edcs632/wp-content/uploads/sites/5/2014/04/creswell-ch-2.pdf>
- U.S. Department of Health and Human Services. (2018) *Physical activity guidelines for Americans*. 2nd ed. Washington, DC: DHHS; Available at: <https://health.gov/paguidelines/second-edition/>.
- U.S. Department of Health and Human Services (2017). *Pregnancy. Eunice Kennedy National Institute of child Health and Human Development*. Retrieved from: <https://www.nichd.nih.gov/health/topics/pregnancy>
- Vanstone, M., Kandasamy, S., Giacomini, M., DeJean, D., & McDonald, S. D. (2017). Pregnant women's perceptions of gestational weight gain: A systematic review and meta-synthesis of qualitative research. *Maternal & child nutrition*, 13(4), e12374.  
<https://doi.org/10.1111/mcn.12374>
- Volkow, N. D., Compton, W. M., & Wargo, E. M. (2017). The risks of marijuana use during pregnancy. *Jama*, 317(2), 129-130.



- Walasik, I., Kwiatkowska, K., Kosińska Kaczyńska, K., & Szymusik, I. (2020). Physical Activity Patterns among 9000 Pregnant Women in Poland: A Cross-Sectional Study. *International journal of environmental research and public health*, 17(5), 1771. <https://doi.org/10.3390/ijerph17051771>
- Walker, L. O., & Tinkle, M. B. (1996). Toward an integrative science of women's health. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 25, 379-382
- Wallace, A. M., Boyer, D. B., Dan, A., & Holm, K. (1986). Aerobic exercise, maternal self-esteem, and physical discomforts during pregnancy. *Journal of nurse-midwifery*, 31(6), 255-262.
- Warland, J., Dorrian, J., Morrison, J. L., & O'Brien, L. M. (2018). Maternal sleep during pregnancy and poor fetal outcomes: a scoping review of the literature with meta-analysis. *Sleep medicine reviews*, 41, 197-219.
- What Is Nutrition. (2003). *The American Journal of Clinical Nutrition*, 77(5), 1093. <https://doi.org/10.1093/ajcn/77.5.1093>
- Williamson, C. S. (2006). Nutrition in pregnancy. *Nutrition bulletin*, 31(1), 28-59.
- Wood, R. & Bandura, A. (1989). Social Cognitive Theory of Organizational Management. *The Academy of Management Review*, 14(3), 361-384.
- Wong, C., Monaghan, M. (2020) Behavior change techniques for diabetes technologies. *Diabetes Digital Health*.
- World Health Organization. (1947). Constitution of the World Health Organization. Chronicle WHO.1, 29-43.
- World Health Organization. (2004). Promoting Mental Health: Concepts, Emerging Evidence, Practice. WHO, Google Scholar.

World Health Organization. (2016). Recommendations on antenatal

care for a positive pregnancy experience. *World Health Organization*. <https://www.who.int/publications/i/item/9789241549912>.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. *In Handbook of self-regulation* (13-39). Academic press.

## Appendix A: Recruitment Flyer

### Recruitment: Social Media Private Message

---

ATTENTION INSTAGRAM/FACEBOOK FRIEND: As a graduate student in the School of Behavioral Sciences at Liberty University, I am conducting research as part of the requirements for a doctoral degree.

The purpose of my research is to collect perceptions and lived experiences for physical wellness during pregnancy. I am writing to invite eligible participants to join my study.

To participate, you must be 18 years or older, live in central Florida and be pregnant or have been pregnant in the past three years. Participants, if willing, will be asked to answer several interview questions about their perceptions and lived experiences about physical wellness during pregnancy. The interview should take approximately one hour to complete. Names and other identifying information will be requested as part of this study, but the information will remain confidential.

Would you like to participate? Yes, great, I will message the official criteria question form. No, I understand. Thank you for your time.

Once the participant has met the criteria, a consent document will be sent via email. The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document and return it to me before the scheduled interview. Doing so will indicate that you have read the consent information and would like to take part in the study. Participants will receive a ten-dollar Starbucks gift card via text message for participating.

Sincerely,

Mary Reynolds-Licciardello  


## **Appendix B: Criteria Questions**

### Criteria Questions

CQ1: Are you 18 years or older?

CQ2: Do you live in central Florida?

CQ3: Are you pregnant or have been pregnant in the past three years?

## **Appendix C: Consent**

### **General Consent**

**Title of the Project:** Physical Wellness During Pregnancy

**Principal Investigator:** Mary Reynolds-Licciardello, Liberty University

#### **Invitation to be Part of a Research Study**

You are invited to participate in a research study. To participate, you must be 18 years or older, live in central Florida and pregnant or have been pregnant in the past three years. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

#### **What is the study about and why is it being done?**

The purpose of this study is to cover the topic of women's perceptions and lived experiences of physical wellness during pregnancy.

#### **What will happen if you take part in this study?**

If you agree to be in this study, I will ask you to do the following things:

Participants will be asked to answer several interview questions about physical wellness during their pregnancy. It should take approximately one hour to complete the procedure listed. Names and other identifying information will be requested as part of this study, but the information will remain confidential, and pseudonyms will be used. An audio recorder will be used during the interview to record audio only. The information given by the participant will be sent to a professional transcriber.

#### **How could you or others benefit from this study?**

Participants should not expect to receive a direct benefit from taking part in this study.

#### **What risks might you experience from being in this study?**

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

#### **How will personal information be protected?**

The records of this study will be kept private. Data collected from you may be shared for use in future research studies or with other researchers. If data collected from you is shared, any information that could identify you, if applicable, will be removed before the data is shared.

Interviews will be recorded and transcribed. To maintain confidentiality, data that will be gathered from the interview, recorder and flash drive will be secured in a locked filing cabinet that the researcher has access to. The information from the participants will be uploaded to a password-locked computer. Only the researcher will have access to the computer, password and filing cabinet. Liberty University requires data to be deleted after three years. Data will be deleted from computer, recorder, and field notes with be shredded after three years.

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

### **What should you do if you decide to withdraw from the study?**

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

### **Whom do you contact if you have questions or concerns about the study?**

The researcher conducting this study is Mary Reynolds-Licciardello. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [REDACTED] and/or [REDACTED]. You may also contact the researcher's faculty sponsor, Dr. Tracy N. Baker, at [REDACTED]

### **Whom do you contact if you have questions about your rights as a research participant?**

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at [irb@liberty.edu](mailto:irb@liberty.edu).

*Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.*

### **Your Consent**

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

*I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.*

The researcher has my permission to audio-record me as part of my participation in this study.

---

Printed Subject Name

---

Signature & Date

### Appendix D: Interview Questions

1. Please tell me about yourself, as if we just met one another.
  - c. Are you married, single or widowed?
  - d. How many children do you have?
2. Please describe your knowledge of wellness.
3. Please describe your knowledge of physical wellness.
4. Please describe your pregnancy/pregnancies.
5. Please describe your nutrition during pregnancy.
  - d. What foods did you eat?
  - e. What did you drink to keep hydrated?
  - f. What supplements did you take?
6. Please describe your sleep during pregnancy.
  - b. Did anything keep you up at night?
7. Did you have to change any of your daily habits once you became pregnant?
  - b. How did that make you feel?
8. Please describe your physical activity during pregnancy.
  - b. Please describe the activities you participated in.
9. Please describe the promotion of physical wellness given by your physician during pregnancy.
10. Is there anything more that you would like to add?



## Appendix E: IRB Approval

# LIBERTY UNIVERSITY

## INSTITUTIONAL REVIEW BOARD

March 15, 2023

Mary Reynolds  
Tracy Baker

Re: IRB Exemption - IRB-FY22-23-615 Physical Wellness During Pregnancy

Dear Mary Reynolds, Tracy Baker,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether

possible modifications to your protocol would change your exemption status, please email us at [irb@liberty.edu](mailto:irb@liberty.edu).

Sincerely,  
G. Michele Baker, MA, CIP  
*Administrative Chair of Institutional Research*  
Research Ethics Office