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Working Mothers' Lived Experiences of Maintaining an Exercise Practice During a Pandemic

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2022

Abstract

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by

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Master of Education, Cleveland State University, 2013

Master of Education, The University of Akron, 2006

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Promotion and Education

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Abstract

Working mothers have been associated with low levels of exercise during the COVID-19 pandemic. This population faces many challenges and obstacles to exercise as they manage a household and work; this lack of exercise could leave their health at risk. Researchers have not yet considered working mothers' lived experiences with exercise during a pandemic. Existing research on working mothers indicates there are barriers to exercise for this population, but more information on what allows these mothers to sustain exercise is needed. This qualitative narrative study was conducted to explore the lived experiences of working mothers who maintained an exercise practice during the COVID-19 pandemic. Self-efficacy theory, perceived barriers of the health belief model, and perceived behavioral control of the theory of planned behavior provided the conceptual framework for this study. Data were collected from eight working mothers via an initial interview and a follow-up two weeks later; both interviews occurred virtually using Zoom. Data were analyzed for codes, categories, and themes using hand coding and the program MAXQDA. Nine themes emerged from the data: (a) exercising at home, (b) experience with exercise, (c) utilizing the built environment, (d) setting an example for kids/others, (e) self-care, (f) scheduling and preparation, (g) both physical and mental benefits, (h) family support, and (i) managing mom guilt. The study's findings indicate that working mothers who sustain exercise are aware of barriers to exercise but use effective strategies such as scheduling and preparation along with previous experiences to sustain exercise. The findings from this research have potential implications for positive social change by influencing health education interventions that can help working mothers sustain exercise to improve their overall quality of life.

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Dedication

I dedicate this study to my family, my three kids, and especially my husband, who has been by my side through this whole process. He has sacrificed a lot for me to complete this when it sometimes felt so overwhelming. Our marriage is strong because despite not understanding each other's interests, we support each other unconditionally. To my beautiful kids, Henley and Charlie, who have hopefully seen me work hard and read a lot rather than on the computer too much. To my first born, Ephraim, who gave me the gift of motherhood and left this earth too soon. He was the reason I decided to pursue a doctorate; even after my master's degree, when I said I was done, he whispered, "Mom, you still have more to do."

Acknowledgments

I would like to thank God for giving me the courage and ability to work on such a huge undertaking and for providing me with encouragement and support as I struggled with the obstacles along the way.

I would have never completed this study without the support and patience of my dissertation committee members, especially my chair, Dr. Beverly Neville, and my methodology committee member, Dr. Carol Spaulding. I will never forget what they said at my proposal presentation, “What a voice you are giving to these women.” I hope I did them justice. I am grateful for their support and guidance along the way.

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Chapter 1: Introduction to the Study

Introduction

Working mothers make up nearly 70% of the labor force and take on most household and childcare responsibilities compared to their male counterparts (Chesley & Flood, 2017). Research on women and their roles in the family indicates they are the primary healthcare providers and decision- makers for their families. Still, their health and well-being are often overlooked (Gahlawat et al., 2019). The many responsibilities of childcare and work can create challenges and obstacles that may hinder physical activity for parents and may impact their short- and long-term health behaviors and decisions (Tuominen et al., 2018). Working mothers must be healthy for their families and to contribute to society (Currie, 2020; Limbers et al., 2020). Families that engage in healthy behaviors such as exercise are more active members of their community than those who are not physically active and go to the doctor less frequently, putting less stress on the health care system (Chesley & Flood, 2017; Limbers et al., 2020).

The COVID-19 pandemic created new challenges and obstacles for many people, including working mothers who had to make lifestyle modifications that affected their health (Limbers et al., 2020). Although there is limited research on working mothers and exercise, some researchers have indicated that working mothers who report exercising have high self-efficacy and can manage their barriers to exercise along with their various roles and responsibilities (Buckworth, 2017; Gierc et al., 2016; Mailey et al., 2016). With this study, I explored working mothers' lived experiences regarding exercise related to

their perceived behavior control (PBC), self-efficacy, and barriers to exercise during the COVID-19 pandemic.

Exercise is an important modifiable lifestyle habit that can lower the risk of chronic diseases such as cardiovascular disease and depression, and anxiety that can negatively affect individuals, families, and communities (American College of Sports Medicine [ACSM], 2020). Working mothers are a population associated with low levels of exercise, and research has indicated that more information may help improve these levels (Gierc et al., 2016; Kotlar et al., 2021; Limbers et al., 2020; Mailey & Hsu, 2019). Understanding how mothers sustain exercise may provide the public health field information for future interventions with working mothers and exercise. This chapter includes the background of the study, the research problem statement, the purpose of the study, research questions, conceptual framework, nature of the study, key definitions, assumptions, scope and delimitations, limitations, and significance of the study.

Background

A literature search on self-efficacy and working mothers' exercise did not reveal any studies published since 2016. Most studies on working mothers and self-efficacy have used a quantitative approach (e.g., Gierc et al., 2016; Jung & Brawley, 2013; Mailey et al., 2016; Mailey & McAuley, 2014). Earlier research on working mothers and exercise indicates similar results: higher self-efficacy may lead to higher levels of exercise for this population (Jung & Brawley, 2011, 2013; Mailey & McAuley, 2014). Limbers et al. (2020) found that working mothers struggled to meet the physical activity guidelines, and more support for this population was needed as their responsibilities

changed during the pandemic. With these responsibilities, many working mothers find it challenging to take care of themselves and engage in healthy behaviors such as exercising (Limbers et at., 2020; Lloyd et al., 2016).

Regular exercise has been shown to reduce the risk of chronic diseases and lower adult stress levels (Healthy people, n.d.). Research on exercise has indicated that it decreases during parenthood, particularly among mothers, as childcare responsibilities increase (Limbers et al., 2020; Lloyd et al., 2016). Adding work responsibilities to childcare for working mothers demands more time and attention, leaving little time to think about themselves and their health. Research on this population has indicated that these demands may not change, but more information may be helpful on how this population can manage the barriers and improve self-efficacy to exercise (Curtis et al., 2021; Gierc et al., 2016; Limbers et al., 2020).

Self-efficacy is an effective indicator of exercise levels in working mothers (Gierc et al., 2016). Self-efficacy includes confidence to perform the behavior and work toward a goal (Gierc et al., 2016). Research has suggested that factors such as self-efficacy could play a role in adherence to exercise programs for working mothers and even busy individuals, despite having many barriers to exercise or high demands in their life (Lloyd et al., 2016; Mailey et al., 2016). Concurrent self-regulatory efficacy (CSRE) has been noted to affect the degree of persistence to goals despite challenges and obstacles (Gierc et al., 2016; Jung et al., 2013). CSRE is the confidence to manage many roles concurrently and is commonly associated with populations such as working mothers who have many roles and responsibilities (Gierc et al., 2016; Jung et al., 2013).

In a study on self-efficacy, working mothers, and exercise adherence, Jung et al. (2013) found that working mothers with a greater CSRE will persist more toward their goal than individuals with lower CSRE, even with numerous barriers to that goal. Working mothers who exercise are more active in their community and are associated with improved productivity at work (Mailey et al., 2016; Limbers et al., 2020). Studies on working mothers indicate that more information is needed on those mothers who exercise and how their self-efficacy is developed and managed to sustain exercise despite many demands and barriers to exercise (Gierc et al., 2020; Jung & Brawley, 2013; Mailey & McAuley, 2014).

Like self-efficacy, PBC, a construct of the theory of planned behavior (TPB), refers to an individual's perceptions of their ability to perform a behavior (Ajzen, 1991). PBC has also been an essential factor in predicting intention for exercise for different populations (Hagger, et al, 2022; Lee et al., 2021; Rhodes et al., 2021). Examples of such populations are pregnant women, women with conditions such as heart disease and sexual function disorders, new parents, and parents of young children, but this construct has yet to be studied with working mothers (Hagger, et al., 2022; Lee et al., 2020; Rhodes et al., 2021; Zhu et al., 2020). Using PBC and self-efficacy in working mothers may provide an innovative and comprehensive approach to this population whose health behaviors have been negatively affected by the pandemic (Faulkner et al., 2020; Gierc et al., 2016; Limbers, 2020).

In March 2020, COVID-19 was declared a pandemic, and many nonessential workers were required to work from home while schools and daycares closed (Limbers et

al., 2020). The pandemic increased stress and anxiety due to uncertainty and disruption of daily lives (Curtis et al., 2020). These changes increased the demands on parents, especially working mothers (Faulkner et al., 2020; Limbers et al., 2020). Even though both working mothers and working fathers have been affected by the pandemic via isolation regulations, working mothers have been associated with taking on more of the responsibilities at home and may have taken on the role of educator, mother, and employee during the pandemic (Colley et al., 2020; Custinato et al., 2020; Faulkner et al., 2020). Stressed parents may not be as responsive and caring for their children during a difficult time such as a pandemic, and experts indicate that more support is needed for parents to manage stress (Kolter et al., 2021).

The research on health during a pandemic suggests that physical activity is an effective way to organize and reduce stress and improve psychological stress. However, parents, particularly mothers, have decreased their exercise, which may impact their health in the future (Faulkner et al., 2020). Research during the pandemic indicated that working mothers are a population significantly affected, with many businesses, daycares, and fitness facilities closing or limiting services (Clark et al., 2021; Limbers et al., 2020; Faulkner et al., 2020). Understanding the factors that are essential and influential to working mothers sustaining exercise during a pandemic may be helpful for health professionals to recommend strategies and develop effective interventions.

Gap in Literature

The gap identified from the literature is that research on working mothers who exercise during the pandemic is limited. In addition, research is limited on identifying

sources of self-efficacy and PBC to exercise for working mothers with a qualitative research method (Clark et al., 2021; Limbers et al., 2020; Reichelt et al., 2021). Limbers et al. (2020) indicated that more research on working mothers and their experiences with exercise might be helpful to improve their exercise levels and to identify what is effective in sustaining their practice while managing their multiple roles and responsibilities. Exploring the concepts of PBC, self-efficacy, and perceived barriers toward exercise for working mothers may provide information on improving internal motivation, despite obstacles to exercise and creating a healthy behavior of regular exercise (Jung & Brawley, 2011, 2013). Health educators who understand the PBC, self-efficacy, and barriers for working mothers to sustain exercise can develop effective programs to help this population sustain exercise and improve health (Gierc et al., 2016; Mailey et al., 2016).

Problem Statement

The research problem is that researchers have not yet considered working mothers' lived exercise experiences during a pandemic (Gierc et al., 2016; Mailey et al., 2016). Research on working mothers has indicated barriers to exercise for this population, but more information is needed on what is needed for working mothers to sustain exercise (Limbers et al., 2020; Mailey et al., 2019). PBC, self-efficacy, and perceived barriers have affected parents and working mothers (Gierc et al., 2016; Hagger et al., 2022; Lin et al., 2020). With these constructs showing the influence on exercise, it may be helpful to use them together to explore the lived experiences of working mothers who exercise.

The pandemic has brought significant changes to individual and family life. Even though all working parents have been affected by the pandemic and isolation regulations, working mothers have been associated with taking on more responsibilities at home with childcare responsibilities than most working fathers (Custinato et al., 2020; Faulkner et al., 2020). Working mothers have been associated with increased stress from working from home, managing kids' activities, and dealing with canceled schools (Cusinato et al., 2020; Faulkner et al., 2021). Research conducted on the impact of the COVID-19 pandemic on maternal health concluded that many of the social and economic effects of the pandemic affected more women than men, with more job loss for working mothers (Kotlar et al., 2021). In addition, many working mothers lost jobs during the pandemic, which created stress, anxiety, and depressive symptoms, affecting their families and communities (Brand et al., 2020; Curtis et al., 2021). The U.S. Bureau of Labor Statistics reported that in April 2020, 55% of women lost their job, which was more rapid than men (Kotlar et al., 2021).

These economic effects increased working mothers' stress and anxiety during the pandemic (Kotlar et al., 2021). Working mothers have also been associated with low levels of exercise due to their many roles and responsibilities (Mailey et al., 2016). The research on health during a pandemic indicated that physical activity effectively manages and reduces stress and improves adult psychological stress (Faulkner et al., 2021). Kotlar et al. (2021) suggested that future research should include working mothers and their experiences during a pandemic to improve their health. Health educators may use the

information from this study to help working mothers who concurrently manage many roles improve their exercise participation.

Purpose of the Study

This qualitative study aimed to explore working mothers' lived experiences with exercise during the pandemic. The results of this study may provide helpful information for health educators to understand working mothers' PBC, their self-efficacy, and perceived barriers toward exercise. Health professionals can also use the results of this study to develop strategies and programs for improving working mothers' exercise participation levels and overall health.

Research Questions

The research question and research subquestions addressed in this study were:

RQ: How do working mothers describe their lived experiences toward exercise during a pandemic?

RSQ1: What are the sources of self-efficacy that support working mothers to sustain exercise during a pandemic?

RSQ2: What are the perceived barriers of working mothers who sustain exercise during a pandemic?

RSQ3: What is the PBC of working mothers who sustain exercise during a pandemic?

Conceptual Framework

The conceptual framework of this study included the construct of PBC within the TPB model, self-efficacy theory, and perceived barriers, a construct within the health

belief model (HBM). Perceived barriers are a construct of HBM (Ajzen, 1991; Glanz et al., 2015). HBM and TPB have been used to study health behaviors (Glanz et al., 2015; Hagg; Parkinson et al., 2017). HBM is an effective model for exploring behavior change factors and suggests that individuals adopt healthy behaviors if they perceive the benefits of performing the behavior to outweigh perceived barriers (Glanz et al., 2015). TPB is an essential decision-making model and has been applied to many studies involving social and health behaviors, including exercise (Ajzen, 1991; Hamilton et al., 2016; Lee et al., 2021). Recent research has used TPB when assessing beliefs related to health behavior (Hamilton et al., 2016). This model involves intention as a proximal predictor of conduct and attitude; subjective norms predict intention, and PBC is further hypothesized to predict behavior intention (Azen, 1991). PBC may help indicate the preference for behavior and self-efficacy associated with influencing behavior and may provide a practical, comprehensive conceptual framework for exploring working mothers' exercise participation.

Self-efficacy is an individual's belief in succeeding in a situation, behavior, or goal (Bandura, 2005). Self-efficacy affects exercise participation, particularly among women and mothers (Gierc et al., 2016; Mailey et al., 2016). Research has indicated that higher levels of self-efficacy are associated with higher levels of exercise, particularly among women, despite barriers such as multiple roles and responsibilities (Gierc et al., 2106; Mailey et al., 2016). Research has also suggested that self-efficacy and barriers affect exercise adherence and maintenance for women and mothers (Gierc et al., 2016; Jung & Brawley, 2011, 2013; Mailey et al., 2016; Mailey & Hsu, 2016). Individuals

develop their self-efficacy beliefs by interpreting primary sources (Bandura, 1977). These influences include mastery experiences, vicarious experiences, social persuasion, and emotional states (Bandura, 2005). In addition, research has indicated that higher levels of self-efficacy are associated with higher levels of exercise, particularly in women, despite the barriers to exercise (Hosseini et al., 2107; Mailey et al., 2016; Mailey & Hsu, 2019).

I used the main research question to explore the lived experiences of working mothers and their exercise during a pandemic and then used the conceptual framework to address the research subquestions that may address factors of PBC, self-efficacy theory, and perceived barriers. This study involved in-depth and follow-up interviews that allowed me to explore PBC, self-efficacy, and perceived barriers that directly affect exercise participation and sustainment among working mothers (Mailey et al., 2016). The data analysis revealed common patterns or themes on how working mothers sustain exercise despite their various obstacles and challenges (Curtis et al., 2021; Limbers et al., 2020). More information is covered in Chapter 2 with the literature review on these constructs and can help predict exercise, particularly among working mothers.

Nature of the Study

This study was a qualitative design with a narrative approach, and I explored PBC, sources of self-efficacy, and the perceived barriers to exercise for working mothers. The key concepts are working mothers, self-efficacy to exercise, PBC, and perceived barriers. The participant pool included working mothers who work full-time, at least 30 hours a week, live with their children, and exercise regularly. ACSM (2022) defines exercising regularly as three days a week for at least 30 minutes a day for the past three

months. A qualitative narrative methodology was used for this study to provide an opportunity for working mothers to share their lived experiences of exercise during a pandemic. A sample of six working mothers was proposed, but the participant recruitment and selection process resulted in 11 participants who met the criteria and were willing to participate.

A qualitative approach helped develop the working mothers' exercise stories during an event like a pandemic. A narrative design with an experience-centered system assumes that the narratives are human, sequential, and meaningful; represent experience; and portray a transformation or change (Butina, 2013). This narrative approach uses personal records and includes all meaningful stories of personal experiences (Butina, 2013). A narrative approach aligns with the research questions, population, and interviewing research method to explore the lived experiences of working mothers and their exercise during a pandemic. Data were collected using an in-depth narrative interview and a follow-up interview within two weeks to gather more information or clarification on participant responses and experiences. Although brief, a few instances of interviewing provided a quick and accessible way to collect data on what may be affecting working mothers' exercise experiences and what may affect them throughout their daily living (Patton, 2002). Data were analyzed using hand coding. A narrative analysis process was used for this study to put the codes into general concepts and categories, then explore the categories to develop themes common across the collected stories or interview responses from the participants (see Kim, 2015). This type of narrative analysis, called the *paradigmatic analysis*, describes categories of participant

themes and relationships among categories (Kim, 2015). More information on data analysis will be described in Chapter 3.

Definition of Terms

Exercise: "Type of physical activity that involves planned, structured, and repetitive bodily movement has done to maintain or improve one or more components of physical fitness" (Center for Disease Control and Prevention, 2021a).

Pandemic: "An epidemic that has spread over several countries or continents, usually affecting many people" (Center for Disease Control and Prevention, 2021b).

Perceived behavioral control: An individual's perception of the ease or difficulty of behavior (Ajzen, 1991; Lee et al., 2021).

Regular exercise: Actively exercising regularly at least 3 times a week for at least the past 3 months consecutively (ACSM, 2020).

Self-efficacy: The belief or confidence in an individual's ability to organize and work toward a goal (Bandura, 1997).

Working mothers: Women who work full-time, at least 30 hours per work, have at least one child, and are of child-bearing age (Cambridge University Press, 2021; Society of Human Resource Management, 2022; WHO, 2022).

Assumptions

Qualitative research has many assumptions. Within this research, the participants develop the reality, which is subjective (Creswell, 2015). Reality is defined as the state of experiences and knowledge as being true according to the participants of the study (Creswell, 2015). This study involved working mothers who regularly participate in

exercise. An assumption was that the participants had developed the self-efficacy and PBC to exercise and could manage the barriers to exercise to sustain activity. Another assumption was that the working mothers would be willing to participate and complete all the data-gathering tasks. This qualitative research involved interviewing and interacting with the participants while gathering data. As a researcher, I interacted with the participants to ask questions, an assumption for qualitative research (Creswell, 2015).

Qualitative research is also value-laden and biased, based on the data received as personal accounts (Creswell, 2015). The interview process involved some assumptions. The method is inductive and can differ based on the observation or researcher (Creswell, 2015). Another assumption was that the participants understood the interview questions and provided honest feedback and honest accounts of lived experiences related to exercise (see Merriam & Tisdell, 2015). I assumed that the participants did not change or modify their responses to look good or be accepted. The results identified biases and influences on the participants (Merriam & Tisdell, 2015). Finally, qualitative research is context-bound, and I assumed a relationship between working mothers and exercise (Creswell, 2015).

These assumptions are necessary for this study because the study involved exploring the lived experiences of working mothers. Based on the research on self-efficacy, PBC, and exercise, I assumed participants who are working mothers who exercise have developed and established self-efficacy and PBC to exercise (Gierc et al., 2016; Hagger et al., 2022; Lin et al., 2020; Mailey & McAuley, 2014). I also assumed the

participants understood the interview questions and were not biased or influenced to provide their perspectives on this study.

Scope and Delimitations

In this study, I explored working mothers' lived experiences of exercise during the pandemic. The participants were working mothers who regularly participated in exercise. This study did not include working women who are not mothers. Reflections on working women versus working mothers indicate that working mothers are a population that needs support more so than working women (Hosseini et al., 2017). The additional roles of working mothers make it more challenging to focus on their health than working women who do not have dependents to take care of (Currie, 2020; Hosseini et al., 2017).

Research on working mothers who exercise is limited (Curtis et al., 2021; Faulkner et al., 2020). This population may provide helpful information on how exercise can be sustained despite many obstacles and barriers (Gierc et al., 2016). Researchers have indicated that barriers such as time, social support, and motivation are key factors limiting working mothers' exercise participation and sustainment (Hosseini et al., 2017; Limbers et al., 2020). Within my literature review, I found a few studies exploring strategies to help this population sustain exercise with their multiple roles, but most were focused on the barriers for this population (Limbers et al., 2020; Mailey et al., 2016). Studying those working mothers who exercise using a narrative approach may provide a detailed account of their lived experiences and how they exercise despite having many barriers (Limbers et al., 2020).

Research on exercise and women has been associated with using the transtheoretical model of behavior change (Malverdy & Kazemi, 2016). This model has been helpful when participants are not meeting exercise guidelines. However, this model was not appropriate for this study as it would be focused more on working mothers who exercise regularly (Malverdy & Krazemi, 2016; Rosenkranz et al., 2015). This study's findings may provide helpful information for health professionals to develop strategies and interventions for working mothers to sustain exercise. The narrative design and the interviews helped me to explore the lived experiences of working mothers who regularly exercise. These women gave their perspectives on what affects their exercise regimen and how they manage to include exercise in their busy schedules.

Limitations

The findings of this study may not adequately represent the lived experiences of all working mothers because the research involved a small sample size. It is difficult to generalize these findings to all working mothers; what is universal for this group cannot be assumed for all working mothers. However, I kept a journal of my actions, experiences, and thoughts during this process to let others make generalizations and applications.

Limitations to qualitative research include the subjectivity of the results and the ability to generalize the results to the population (Creswell, 2018). The results from the interviews were subjective, which may be only the opinions of those in this group. One limitation of this study was the access to technology for participants, which affected the recruitment of participants for interviews. Participants were recruited through social

media, and interviews were conducted online over the video conferencing platform, Zoom. I was successful in recruiting participants with social media, and I used snowball sampling to recruit participants. In addition, another limitation was not asking for demographic information, which may have provided specific information on a population or group on how to sustain exercise during a pandemic.

Nevertheless, this study showed how working mothers' exercise participation might affect them. My journal as a researcher reflected my experiences, designs, and thoughts. My journal reflections may help future researchers understand this population, apply it to future research, and use it in future research (Creswell, 2015).

Significance

Exercise interventions were modified to be easily accessible and cost-effective due to the pandemic (Custino et al., 2020). A study on PBC, self-efficacy and barriers to exercise may be helpful and comprehensive in developing effective interventions for working mothers. The pandemic created more obstacles and barriers to exercise, and working mothers had more responsibilities that affected their health behaviors (Curtis et al., 2021). Research on working mothers has been limited, and potential mediators between obstacles and exercise behavior have been limited (Gierc et al., 2016; Hosseini et al., 2017; Limbers et al., 2020). The psychological factors of self-efficacy, social interactions, and perceived barriers to exercise among working mothers may help explain such relationships (Limbers et al., 2020; Mailey et al., 2016). This study may provide more information on working mothers and how their PBC, self-efficacy, and perceived barriers toward exercise may be improved. Research on working mothers has not

included sources of self-efficacy toward exercise, PBC, how perceived barriers of those working mothers are managed, or how their self-efficacy toward exercise changed during the pandemic (Cooley et al., 2021; Cusinato et al., 2020; Kotlar et al., 2021). The findings of this study may have potential implications for positive social change by providing ways for working mothers, a population that continues to grow throughout the years, to manage many roles and responsibilities and exercise to provide a healthy environment to maintain a healthy lifestyle.

Summary

In this chapter, I focused on introducing the study and the importance of studying working mothers, their PBC, self-efficacy, and barriers to exercise, and how they sustain it during an event like a pandemic. This chapter included the background, problem statement, purpose statement, research questions, definitions, assumption, scope and delimitations, limitations, and significance. Working mothers have been associated with low levels of exercise, and the COVID-19 pandemic created new challenges for this population as schools, businesses, and social interactions were affected. To develop effective interventions for this population, understanding the lived experiences of working mothers is essential (Faulkner et al., 2020). Research on working mothers has indicated that this population struggles to balance work and life responsibilities during an experience like the pandemic but does not meet exercise recommendations (Curtis et al., 2021; Kotlar et al., 2021). Many researchers have focused on the barriers to exercise but not on what has worked for mothers who exercise (Limbers et al., 2020; Mailey et al.,

2016). In the next chapter, I review the literature on PBC, self-efficacy, and perceived barriers of working mothers and how it has influenced their exercise participation.

Chapter 2: Literature Review

Introduction

In this qualitative study, I explored the lived experiences of working mothers with exercise during the pandemic. The research problem was that researchers have not yet considered working mothers' lived experiences during a pandemic (Gierc et al., 2016; Mailey et al., 2016). Those working mothers who report exercising regularly indicate they have barriers to exercise but have been associated with higher levels of exercise (Gierc et al., 2016; Limbers et al., 2020). In addition, the most recent research on working mothers reported that higher self-efficacy and PBC are more elevated in those who exercise (Gierc et al., 2016). The study is limited to how these concepts of PBC, self-efficacy, and perceived barriers are developed and managed by working mothers who exercise (Hagger et al., 2022; Limbers et al., 2020). Working mothers who exercise report fewer health conditions and good quality of life, but more information is needed on how these women sustain their exercise (Limbers et al., 2020; Xiao et al., 2019).

This chapter begins with the literature search strategy, then the conceptual framework, which includes TPB, focusing on the construct of PBC, HBM, explicitly focusing on the construct of perceived barriers, and self-efficacy theory related to working mothers' exercise levels. The literature review contains vital variables and concepts, including working mothers, the COVID-19 pandemic and working mothers' self-efficacy to exercise, and perceived barriers to exercise. The final section of this chapter encompasses a summary and conclusions.

Literature Search Strategy

The literature search involved two research approaches: the population of working mothers and their exercise and how the COVID-19 pandemic affected their practice. Searches were conducted using the internet, and database sources used were Academic Search Premier, Medline, ProQuest, PsycArticles, PsycInfo, SocIndex, Dissertation & Theses at Walden University, ProQuest Dissertations and Theses Global, and Scholar Works. The sources include peer-reviewed articles published between 2016 and 2022. In addition, health sciences textbooks from 1977, 2004, 2002, and 2005 were used to understand the theories on exercise and health behavior and the narrative approach. National organization websites included the World Health Organization and the Centers for Disease Control and Prevention, which provided statistics and current information on national trends for exercise.

The keywords used in the searches were *physical activity, exercise, fitness, exercise maintenance, perceived behavior control, theory of planned behavior, self-efficacy, motivation to exercise, barriers, narrative inquiry, mother, working mother(s), working parent, parents, self-efficacy to exercise, pandemic, COVID-19 pandemic*, and *health belief model*. The databases were used by applying the search function. Some key phrases were changed by adding *or* between the keywords of *exercise* and *physical activity* and *fitness* to include more resources. Health professionals and researchers have varying definitions of physical activity and exercise, so all three words were used to search to create an extensive literature review (Bandura, 2005; Faulkner et al., 2020;

Mailey et al., 2016). The term *self-efficacy* was also used without the hyphen to include more literature.

The literature contains several studies on mothers' self-efficacy to exercise, but most have been quantitative studies (Blouin & Gyurcsik, 2018; Gierc et al., 2016; Jung & Brawley, 2013; Mailey et al., 2016; Limbers et al., 2020). Older research (Jung & Brawley, 2013, 2011; Mailey & McAuley, 2014) provides a background on what has been studied about working mothers and exercise. There is a need to learn more about how working mothers sustain exercise during unusual events such as a pandemic. My search revealed a lack of qualitative studies exploring working mothers' perspectives about self-efficacy sources and barriers and PBC to exercise. Studies on TPB have included populations, such as parents, new parents, pregnant women, and women, but have not focused on working mothers (Cowie et al., 2018; Hagger et al., 2022; Lee et al., 2021; Rhodes et al., 2021). With a narrative approach, this study can provide unique information using personal experiences and thoughts as data on working mothers' experiences during a pandemic.

Conceptual Framework

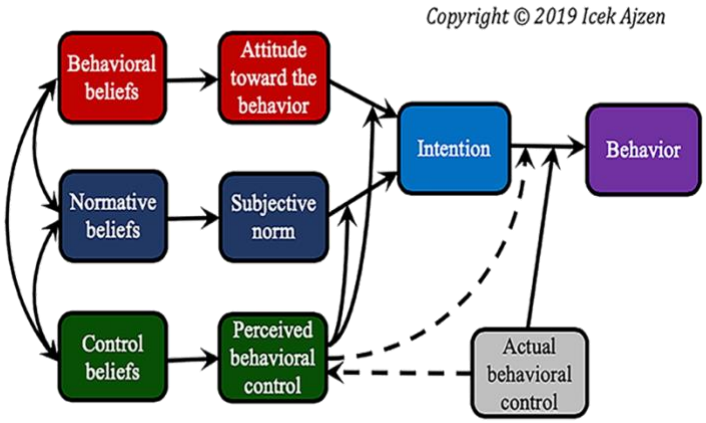
Theory of Planned Behavior: Perceived Behavior Control

TPB began in 1980 by Icek Ajzen as a theory to explain behaviors that people could control and was used initially to predict an individual's intention to engage in the behavior within a specific time and environment (Ajzen, 1991). Behavioral intent is a critical component of this theory. It is affected by attitude regarding the likelihood of behavior having an expected outcome and subjective assessment of risks and benefits of

that outcome (Ajzen, 1991). This theory indicated that a person's PBC could affect behavioral intentions or behaviors (Ajzen, 1991; Haggers et al., 2022). The most recent model of TPB is shown in Figure 1.

Figure 1

The Theory of Planned Behavior



Note. Adapted from *Theory of Planned Behavior Diagram*, by I. Ajzen, 2019, https://people.umass.edu/aizen/tpb.diag.html#null-link, in the public domain.

The Beliefs column on the far-left column in Figure 1 leads to the constructs of attitude toward behavior, subjective norm, and PBC (Ajzen, 2019). The diagram shows that the constructs then lead to the intention of conduct, with PBC affecting the other constructs of attitude and subjective norm to achieve the purpose of behavior (Ajzen, 2019). PBC is seen in this diagram to influence actual behavioral control and may lead to behavior prediction (Ajzen, 2019). PBC is an individual's perception of the difficulty or ease of performing a behavior (Ajzen, 2019).

In this study, I focused on PBC, including individuals' perceptions of their ability to perform a behavior (Ajzen, 2019). Control beliefs have been associated with

determined PBC (Ajzen, 2019). Control beliefs include the perceived ideas about the factors that may facilitate or impede behavior performance, which is closely associated with perceived barriers (Ajzen, 2019). Research has indicated that lower PBC and self-efficacy lead to lower exercise levels (Ajzen, 2019; Rhodes et al., 2021).

Perceived Behavior Control and Self-Efficacy

Some research on *PBC* and *self-efficacy* have used these terms interchangeably (Droms Hatch & Craciun, 2014), while other studies have defined them as separate constructs (Yap & Lee, 2013). Both are similar and refer to individuals' beliefs that they can perform a given behavior (Tavousi, 2009). Terry and O'Leary (1995) found that self-efficacy helps predict exercise behaviors, not intentions, and PBC predicts intentions but not behaviors. Recent research suggests self-efficacy predicts behavior and intent better than PBC (Parkinson et al., 2017). Self-efficacy has been used as a modifiable variable to change behaviors and create action (Bandura, 2005). A study (N = 724) on a program for weight management behaviors examined the difference between self-efficacy and PBC and found that both constructs are distinctly different (Parkinson et al., 2017). The study's results indicated that self-efficacy was a factor in influencing internal motivation for exercise, while PBC affected more external motivation factors, such as barriers to exercise (Parkinson et al., 2017). Thus, using both constructs may provide a more extensive explanation of health behavior.

Health Belief Model: Perceived Barriers

HBM was developed in the 1950s by social psychologists in the U.S. Public Health Service who wanted to explore why people were not participating in programs to

prevent and detect disease (Glanz et al., 2015). Other health professionals later applied this model to learn about individual responses to health conditions and behavior (Glanz et al., 2015). HBM is used for many health behaviors and populations (Glanz et al., 2015). This model comes from psychological and behavioral theory, with two components being the foundation. These two components are the desire to avoid illness and the belief that a specific health action will prevent or cure disease (LaMorte, 2019).

Perceived barriers refer to an individual's feelings about the obstacles to a recommended health action or behavior (Saligheh et al., 2016). One's feelings toward barriers can create a cost and benefit analysis as the person decides on the actions' effectiveness versus the perceptions of the side effects of acting (Saligheh et al., 2016). For example, parents face several barriers to exercise associated with low activity levels (Saligheh et al., 2016). This population has reported that lack of exercise is primarily due to perceived barriers such as lack of time, motivation, and accessibility to exercise (Ha et al., 2020). Ha et al. (2019) and Saligheh et al. (2016) indicated that two constructs of self-efficacy and barriers should be assessed to develop an exercise program for mothers. Hoare et al. (2017) reported that knowing the obstacles to exercise might not be enough. Exploring underlying motivations and barriers of why adults engage in exercise or not is of critical importance to public health. Using a qualitative narrative approach may provide new information on working mothers' experiences with barriers to exercise.

Self-Efficacy

Individuals' actions depend on their perceptions of the benefits and barriers and their confidence in that behavior (LaMorte, 2019). Self-efficacy is an individual's belief

in succeeding in a situation, behavior, or goal (Bandura, 2005). Individuals develop their self-efficacy beliefs by interpreting information from main influences (Bandura, 1977). The sources influencing self-efficacy include mastery experiences, vicarious experiences, social persuasion, and emotional states (Bandura, 2005).

Mastery Experiences

An individual's mastery experience or previous performance is the most significant self-efficacy influence (Bandura, 2005). When taking on a new challenge, an individual knows from prior experience regarding that behavior that they can accomplish the task and succeed (Bandura, 2005). Mastery experiences are essential in developing self-efficacy, particularly in exercise (Kashian & Liu, 2020). Mastery experiences are also performance accomplishments (Kashian & Liu, 2020). Kashian and Liu (2020) studied mastery experiences toward exercise and social media. They reported that individuals who post mastery experiences of activity on social media positively affected their self-efficacy toward training and well-being (Kashian & Liu, 2020). Studies on posting these mastery experiences have improved self-efficacy, provided support, and developed a community with individuals interested in similar experiences (Burke et al., 2018; Kashian & Liu, 2020; Lewis et al., 2016). The study indicated that posting on social media about mastery experiences is more critical for self-efficacy than posting about social experiences of exercise (Kashian & Liu, 2020).

Vicarious Experiences

Social role models or vicarious experiences are the second most important source of self-efficacy (Bandura, 1977). When individuals see people like them succeeding, it

raises the belief that they can also master the activity (Bandura, 1977). Social role modeling can include siblings, teachers, parents, family, friends, coaches, and employers (Bandura, 2005). Vicarious experiences have been associated with social comparison theory, which compares one to another for self-improvement and self-evaluation (Rowland et al., 2020). Social comparison theory is influenced by perceived similarity; thus, if a comparison person is not similar in age, ability, or gender, then a self-evaluation and subsequent behavior change are not likely for the individual (Rowland et al., 2020). For example, a study that involved health professionals modeling exercise to women in the workplace helped improve physical activity levels for participants as they saw their peers, like their age and gender, succeed in health behavior (Rowland et al., 2018). Another study on self-efficacy and exercise indicated that individuals feel more confident when they perceive others are successful in behavior or task (Kim. 2021). Kim (2021) used perceptions of others' physical activity to see if it influences others' physical activity intentions and actions and concluded that these descriptive norm messages influence others' physical activity experiences.

Verbal and Social Persuasion

Another influence on self-efficacy is persuasion which is receiving positive verbal feedback while completing a task so that the individual believes they have the skills and abilities to succeed (Bandura, 1977). Verbal persuasion works better if begun at an early age and is more likely to encourage self-efficacy throughout one's life (Bandura, 1977). However, verbal persuasion has not been as effective as mastery experiences in influencing self-efficacy as it does not provide people with authentic observation

(Buckworth, 2017). But encouragement and feedback from verbal persuasion can be practical if given by a professional with perceived credibility, prestige, trustworthiness, and expertise (Buckworth, 2017). For example, a health professional perceived as well qualified by the patient through experience and certifications will be more effective in improving self-efficacy than someone inexperienced or unprepared (Buckworth, 2017).

Social persuasion on social media posts has been studied on health behavior with positive results as a motivator to exercise (Johnston & Davis, 2019). Johnston & Davis (2019) suggest that an individual beginning to exercise may be more motivated by someone who has gone through the same process with similar experiences with exercise. For example, a working mother trying to exercise may be more motivated by a mother who has overcome the same struggles and barriers to exercise than younger, even elite athletes or fitter individuals who have never been a parent (Johnston & Davis, 2019).

Emotional or Physiological State

The emotional or physiological state refers to the well-being of a person (Bandura, 1977). For example, it is easier to complete other tasks if an individual is not suffering from a condition or disease such as depression or anxiety (Bandura, 1977). In addition, one's emotions and physical state and how they are perceived and interpreted are important (Bandura, 1977). For example, individuals may improve their sense of self-efficacy by learning to manage anxiety and mood when experiencing challenging situations (Bandura, 1977). The physiological states include emotional arousal, also called physical arousal, which can influence perceptions of performing a behavior or action (Fortier et al., 2021). For example, a fitness professional can help a client improve

stress management by finding time to walk or exercise to help focus on problem-solving and creative thinking, thus improving physiological or emotional states (Buckworth, 2017). Kashian and Liu (2020) examined emotional experiences and well-being among individuals who posted exercise activities on social media, focusing on mastery experiences, revealing that those who post-exercise activities on social media improve self-efficacy, which is positively related to physical and mental health well-being. Pkyk et al. (2017) found similar results with a physical activity intervention that allowed participants to share fitness photos on social media. Participants who received feedback reported greater life satisfaction at the end of the intervention (Pkyk et al., 2017). Research on self-efficacy and mental well-being, in general, indicates that these concepts are positively related (Pyky et al., 2017). Each of these influences of self-efficacy — mastery experiences, vicarious experiences, social and verbal persuasion, and emotional or physiological state—has been shown to influence physical activity levels (Fortier et al., 2021; Kashian & Liu, 2020; Kim et al., 2021; Pkyk et al., 2017; Johnston & Davis, 2019; Rowland et al., 2018; Rowland et al., 2020). Even though the degree of influence on physical activity may differ, health professionals should consider these self-efficacy influences when developing exercise interventions, particularly for working mothers (Mailey & Hsu, 2019; Limbers et al., 2020).

Studies on single theories to explain behavior may be limiting (Cowie et al., 2018). Using integrated models may provide meaningful predication of parental exercise participation and intention (Cowie et al., 2018). Previous research on influential factors using psychological models to understand behavioral decision-making has indicated that

using more than one theory may provide more meaningful data, especially for parents with younger children (Cowie et al., 2018). Several researchers have advocated for integrating TPB with complementary theories to help predict and explain health behaviors (Cowie et al., 2018; Lin et al., 2021; Pourmand et al., 2020; Parkinson et al., 2017; Maryam & Mehran, 2018). One model may not be sufficient to explain health behaviors, especially with a population such as parents (Cowie et al., 2018). Using these constructs of PBC, perceived barriers, and self-efficacy may provide a comprehensive approach to studying working mothers' exercise during a pandemic. This next section will describe how PBC, self-efficacy, and perceived barriers have been applied to working mothers and exercise.

TPB has been applied to interventions and research on parents and women (Cowie et al., 2018; Hamilton et al., 2016; Rhodes et al., 2021). A study done with new parents (N = 264) using TPB and multi-process action control (M-PAC) framework to predict moderate to vigorous-intensity physical activity (MVPA) found that PBC was an essential factor for physical activity interventions (Rhodes et al., 2021). PBC has been helpful for exercise and, when used with other constructs, can be beneficial in assessing health behaviors and intentions (Marymam & Mehran, 2018).

TPB has been studied with other theories and constructs, such as perceived barriers, to help explain health behaviors (Maryam& Mehran, 2018; Lin et al., 2020). A study (N = 1011) applied TPB and perceived barriers to explain behaviors of individuals at risk of anxiety or depression (Maryam & Mehran, 2018). This study found that TPB and perceived barriers were an effective model to explain these individuals' health

behaviors (Maryam & Mehran, 2018). Another study used TPB and perceived barriers to evaluate the behavioral intention of women with heart failure (Lin et al., 2020). The study developed an extended TPB model that included self-stigma and perceived barriers along with TPB (Lin et al., 2020). Perceived barriers were indicated as a significator obstacle for women to increase their intention to seek help (Lin et al., 2020). A study done on patients with hypertension using TPB (N = 00) showed that the perception of having control over their self-care behaviors is an essential determinant of self-care behaviors and that PBC influenced women's behavioral interventions (Pourmand et al., 2020). This study suggested that future interventions for women should include improving confidence and empowerment to engage in health behaviors. This population has been associated with less control over self-care behaviors (Pourmand et al., 2020).

HBM is an effective model for exploring behavior change factors (Shahnazi et al., 2019). The premise of HBM is that individuals will adopt healthy behaviors if they perceive benefits to hold more merit than perceived barriers to the behavior (Shahnazi et al., 2019). One of the constructs of HBM, self-efficacy, has been associated with influencing adults' physical activity levels (Bandura, 1977; Mailey et al., 2016). The basis of self-efficacy is that individuals are likelier to engage in activities in which they have high self-efficacy (Bandura, 2005; Mailey et al., 2016). Self-efficacy can influence an individual's learning ability, motivation, and performance (Bandura, 2005). Many studies on exercise and self-efficacy have concluded that high self-efficacy is associated with high-performance levels, educational achievement, and healthy lifestyle habits such as exercise (Gierc et al., 2016; Mailey et al., 2016). A cross-sectional study used a

questionnaire on 120 obese and overweight women under preconception care involved in applying HBM. It indicated that this model could be a factor that predicts health behaviors related to weight, such as nutrition and physical activity (Malverdy & Kazemi, 2016). Women who perceived a threat or perceived benefits to their health or their baby's health were more likely to engage in physical activity (Malverdy & Kazemi, 2016). Hosseini et al. (2017) conducted a study on middle-aged women (N = 224) in Isfahan, applying the HBM, indicating that perceived barriers, perceived benefits, and self-efficacy were predictors of physical activity (Hosseini et al., 2017). The researcher suggested that self-efficacy should be applied in short-and long-term planning with physical activity programs and interventions (Hosseini et al., 2017).

HBM has been noted to predict health behaviors such as exercise to prevent weight gain during pregnancy (Malverdy & Kazemi, 2016; Shahnazi et al., 2019; Hosseini et al., 2017). This model has been effective for behavior change factors, particularly for women (Malverdy & Kazemi, 2016; Shahnazi et al., 2019). Saligheh et al. (2016) found that focusing on environmental and personal barriers to exercise for postpartum women can help develop effective interventions to improve exercise levels. Mailey et al. (2016) found that enhancing self-efficacy by overcoming obstacles and enhancing perceptions of barriers may be helpful approaches for increasing exercise for parents. Perceived barriers have been shown to influence exercise adherence, especially among women and mothers (Ha et al., 2021; Saligheh et al., 2016). Studies on perceived barriers to exercise depend on population but, for the most part, include time, resources, and lack of motivation (Shahnazi et al., 2019; Mailey et al., 2016; Gierc et al., 2016).

Mothers have reported barriers to exercise adherence that other populations may not face (Shanazi et al., 2019; Mailey & Hsu, 2019; Hosseni et al., 2017). Gierc et al. (2016) reported that working mothers who manage their perceived barriers to exercise have greater CSRE, limit barrier frequency, and improve exercise participation.

Self-efficacy has influenced adults' physical activity levels (Bandura, 1977). Xiao et al. (2019) investigated the psychosocial predictors of physical activity and quality of life in working adults. They found that self-efficacy improved physical activity and influenced stress and quality of life. In this study, adults improved their self-efficacy by observing others who accomplished their exercise goals and received verbal persuasion from peers to perform the exercise (Xiao et al., 2019). In addition, research has shown that this self-efficacy can influence women, mothers, and working mothers' exercise participation (Gierc et al., 2016; Mailey et al., 2016; Mailey & Hsu, 2016). The basis of self-efficacy is that individuals are likelier to engage in activities with high self-efficacy (Bandura, 1977). Many studies conducted on exercise and self-efficacy with parents and mothers have concluded that high self-efficacy is associated with high levels of performance, educational achievement, and healthy lifestyle habits such as exercise (Gierc et al., 2016; Jung & Brawley, 2011; Mailey et al., 2016; Mailey & Hsu, 2019). Exploring working mothers who regularly exercise, their PBC, self-efficacy, and barriers to exercise may provide helpful information on what works well for a population managing different roles and responsibilities (Blouin & Gyurik, 2017; Gierc et al., 2016; Hosseini et al., 2017; Mailey et al., 2016).

Previous research on self-efficacy and exercise behavior has indicated that both have a positive relationship (Mailey & Hsu, 2019). Knowing that self-efficacy may predict exercise behavior, particularly among working mothers, provides a good foundation for this study to use self-efficacy as a framework. Previous research on barriers to exercise has indicated that this may also relate to working mothers' exercise participation (Gierc et al., 2016; Mailey & Hsu, 2019; Saligheh et al., 2016). Mailey and Hsu (2019) state that the perceived barriers, such as time and childcare may be a constant for working mothers, so looking at positive ways to manage these barriers may be helpful. Research on PBC and health behaviors indicates an essential factor in developing health interventions for populations such as parents and women (Hagger et al., 2022; Lee et al., 2021; Rhodes et al., 2021). According to my literature review, there are no studies combining all three concepts used on working mothers and their exercise experiences.

Using a narrative approach and providing the working mothers' personal stories on how they managed to sustain exercise during a pandemic provided more information on how these perceived barriers to exercise can be addressed for this population. The narrative approach involves participants reporting and narrating episodes from their life and reflecting on the influences of their actions and behaviors (Bates, 2004). This approach requires understanding and exploring everyday information from the perspectives of the individuals using their language (Bates, 2004). According to my literature review, this approach has not yet been applied to working mothers and their exercise participation. This study adds to the current literature by further investigating

working mothers' PBC, self-efficacy, and perceived barriers to exercise are managed for working mothers who engage in regular exercise during a pandemic.

According to this literature review, most studies conducted on working mothers and self-efficacy to exercise have been done using a quantitative approach (Gierc et al., 2016; Jung et al., 2011; Jung & Brawley et al., 2013; Mailey et al., 2016; Limbers et al., 2020). However, a few studies on exercise and mothers have applied a qualitative approach, which will be discussed in this next section.

Research on parents has indicated that although exercise benefits are known, barriers, feelings of guilt, and the many roles and responsibilities affect their exercise participation (Carson et al., 2021; Ingram et al., 2021; Saligheh et al., 2016). Saligheh et al. (2016) studied women's beliefs about exercise participation during the postpartum period by focusing on the socioecological framework. These women reported environmental and personal factors as barriers to exercise participation (Saligheh et al., 2016). The walls included lack of time, energy, social isolation, lack of access to an exercise program or professional., childcare, and money (Saligheh et al., 2016). Carson et al. (2020) found similar results with a study on parents and parenthood's effect on physical activity. This study reported that parents are associated with low physical activity and high sedentary behavior due to their barriers to exercise and childcare demands (Carson et al., 2020). A systematic review of qualitative research on parents' experiences of starting and maintaining exercise includes these same barriers and feelings of guilt and ethics of care (Ingram et al., 2021). Ingram et al. (2021) reviewed and critiqued ten qualitative research articles on parents' experiences concerning their uptake

and maintenance of aerobic endurance exercise. This systematic review reported that mothers struggle with guilt more than fathers and work to overcome the ethic of care, feeling responsible for their child's needs (Ingram et al., 2021). Another result was the feeling of 'good parent motivation,' which was reported as parents feeling better when they exercise as they demonstrate healthy behaviors, are calmer and patient and improve their well-being (Ingram et al., 2021).

The similarities among these qualitative studies indicate that more research is needed to help parents, particularly mothers, overcome exercise barriers to help improve their health (Ingram et al., 2021; Saligheh et al., 2016). A qualitative narrative approach will provide a unique way of gathering detailed information and personal stories on parents' barriers and their feelings and behaviors towards exercise (Carson et al., 2021; Ingram et al., 2021).

The constructs of interest for this study included PBC, working mothers, self-efficacy to exercise, barriers to exercise, and the COVID-19 pandemic. These constructs were chosen as working mothers are associated with low levels of exercise, and the pandemic has continued to affect their exercise negatively; PBC, self-efficacy, and barriers are critical factors in exercise adherence (Curtis et al., 2020; Gierc et al., 2016; Mailey & Hsu, 2016; Limbers et al., 2020).

Literature Review Related to Key Variables and Concepts

Working Mothers

Working mothers are employed women with dependent children (Gierc et al., 2016). This sub-population accounts for 71.5 % of mothers in the United States with at

least one child (Limbers et al., 2020). In addition, this population has been associated with managing several concurrent roles such as employee, mother, and wife (Gierc et al., 2016; Limbers et al., 2020; Mailey et al., 2016). The family culture within the United States and in most countries is that mothers carry most household and childcare responsibilities (Dlugnoksi et al., 2020; Lamar et al., 2019; Mailey & McAuley, 2014; Mailey et al., 2016). The transition to motherhood is associated with various stressors, including social isolation, role changes, sleep patterns, postpartum depression, and a decline in physical activity (Limbers et al., 2020).

Hays (1996) introduced the concept of intensive mothering. Within this concept, a good mother is defined as spending a reasonable amount of time, energy, and resources to raise their children (Hays, 1996). In addition, mothers are expected to create and be responsible for their children's physical, social, cognitive, and emotional well-being (Lamar et al., 2019). According to Hays's intensive mothering concept, a mother should be centered around the child(ren), look for experts for advice and guidance, and spend lots of time and work on raising their children (Hays, 1996). This concept has been considered a potential barrier and a tremendous challenge for a working mother's career development and mental health (Lamar et al., 2019). Early research on mothers has developed shifts within a mother's life (Maddox & Bustand, 2020). The first shift for working mothers is professional work (Maddox & Bustand, 2020). The second shift is childcare and home responsibilities. The third shift is associated with exercise and returning to pre-pregnancy physical form (Dworkin & Waches, 2009). Understanding how mothers manage the 'third shift' is crucial because it can help explain the obstacles

and struggles of current motherhood and how to balance home, work, and self-care behaviors such as exercise (Maddox & Bustad, 2020).

Exercise is an important lifestyle factor associated with lowering the risk of chronic diseases (Healthypeople.gov., 2020). However, only 24 % of adults reach the recommended levels (Dlugnoksi et al., 2020; Healthypeople.gov., 2020;). It has been documented that exercise can help decrease the risk of developing non-communicable diseases and improve cognitive function and mental well-being (WHO, 2020). Not only can regular exercise lower their risk of chronic disease, but it may help them cope with the challenges of motherhood (Dlugnoksi et al., 2020; Limbers et al., 2020;). Women need to be physically active for health benefits, such as lowering the risk of developing chronic diseases (Dlugonski et al., 2017; Limbers et al., 2020). However, working mothers also highly value family and work, leading to obstacles and challenges to participating in healthy behaviors such as exercise (Gahlawat et al., 2019; Gierc et al., 2016; Greaud, 2017;). Exercise and physical activity have declined during pregnancy and postnatal (Hosseini et al., 2017; Saligheh et al., 2016). Women who transition into motherhood are associated with low activity levels and are less likely to be active than fathers or women of the same age with no children (Mascarenhas et al., 2018). However, physical activity is still recommended during this time because of the health benefits for mothers and babies, particularly in a pandemic situation (Atkinson et al., 2020).

Parents who reported exercising had indicated that exercise made them better parents when they participated, despite feelings of guilt (Ingram et al., 2021; Limbers et al., 2020). Mothers who exercise reported an increased sense of well-being with a stress

reduction, having their own space, a break from home and childcare responsibilities, and improving their physical appearance (Currie, 2004 as cited in Maddox & Bustad, 2020; Limbers et al., 2020). Babić et al. (2015) found that exercise improved the quality of life for working and stay-at-home mothers. Currie (2020) reported that mothers who committed to exercising feel more in control and relaxed, less frustrated and worried, more optimistic, and indicated an improvement in coping ability. Currie (2020) also concluded with the 'time-out' theory that exercise served as a break from a mother's routine, allowing them to feel more relaxed and rejuvenated. Unfortunately, mothers know exercise benefits yet do not meet the exercise recommendations to participate. Many of them work on priorities with family and work and feel guilty about taking time away from family (Limbers et al., 2020).

Research on motherhood and activity suggests a complex process of active negotiation that mothers must undergo as they decide between exercise or household responsibilities (Blouin & Gyurcsik, 2018; Maddox & Bustad, 2020). Resources, support from home and work, and internal motivation are examples of working mothers needing to support their exercise participation (Dlugnoksi et al., 2020; Maddox & Bustad, 2020). Limbers et al. (2020) was the most recent study on the impact of physical activity and quality of life for working mothers during the pandemic. This quantitative study evaluated the associations between parenting stress, quality of life, and physical activity with a national sample of working mothers who were forced to work from home during the pandemic and found that moderate physical activity during the pandemic decreased parenting stress, improved quality of life (Limbers et al., 2020).

Additional research has been suggested on working mothers and exercise during the pandemic to help this population maintain activity levels and overall health (Maddox & Bustad, 2020). Future research suggestions include qualitative engagement with the lived experiences of mothers to help identify and evaluate how mothers manage both motherhood and exercise (Dlugnoksi et al., 2020; Maddox & Bustad, 2020). Another research suggestion is to examine working mothers' self-efficacy sources to help improve exercise levels (Gierc et al., 2016).

Pandemic Quarantine Effect on Working Mothers

On March 11, 2020, the WHO declared COVID-19 a pandemic, and billions of people everywhere were affected, as facilities, daycares, schools, businesses, and gyms closed (Barrett et al., 2020; Faulkner et al., 2020). Most governments introduced national quarantines that reduced social interactions and implemented a 'stay at home' policy (Lee et al., 2020; Natalucci et al., 2020). These procedures were to help limit viral virus transmission, and lockdowns are considered an extreme strategy to protect the health of the most vulnerable people and those with chronic diseases (Gildner et al., 2020; Natalucci et al., 2020). However, it disrupted the general population and their routines (Lee et al., 2020; Natalucci et al., 2020). The COVID-19 pandemic created isolation within communities, families, and individuals, affecting socialization and individual health (Foster et al., 2020; Custino et al., 2020). Working mothers have been associated with increased stress from home, kids' activities, and canceled schools during the COVID- 19 pandemic (Cusinato et al., 2020; Faulkner et al., 2021). This population also reported fewer work hours and job loss during the pandemic than fathers and emotional

strain affecting their children (Colley et al., 2020; Reichelt et al., 2020). In addition, more families have reported financially struggling during the pandemic with increased stress and anxiety, which has caused more emotional strain on their kids (Colley et al., 2020; Lee et al., 2020). Children's development, academics, and working mothers' work-life balance will affect the community, society, and public health (Lee et al., 2020; Mailey et al., 2016).

The pandemic significantly impacted the well-being of mothers who were managing childcare, work, and home responsibilities (Neinhuis & Lesser, 2020; Wulandari et al., 2020). In addition, research during the pandemic indicated that mothers are one of the most vulnerable groups that have been affected by the COVID-19 pandemic as they are reported as the primary caregivers for their children and are overrepresented in low-wage jobs (Clark et al., 2021; Jakeman et al., 2021). During the pandemic, working mothers were expected to continue to work while educating their children, helping with schoolwork, staying healthy, and continuing household responsibilities (Faulkner et al., 2020; Limbers et al., 2020). However, taking on family and work duties can also lead to increased parenting stress and conflict in balancing roles and responsibilities for working mothers (Curtis et al., 2021; Neinhuis & Lesser, 2020; Lee et al., 2020). In addition, the physical distancing and businesses closing with prolonged periods of staying at home may lead to sedentary behaviors and lower activity levels for working mothers (Barrett et al., 2020; Jakeman et al., 2021). Working mothers have reported the need for support and interaction during a pandemic or social isolation (Atkinson et al., 2022; Limbers et al., 2020). This population also indicated that their

subjective well-being and physiological health decreased during the pandemic (Lee et al., 2020; Wulandari et al., 2020). Work demands and childcare responsibilities during the pandemic were primarily placed on the mothers who reduced their leisure sport and exercise participation and faced more difficulties than working fathers in remaining active (Lee et al., 2020; Mutz et al., 2021). In addition, exercise reduction can lead to other health conditions for working mothers, such as increased anxiety and poor stress management (Gildner et al., 2020; Giurge et al., 2021; Mutz et al., 2021).

Studies on the effect of the pandemic reveal adverse effects on health, including exercise. Meyer et al. (2020) found that parents lowered their exercise and increased screen time during the pandemic. These behaviors lead to increased sedentary behavior and adverse mental health (Lee et al., 2020; Meyer et al., 2020). Parents and children studied during the pandemic reported increased depression and anxiety (Lee et al., 2020). During the pandemic, working mothers' well-being declined (Curtis et al., 2021; Clark et al., 2021).

Exercise is a possible remedy for working mothers' challenges and increased strains during a pandemic (Mutz et al., 2021; Symons et al., 2021). Exercise can provide working mothers with many benefits, particularly during a pandemic (Atkinson et al., 2020). Studies on exercise and pandemics indicate that adults, particularly women and mothers, who managed to exercise improved mental health, including anxiety symptoms, depressive systems, and well-being (Curtis et al., 2021; Faulkner et al., 2021; Jacob et al., 2020). Faulkner et al. (2021) assessed exercise, mental health, and well-being during initial COVID-19 restrictions. They reported that those who decreased their exercise

participation before and during the COVID-19 regulations reported poorer mental health and well-being than those who maintained or improved exercise participation (Faulkner et al., 2021). In addition, research on exercise and COVID-19 reported that encouraging exercise may help reduce the risk of chronic diseases such as COVID-19 due to the improvement of immune system function that exercise may provide to those with chronic conditions (Faulkner et al., 2021; Zoch et al., 2021).

Research during the pandemic has indicated a need to advocate and create more support for exercise opportunities for working mothers (Atkinson et al., 2020; Curtis et al., 2021; Faulkner et al.,2020; Giurge et al., 2021; Neinhuis & Lesser, 2020). In addition, health professionals need to consider physical activity during uncertain times, such as the COVID-19 pandemic, as it may potentially impact mental health and well-being and negatively affect public health (Curtis et al., 2021; Faulkner et al., 2021). During the pandemic, exercise should be encouraged to not only improve and maintain physical health but improve mental health and well-being (Faulkner et al., 2021; Symons et al., 2021). Many women moved to online workouts and programs during the lockdown, which provided ways to stay active at home (Clark et al., 2021; Colley et al., 2020). However, working mothers can find it difficult to exercise and make time as families' schedules create obstacles to even making time for exercise (Atkinson et al., 2020; Tuominen et al., 2020).

Exercise is a significant health behavior for working mothers as their health can be overlooked (Limbers et al., 2020; Tuominen et al., 2020). Those mothers who exercise have experienced many benefits (Limbers et al., 2020). Neinhuis & Lesser (2020)

assessed physical activity and well-being during the COVID-19 pandemic. It indicated that mothers who remained active could maintain their activity and positive well-being despite the barriers to exercise, such as additional childcare responsibilities. Quality of life improved, less psychological stress, and lower stress levels have been associated with increased exercise participation among working mothers (Limbers et al., 2020). But the pandemic has drastically changed lifestyles and priorities for many mothers as COVID has been affecting work-life, childcare, schools, and businesses (Curtis et al., 2021). Many working mothers had to change their lifestyles during the pandemic, which may have lasting effects on society and health behaviors (Kolter et al., 2021). Research on working mothers is essential, but it is still evolving and has many limitations (Limbers et al., 2020; Maddox & Bustad, 2020). This research has also included many quantitative studies with participants completing online questionnaires (Limbers et al., 2020). Qualitative research with more personal accounts from working mothers who exercise during the pandemic may help understand the barriers to exercise and how this population may overcome them (Faulkner et al., 2021).

Self-Efficacy to Exercise

Self-efficacy can influence one's decisions and activities, and the more self-efficacy towards a behavior, the more persistence and effort put into that behavior (Buckworth, 2017; Dlugnoksi et al., 2020). This construct of HBM can directly affect healthy habits such as exercise by impacting the outcome expectations and socio-structural factors such as facilitators or impediments (Bandura, 2004). The research on parents, self-efficacy, and exercise indicates that self-efficacy is a factor that can predict

exercise behavior (Dlugnoksi et al., 2020; Mailey & Hsu, 2019). Self-efficacy has been shown to help predict exercise initiation and maintenance, particularly for a population that faces many barriers to exercise, such as working mothers (Mailey et al., 2016; Mailey & Hsu, 2019; Jung & Brawley, 2011). Those working mothers with high self-efficacy believe that they control their behaviors (Dlugnoksi et al., 2020; Gierc et al., 2016; Mailey et al., 2016). With self-efficacy, working mothers can develop strategies to continue a task or behavior, such as exercise, when obstacles arise (Mailey et al., 2016). Working mothers who exercise have been associated with managing challenging barriers and prioritizing exercise, leading to improved self-efficacy (Dlugnoksi et al., 2020; Jung & Brawley, 2011).

A study was done on parental exercise participation within 12 months with mothers

(N = 226) and fathers (N = 70) reported that barriers to self-efficacy were directly related to exercise as well as indirectly through perceived obstacles and prioritization/planning (Mailey et al., 2016). Barriers to self-efficacy included time, enjoyment of exercise, relation to family time, access to facilities, and support/encouragement (Mailey et al., 2016). Blouin and Gyurcsik (2018) examined whether adults (N = 30) with conflicting or facilitating exercise and non-exercise goals differed in self-regulation in actors that include self-regulatory efficacy and outcome expectation and exercise). Concurrent self-regulatory efficacy involves an individual's confidence to manage multiple purposes simultaneously regarding exercise (Gierc et al., 2016; Mailey et al., 2016). This type of self-efficacy is closely related to working mothers as they manage multiple roles and

responsibilities (Gierc et al., 2016). This study indicated that concurrent self-regulatory efficacy is essential for adults such as working mothers with conflicting and facilitating goals (Blouin & Gyurcsik, 2018).

CSRE has been associated with working mothers as it is the confidence to manage multiple goals simultaneously, which relates to working mothers with various roles and responsibilities (Blouin & Gyurcsik, 2018; Gierc et al., 2016; Jung & Brawley, 2013). Gierc et al. (2016) reported that working mothers with lower CSRE were associated with less physical activity. Jung and Brawley (2011) also found that high CSRE was associated with higher amounts of exercise even when perceived barriers to exercise were numerous. Mailey et al. (2016) examined parents 'exercise participation and reported that self-efficacy to overcome obstacles to exercise and prioritizing and self-regulation might help increase exercise participation among parents.

Learning to plan and improve self-efficacy can be challenging for working mothers with multiple roles and responsibilities (Limbers et al., 2020; Mailey & Hsu, 2019). Individuals who doubt their capabilities and have low self-efficacy may give up on the attempts (Bandura, 2004). Self-efficacy is uncommon to decline as one takes on a new role or learns a new behavior, such as exercise (Mailey & Hsu, 2019). Mothers have unique demands and responsibilities with motherhood, and physical activity may be considered new behavior (Mailey & Hsu, 2019). This population may struggle with developing their self-efficacy as they have reported being overwhelmed with new demands, and prioritizing themselves with exercise may be challenging as a mother (Mailey & Hsu, 2019; Mailey & McAuley, 2014). In addition, working mothers may

have to overcome physical changes to their body after childbirth that has lasting effects, or periods of inactivity due to lack of time or resources may affect their development of self-efficacy to exercise participation (Mailey & Hsu, 2019).

Researchers need to consider the environment and how self-efficacy is developed for working mothers with varying and constant demands from their work and family (Gierc et al., 2016; Limbers et al., 2020; Curtis et al., 2021). Mailey and Hsu (2019) reported that mothers have benefited from an exercise intervention with the manageable progression of exercise recommendations to build mastery experiences and self-efficacy to exercise. Research on mothers has indicated that personalized exercise recommendations may be needed for this population as the environment and demands are constantly changing (Hoare et al., 2017; Limbers et al., 2020; Mailey & Hsu, 2019). Studies have concluded that self-efficacy can help improve exercise adherence for this population, but research has been limited to where self-efficacy is developed for those with high self-efficacy, particularly concerning exercise (Gierc et al., 2016; Limbers et al., 2020).

Perceived Barriers to Exercise

Bandura (1977) noted personal change might be easier if no barriers were overcome. Managing borders is a self-regulatory process that involves self-efficacy and has been associated as a factor in exercise adherence and maintenance (Gierc et al., 2016; Hoare et al., 2017). Parents have been related to increased barriers to exercise compared to the general population (Barrett et al., 2020). Research on parents and exercise participation has reported that perceived barriers included time, enjoyment of exercise,

family time, access to facilities, support, and encouragement (Hosseini et al., 2017; Mailey et al., 2016). Mothers have reported similar barriers to exercise but added lack of leisure time, lack of social support, no childcare, and the family obligations they have for themselves (Mascarenhas et al., 2018; Zoch et al., 2021). Neinhuis and Lesser (2020) explored adults' barriers to exercise and whether sex differences existed during the COVID-19 pandemic and found that women reported significantly more barriers to exercise than men. The perceived barriers to their exercise written by these women were the effects of the public health restrictions, such as closures of businesses and childcare facilities (Neinhuis & Lesser, 2020).

Studies on parents and barriers to exercise indicate that prioritizing exercise and self-efficacy leads to better management of perceived barriers (Blouin & Gyurcsik, 2018; Mailey et al., 2016). In addition, another study (N = 74) to examine concurrent self-regulatory efficacy and barriers to physical activity with working mothers indicated that those women who reported activity have greater self-efficacy and minor barrier limitation and frequency (Gierc et al., 2016). Hoare et al. (2017) also examined motivation and barriers to physical activity among inactive and active adults. They concluded that exploring perceptions and barriers is essential for encouraging physical activity participation, especially for adults like working mothers with concurrent and various demands. What research has reported is that there are barriers working mothers face, and these barriers may not decrease, so future directions in public health should consider developing interventions on strategies to manage them that can be useful for working mothers (Blouin & Gyurcsik, 2018; Limbers et al., 2020; Mailey & Hsu, 2019;).

When developing an exercise routine, many individuals judge their efficacy in sustaining exercise by their life obstacles, such as work, fatigue, weather, or other perceived barriers (Bandura, 2004; Carson et al., 2018; Hoare et al., 2017). These perceived barriers, prioritizing and planning, along with self-efficacy, can affect working mothers' exercise adherence and should be the focus of future research (Limbers et al., 2020). This study may provide more information on how working mothers who successfully sustain exercise can manage perceived barriers and prioritize training.

Perceived Behavior Control

PBC is the perception of the control one has over their behavior (Parkinson et al., 2017). PBC has been a strong predictor of the intention of behaviors (Lin et al., 2020; Parkinson et al., 2017). A study on firefighters' choice to be physical activity found that PBC significantly influenced their intention (Amodeo & Nickelson, 2019). Another survey of pregnant women found that PBC was a strong predictor of intent to participate in physical activity (Zhu et al., 2020). In addition, PBC and self-efficacy have been combined in studies to help predict, explain and understand behaviors involving physical activity (Parkinson et al., 2017; Wang & Zhang, 2018). Research involving TPB indicates that the extended theory of TPB is standard, which is when TPB is combined with other constructs, such as self-efficacy (Lee et al., 2021; Lin et al., 2020; Wang & Zang, 2018). A study done (N = 264) with new parents examining their moderate to vigorous physical activity within the constructs of TPB, including PBC and multi-process action control framework, suggested that PBC should be included in exercise intervention for this population (Rhodes et al., 2021).

Despite TPB being useful in predicting physical activity and intention, there are still inconsistencies in the research that remains to be addressed (Parkinson et al., 2017; Sniehotta et al., 2014; Oi Ying et al., 2019). TPB, particularly PBC, has been found to predict intention, but it has been limited to specific populations (Sniehotta et al., 2014; Oi Ying et al., 2019). This theory has been shown to help predict self-reported behavior but tested with young, fit, and affluent populations (Sniehotta et al., 2014). Therefore, TPB may be effective with specific populations but not all, particularly with people where behavior change theory is most needed with low socioeconomic status, older adults, and those populations with multiple roles such as working mothers (Rhodes et al., 2021; Sniehotta et al., 2014) This is why some researchers have suggested using TPB with several additional constructs such as self-efficacy to help improve the power of TBP (Oi Ying et al., 2019).

Many studies involve PBC and indicate that it is essential to predict behavior intention (Lin et al., 2020; Maryam & Mehran, 2018; Purmand et al., 2020). It has been studied on women with chronic diseases, populations that are transitioning, such as new parents (Hamilton et al., 2018), pregnant women (Zhu et al., 2020), and parents of young children (Rhodes et al., 2021). It may be adequate to study working mothers and their exercise participation and use PBC to help explain their exercise behaviors during a pandemic. Using PBC to explore the intention to exercise, self-efficacy, and perceived barriers may provide more information on how exercise is sustained for this population with multiple roles and responsibilities (Limbers, 2020; Curtis et al., 2020). This population has been significantly affected by the pandemic, and it may be helpful for

future interventions and health professionals to explore their PBC towards health behaviors, including exercise (Curtis et al., 2020; Faulkner et al., 2020).

The literature review on working mothers indicated that those who exercise have high self-efficacy, but research on this population has been limited to those who do not exercise (Mailey et al., 2016). A qualitative approach with a narrative design adds to the literature on working mothers by providing personal experiences of PBC, self-efficacy, and perceived barriers to exercise. The RQ-1 addressed the literature gap by exploring the lived experiences of working mothers who exercise regularly during a pandemic. Using clarifying questions and the follow-up interview helped address the three sub-research questions involving exploring the PBC, self-efficacy, and perceived barriers of working mothers who exercise regularly during a pandemic.

Summary and Conclusions

Working mothers have been associated with various roles and responsibilities and low levels of exercise, which negatively impact their health (Limbers et al., 2020). Research on this population has indicated that self-efficacy and barriers can influence exercise adherence (Gierc et al., 2016; Mailey et al., 2016). According to my literature review, research on PBC and working mothers has not been conducted yet. Most studies on mothers and working mothers focus on barriers and not how working mothers who exercise overcome and manage these barriers (Hoare et al., 2017; Limbers et al., 2020; Mailey & Hsu, 2019; Mailey et al., 2016). The studies done during the COVID-19 pandemic indicate that working mothers' exercise levels are not improving, and more research is needed on how to support this population during an experience like the

pandemic (Brand et al., 2020; Curtis et al., 2021; Faulkner et al., 2020; Kotlar et al., 2021; Limbers et al., 2020). However, few studies describe the experiences and perceptions of working mothers who exercise and how they manage their health and responsibilities (Limbers et al., 2020). Gaps in the research included studying working mothers who exercise regularly and their self-efficacy sources. Many studies have been done on working mothers and their self-efficacy to exercise using a quantitative approach (Hosseini et al., 2017; Mailey & Hsu, 2019; Mailey et al., 2016; Jung & Brawley, 2011, 2013). This study may close this gap by providing lived experiences of working mothers who exercise and how they develop their self-efficacy PBC and overcome barriers to exercise. I concluded the chapter with the need for additional research on sources of self-efficacy, PBC, and perceived barriers toward exercise for working mothers that sustain exercise during a pandemic (Curtis et al., 2021; Faulkner et al., 2020; Limbers et al., 2020). A qualitative study with a narrative design that describes the lived experiences of these working mothers who exercise provided helpful insight into how they develop and manage their PBC, self-efficacy, and perceived barriers to exercise. Chapter 3 will include the purpose of this study, research design and rationale, population details, sampling and sampling procedures, recruitment, participation, data collection methods, threats to validity, ethical practices, and a summary.

Chapter 3: Research Design

Introduction

In this qualitative study, I explored working mothers' lived experiences with exercise during the pandemic. Researchers have not considered working mothers' lived exercise experiences during a pandemic (Gierc et al., 2016; Mailey et al., 2016). This chapter includes the research design and rationale, population details, sampling, sampling procedures, recruitment, participation, data collection methods, threats to validity and ethical practices, and a summary. The research question and subquestions addressed in this study were:

RQ: How do working mothers describe their lived experiences toward exercise during a pandemic?

RSQ1: What are the sources of self-efficacy of support working mothers to sustain exercise during a pandemic?

RSQ2: What are the perceived barriers of working mothers who sustain exercise during a pandemic?

RSQ3: What is the perceived behavioral control of working mothers who sustain exercise during a pandemic?

In this qualitative study with a narrative design, I explored the lived experiences of working mothers who exercise, their PBC, sources of self-efficacy, and perceived barriers to exercise during a pandemic.

Research Tradition and Rationale

A qualitative approach was chosen over a quantitative approach as numerical data, and objective information would be less helpful in gathering the sources of self-efficacy (see Creswell, 2015). Qualitative data can be beneficial in finding individuals' interpretations of processes and behaviors in their lives, such as exercise and their perceptions, assumptions, and prejudgments (Miles et al., 2014). Using a qualitative approach allowed me to explore the lived experiences of working mothers with exercise. A narrative design was chosen to provide a unique approach to this topic, as most research has been done quantitatively (Mailey et al., 2019).

Narrative research is a qualitative research design that explores the experiences of individuals (Butina, 2013; Lazaro et al., 2017). Connelly and Clandinin first applied this inquiry to examine teachers' perceptions and personal stories and to describe their life experiences through stories (Butina, 2013; O'Toole, 2018). The narrative design includes obtaining and reflecting on people's lived experiences (Creswell, 2015; Lazaro et al., 2017). Researchers using this approach collect stories from individuals and discuss and evaluate the meaning of the stories and experiences (Creswell, 2015). Narrative research helps researchers describe the lived experiences of studied individuals, including restorying (the act of retelling) and chronology of experiences by collaborating with participants (Bonzet & Frick, 2019; Creswell, 2015). This type of research helps identify social problems that may need to be addressed, such as working mothers associated with low levels of exercise (Bonzet & Frick, 2019; Ollenrenshaw & Creswell, 2002).

Narrative research is an effective way to explore and describe exercise among working mothers. Perceptions and experiences can be best understood through written and oral words and may be difficult to interpret through a quantitative or numerical approach (Butina, 2013). The narrative approach involves individual stories and experiences with key events from working mothers and may help understand how the pandemic has affected them and their daily experiences. Kim (2015) stated that telling stories is a natural part of life, and these shared experiences can be practical for gathering typical forms of data familiar to others. I chose this type of approach over the case study approach as the narrative design is focused on understanding the personal story of the participants, and case studies are used to inquire about a case that may be bound by time and place, which did not fit this study (Yin, 2018). I also reviewed the ethnography methodology and chose not to use this, as I was not studying a specific culture but rather the population of working mothers and their experiences with exercise (see Creswell, 2015).

Role of the Researcher

My role as the researcher in this study was as a participant observer. I recruited the participants and conducted the interviews. As a narrative researcher, I engaged with participants in storytelling (Butina, 2013). The narrative interviews included questions that allowed participants to tell their own stories and be specific to the central concepts of this study during the main narration phase (Butina, 2013). I used a main narrative storytelling question, follow-up questions, and clarifying questions (see Appendix C).

The open-ended and follow-up questions helped guide the participants along with the study's topics and allowed them to tell their own stories.

I introduced the topic to the participants with the social media flyer I used to recruit them. I also reminded them in the email I sent with interview details and again in a reminder email a day before the interview. The interviews were all conducted virtually over Zoom, and I was alone in a private room. I conducted the interviews, ensuring that many perspectives and views were reflected. I evaluated and analyzed the responses. I reevaluated responses to prevent any researcher bias. As a professional in exercise, I recognized that I might have assumptions and biases regarding practice. My health professional reviewed my interview questions and notes to ensure I did not modify or incorrectly interpret the data.

Participants were not related to me and were not subordinates of mine, clients I train, or any of my past or future students. I used my school email address, not my personal email address, which did not disclose my professional background in health and exercise. There were no known power relationships between the participants and me. I explained how their responses and participation would remain confidential. I ensured confidentiality by conducting interviews in a private location and saved all information on a password-protected laptop and a password-protected hard drive. I also had the participants review and sign the informed consent form that explained their privacy rights. I provided each participant with a $10 gift card for their involvement in the study. This token of appreciation was a way to thank participants for participating in the study (Creswell, 2015).

Methodology

Participation Selection Logic

In this study, I focused on a target population of working mothers who live with their children, work full-time at least 30 hours a week, and exercise regularly. The sampling strategies used for this study were purposive and snowball sampling. Purposive sampling is commonly used in qualitative research and narrative inquiry studies (Merriam & Tredwell, 2015). Participants are selected based on criteria that align with the study's problem and purpose (O'Toole, 2018). Purposive sampling is adequate for this study as I selected participants who benefited from the study while providing the knowledge needed. Snowball sampling helped in participant selection because I asked early participants to refer other participants for the study (Creswell, 2015).

I contacted moderators of 15 Facebook and Instagram pages and groups that allowed me to recruit within these social media platforms. A social media post with a flyer was used to help recruit participants (Appendix A). The recruitment flyer posted on social media included participant criteria, the purpose of the research, and my contact information (Appendix A). The electronic flyer was shared on local businesses' and my personal Facebook and Instagram pages. Participants who expressed interest in being a part of this study were sent an email with the consent form and next steps.

Participants exercised regularly, which according to ACSM (2020) is at least three times a week, consecutively for at least the past three months. The target population of working mothers of child-bearing age was chosen because research on working mothers indicates that child-bearing years have been associated with lower control over self-care

behaviors such as exercise because of more roles and responsibilities (Curtis et al., 2021; Limbers et al., 2020; WHO, 2022). The participants were all members of Facebook groups to at focused on mothers in certain geographical areas, mothers who work, and mothers in higher education. All participants had access to computers and the internet and chose to use Zoom for the interviews.

The proposed sample size for the participants was six. After conducting interviews with six participants, I found that new information was still being reported, and I began recruiting more participants. I used snowballing sampling with the current participants and posted the flyer on the same Facebook and Instagram groups I posted when I drafted the six participants. Five participants indicated they were interested, but when I emailed these participants, only two people responded to me and consented to be a participant. After interviewing these two participants, no new information was reported, and I felt I had reached data saturation with eight participants.

Instrumentation

Qualitative interviews involve open-ended questions used to explore participants' thoughts and experiences in their own words (Creswell, 2015). My interview protocol and questions were developed from a comprehensive literature review of dissertations and related research on narrative analysis, working mothers, and exercise (Anderson & Kirkpatrick, 2016; Camila Jungueira Mulaert et al., 2014; Geraud, 2017; Paterson et al., 2019; Parrott, 2021). When studying people, observing their experiences, and understanding their own lives, a narrative research design may more effectively interpret their lives than questionnaires and graphs (Anderson & Kirckpatrick, 2016). Narrative

researchers understand participants' perspectives of events experienced (Creswell, 2015). Kim (2015) defined narrative research as a method that includes in-depth interviews to understand the meaning of the text and narratives, a type of inquiry that analyzes the data for developing themes.

This type of data collection method was adequate for this study as a way for working mothers to tell their experiences with exercise during a pandemic. I used researcher-developed questions included in the interview protocol guide to interview the participants (Appendix C). The narrative interview develops a setting that encourages and stimulates participants to tell their stories about their experiences (Jovchelovitch & Bauer, 2017). This type of interview includes unstructured open-ended questions and has four phases in the interview protocol (Appendix C): the introduction, main narrative, questioning, and conclusion phases (Anderson & Kirckpatrick, 2016; Kim, 2015; Jovchelovitch & Bauer, 2017). The introduction includes a welcome, opening, and reminders on informed consent and interview procedures. The questioning phase included the follow-up and clarifying questions. These follow-up questions are listed in the interview guide. These were only asked if I felt I needed more information to clarify a participant's responses.

I began the interview with the main research question, asking the participants to describe their experiences with exercise as a working mother during the pandemic. I asked the participants to take their time answering this question as it has been two years since the pandemic started. I wanted them to include as much detail as possible, including people and resources that may have influenced their experiences. The follow-up

interview also included the same protocol and main question and clarified any responses from the first interview. This approach works well to expand on the information, explain the participants' experiences, and elaborate on their stories, particularly in an unstructured conversational interview such as the narrative interview (Patton, 2002). These working mothers have many roles and responsibilities, and their lives frequently change, including their exercise behaviors. Interviewing only once may not have allowed me to effectively obtain enough rich data for this study (Patton, 2002). The follow-up interviews included questions that helped clarify their experiences with exercise during the pandemic. I used questions to queries such as: Did I hear you correctly when you said…? Did I paraphrase what you said correctly? What resources did you use to help your exercise experience? Did I paraphrase you correctly?

Another data collection instrument is audio-recording and transcription. I used Zoom to meet with all eight participants. Each interview was audio recorded through Zoom, and I also used VOICE Memo, an app on my phone, to record the audio from my computer. Using audio recording during the interviews will help ensure the accuracy of the narrative data from the participants (Creswell, 2015). I used the program Otter.ai to help transcribe my Zoom recordings of the interviews. This program allows users to create their accounts, and it is password protected. The recording during an interview helps to include the participant's responses and how they respond to a question with possible emotion and pausing that can be helpful with data analysis within narrative research (Kim, 2015). Audio-recording and transcription effectively capture all responses, including pauses or inflections as they occur (Creswell, 2015).

The additional data sources include field notes during the interview and my journal as a researcher. The field notes and journal were used to add to this study as a data source to report observations, pauses, inflections, and body language from each participant and reflections as a researcher studying working mothers. Inflections and body language during the interview. In my journal, I summarized my observations to make future recommendations for others in health education and promotion. All these data sources were compared to the audio transcription and used during data analysis. I also shared these notes and observations with the participants to review for accuracy.

After the main interview, I reviewed each transcript and began developing codes within each interview. I then checked the audio recordings of each one to compare with the transcription to see if I missed any information. Once I had the codes, I reviewed the sub-research questions to see if they were addressed in any of the responses. I used the follow-up interview with each participant to clarify answers. I used the example follow-up questions in the Interview Guide Protocol to gather more information, see Appendix C. In addition, I reviewed the journal I had for each participant that may also address each sub-question.

Content validity in qualitative research involves information richness within the sample size and observational and analytical capabilities with the sample size (Patton, 2002). I used my journal to reflect on my experiences and decisions as a researcher and used a peer to help provide an outsider viewpoint. A health care professional peer, working mother whose job is to develop exercise programs for adults helped me with my interview question and clarifying questions, and practice interviewing.

Procedures for Recruitment, Participation, and Data Collection

The participants were recruited through social media, Facebook and Instagram groups, and all participants were members of Facebook groups. After posting, the participants emailed me that they were willing to participate. After they contacted me, I emailed them to confirm that they met the criteria and sent them the Informed Consent form to sign and return to me. I also asked them to send me a few dates and times that they could meet for the first interview. The participants emailed me back, 'I consent,' and we set up a date and time to complete. All the participants chose Zoom as their preferred method of communication for the interviews. A day before the interview, I emailed each of them to remind them of the date and time and the Zoom link for the interview.

The interview protocol and questions followed the narrative interview phase model that helps guide the process (see Appendix C) (Anderson & Kirkpatrick, 2016; Kim, 2015; Jovchelovitch & Bauer, 2000). Before the first phase, there was a preparation stage where I explored the topic and developed the case for the interview (Jovchelovitch & Bauer, 2000). I used the literature review to understand the issue, create the themes and topics that may appear during the narration of the participant, and helps set the study to focus on the interviewee (Jovchelovitch & Bauer, 2000). The preparation period for this study was the literature review on working mothers, PBC, self-efficacy to exercise, barriers to exercise, and experiences during the pandemic.

After preparation, the next step is phase 1, the initiation or introduction phase (Anderson & Kirkpatrick, 2016). In this phase, I informed the participant about the purpose of the study, permission to record the interview, and the narrative interview

process (Anderson & Kirkpatrick, 2016). I also reminded them about the informed consent and that I was recording the interview. The participants were reminded that they could stop the interview at any point. I told them I would schedule a follow-up interview within a week if there were any disruptions or interruptions. I explained to the participants that this study is a narrative interview with an uninterrupted storytelling phase where they tell their story with a questioning phase of clarifying questions and then a conclusion phase where they can ask questions and reflect on the interview (Kim, 2015). I asked each participant to assign herself an identification number used to identify the participant used during data analysis. During this phase, I reminded participants that they would be given a $10 gift card for their participation. This main narration phase is when the interviewee takes the lead and begins telling their story (Anderson & Kirckpatrick, 2016; Kim, 2015). During this phase, I used active listening skills with non-verbal support and showed interest with responses of 'I see' and 'Hmm' (Anderson & Kirckpatrick, 2016). I asked if they could begin their story at the beginning of the pandemic around 2020 and then end at present. This phase continued until the participant marked the end of their account with a possible long pause that may signal the end of their story (Jovchelovitch & Bauer, 2000). At the end of this phase, asked the participants, 'Can you think of anything else you would like to say?'.

The next phase is the questioning phase, where I asked questions to fill in any gaps or clarify any responses. I used queries such as 'What happened when…" or 'can you say a little bit more about…" questions designed to elicit additional information that may help add to the story (Anderson & Kirckpatrick, 2016; Kim, 2015). With these

clarifying questions, the participants could provide examples of PBC, sources of self-efficacy, and barriers to exercise. For example, one participant mentioned that their family supported their exercise. I asked a clarifying question, 'Can you say a little bit more about how your family supported your exercise.' The first three phases, including the introduction, narration, and questioning phases, were audio-recorded for verbatim transcription with the consent of the participants. The fourth phase is the conclusion stage, where the participants are given the next steps of the interview process (Anderson & Kirckpatrick, 2016; Kim, 2015). During the conclusion stage of each interview, the participants were allowed to ask questions, but no one did. I also debriefed them on the study's next steps. The recording did not take place during this phase. During this phase, I set up the date and time for the follow-up interview.

The follow-up interview followed the same interview protocol. Still, the Main Narrative Phase began with, 'Since we last talked, is there any more information you want to share regarding your exercise experience during the pandemic.' The second follow-up interview was approximately two weeks after the initial consultation. This short follow-up interview was about 15 to 20 minutes, but no time limit was set. The follow-up interviews included all four phases of the narrative interview: introduction, main narrative phase, questioning degree with follow-up or clarifying questions, and conclusion phase (Anderson & Kirckpatrick, 2016; Kim, 2015). These clarifying questions were based on their responses so that I could gather their story and as much detail on their experiences with exercise during the pandemic.

Data Analysis Plan

The main narrative phase of the interviews included the main research question, which asked the participants to describe their experience with exercise during the pandemic as working mothers. My experiences and observations as a researcher and participant responses gave an in-depth description of how the participant may feel about the topic and how it affects them as a working mother. The questioning phase of the interview and the follow-up interviews included follow-up and clarifying questions that asked about sources of PBC, self-efficacy, and barriers to exercise and related to the three sub-research questions (What are the sources of self-efficacy of working mothers who sustain exercise during the pandemic? What are the perceived barriers of working mothers who sustain activity during the pandemic? What is the perceived behavioral control of working mothers who feed practice during the pandemic?).

I gathered the transcripts of the interviews, the field notes taken from my observations, and my journal reflections during the interview to begin the data analysis process. Data analysis started with the transcription process (Creswell, 2015). This study used Zoom and Voice Memo to audio record and Otter.ai to transcribe the audio. Using two methods to record audio may help catch gaps one may have missed (Creswell, 2015). Each audio transcription was reviewed and compared with the field notes and journal reflections. Data were transcribed and analyzed and then developed into codes. As I developed codes, I kept a copy of the research problem, theoretical framework, research questions, purpose, and other notes to help make codes (Auberbach Silverman, 2003). I used In-Vivo coding, which involves using a word or short phrase from the actual

language within the data, the terms used by the participants (Saldaña, 2009). This was helpful because I wanted to capture the meanings within the participants' experiences, so using their own words would be essential (see Saldaña, 2009). I repeated this process three times more to see if any new codes emerged. A narrative analysis process was used for this study to put the principles into general concepts and categories, then analyze the categories to develop themes that are common across the collected stories or interview responses from the participants (see Kim, 2015). This type of narrative analysis is called paradigmatic analysis, which describes participant themes and relationships among categories (see Kim, 2015). I began categorizing and applying the conceptual framework of self-efficacy influences and barriers to exercise. The constructs within the conceptual framework include self-efficacy influences, including mastery experiences, vicarious experiences, social persuasion, and physiological well-being, and barriers were used as the initial themes. These themes of commonalities from the participant's stories helped create working mothers' exercise experience during the pandemic.

I was going to use QDA Miner, but the program did not work well with my computer. I ended up hand-coding, which was a positive and rewarding experience. I also used the program MAXQDA to code again to catch any discrepancies I had with hand-coding. Utilizing a third party unfamiliar with the research to help analyze the data and the researcher helped establish inter-rater reliability (Creswell, 2015). My peer health professional helped review the codes developed to ensure accuracy and catch any discrepancies. Participant confidentiality was maintained as the data provided had only a number selected by the participant at the beginning of the study. Once the data was

transcribed and coded, participants reviewed the information for a member, checking for accuracy and validity.

Issues of Trustworthiness

Trustworthiness refers to the rigor of a research study in the degree of confidence in the data, interpretation, and methods used to help validate the quality of the study (Merriam & Tisdell, 2015). The subjective approach to qualitative data has potential weaknesses, including researcher subjectivism and inaccuracy (Merriam & Tisdell, 2015). Qualitative research's reliability relies on the data's stability and interpretation (Merriam & Tisdell, 2015). The four criteria for trustworthiness for qualitative research are credibility, transferability, dependability, and confirmability, which will be addressed in this section (Merriam & Tisdell, 2015). Confidentiality was maintained during the study, and all participants were asked to choose a number during the first interview to be used for the transcribed documents. Research data will be kept on a password-protected thumb drive and hard drive locked in a safe. Data will be securely locked for five years following the study and then be destroyed.

Credibility

Credibility is defined as confidence in the truth of data and interpretation of this data and its findings (Connelly, 2016). To ensure credibility, I chose the appropriate research method and data analysis related to my study. I used peer-reviewed articles on working mothers and their sources of self-efficacy. Credibility also involves how believable a study is to the extent that the survey accurately reflects the investigated concepts (Rubin & Rubin, 2005). This narrative interview involves the participants

telling their stories without interruption, then using their words as codes to analyze the data and create themes. During the questioning phase of the interview, I used follow-up questions and probes to elaborate, clarify and provide evidence in the discussions for thoroughness (Rubin & Rubin, 2005). The initial and two follow-up interviews provided more information and insight and may clarify gaps in the data that helped establish credibility (Patton, 2002). Member checking is also used to help ensure credibility (Creswell, 2005). The audio recording transcription documentation was shared with the participants to confirm the accuracy or clarify any responses. I asked the participants to ensure that my notes reflected their information during the interview.

Triangulation

Triangulation involves using multiple data sources in qualitative research to comprehensively understand the topic (Patton, 2002). The audio transcription documents, field notes taken during the interviews, and journal reflections as a researcher were reviewed to reveal common themes and conclusions. This study recruited participants until saturation was reached, so no new information was reported (Kim, 2015). Saturation is the gold standard used by purposive sample sizes determined in health science research (Kim, 2015). I journaled the research process, my thoughts, and notes on the process. This addressed reflexivity, which is the examination of one's own beliefs and judgments during the research process and how they may influence the research. I also consulted with a health professional peer on the process and my reflections to improve my role as a researcher.

Transferability

The criterion of transferability involves applying or extrapolating the results of a study to other similar individuals, groups, or populations (Connelly, 2016). I recruited from work environments with working mothers working full-time and social media groups with working mothers. To establish this criterion, qualitative researchers should focus on the participants and their specific stories without saying it applies to everyone's stories (Connelly, 2016). The recruitment for participants involved social media groups with mothers. I gave a clear and distinct description of my data collection process, recruitment, and characteristics of the participants, along with a detailed presentation of the findings to enhance transferability.

Dependability

Dependability is data stability over a period (Connelly, 2016). I ensured dependability by providing opportunities for feedback for participants about results and interpretations of results. In this study, I organized my interview transcripts from participants. I showed the transcripts and my fieldnotes to the participants to ensure they said and asked for any changes or additional information they wanted to address. I used my doctoral committee and health professional peer to review my themes for data analysis and reflections as a researcher.

Confirmability

Confirmability includes the accuracy of the data from the participants rather than the potential researcher biases (Connelly, 2016). I ensured confirmability with reflectivity and audit trails in my journal reflections as a researcher. This journal included my

thoughts, reflections, and what I did as a researcher with data collection, analysis, and interpretation. This journal was also used to address reflexivity. I am a working mother exercising during the pandemic, and there is a potential bias in the data and interpretations. I recognized this bias and used my health professional peer and the doctoral committee that agreed to review my work to ensure that I focus on hearing, discovering, and unfolding the experiences of these working mothers and not my views. I continued to challenge myself to learn new information from these women rather than evaluate and interpret it through my professional lenses. This qualitative study involved asking subjective questions to help provide a complete and rich description of the participants' lived experiences, so I was as objective as possible and set aside any bias as an exercise and health professional within this study. Inter-coder reliability is when an independent coder can evaluate the data to reach similar conclusions (Patton, 2002). I worked with the third-party program to help analyze the data on the development of themes for the study and agree on the themes. Coding was done three times on two days to address inter-coder reliability and see if any new codes emerged (Patton, 2002).

Ethical Procedures

Before the study was conducted, I obtained authorization from the Walden University Institutional Review Board (IRB; #05-05-22-0744729). Participants in this study were not vulnerable individuals, students, subordinates, or current clients. The research was conducted and aligned with the research questions, including the methodology, data collection, and data analysis. The IRB was given all the details and procedures of the data collection methods and participant recruitment strategies. Creswell

(2015) reported ethical concerns in qualitative research, including respect for privacy, open interactions, avoiding misinterpretation, and establishing honest and genuine interactions. I had the participants review and sign the informed consent form that addresses privacy and interview at a private location. This form explained the voluntary nature of participation, assurance of protection from risks from the study, and managed the benefits of participation.

Summary

In this chapter, I discussed the various parts of the methodology for this study. A narrative approach was selected as an appropriate method to explore the lived experiences of working mothers with exercise during the pandemic. I explained the narrative interview process and the phases that I used to collect data and conduct narrative interviews to collect data. I also described the data analysis process. The next chapter, Chapter 4, will discuss data collection and analysis.

Chapter 4: Results

Introduction

In this qualitative study, I aimed to explore working mothers' lived experiences with exercise during the pandemic. In Chapter 4, I discuss the findings from analyzing the data collected from eight narrative interviews with working mothers who sustained exercise during the COVID-19 pandemic. The narrative interviews included open-ended questions that addressed the research questions. The research question and subquestions addressed in this study were:

RQ: How do working mothers describe their lived experiences toward exercise during a pandemic?

RSQ1: What are the sources of self-efficacy that support working mothers to sustain exercise during a pandemic?

RSQ2: What are the perceived barriers of working mothers who sustain exercise during a pandemic?

RSQ3: What is the PBC of working mothers who sustain exercise during a pandemic?

In this chapter, I discuss the critical themes that emerged from the data. This chapter is organized into sections that include setting, participant demographics, data collection, data analysis, evidence of trustworthiness, and results.

Setting

All eight participant interviews took place virtually over Zoom, which was convenient for all participants. To recruit participants, I distributed a recruitment flyer on Facebook and Instagram groups on social media. Potential participants contacted me through email to express their interest in participating in the study. All participants came from Facebook groups; I did not recruit any participants through Instagram. I sent potential participants an email with the participant criteria and informed consent and set up the first interview based on their availability. I audio recorded all the interviews on Zoom and using my phone with a voice memo application. Each recording was saved on my password-protected computer. Each participant was also asked to pick a number from 1 to 8, which was used for data analysis. With each participant, I suggested that they

should be in a location during the interview where they would be alone with no distractions. A few participants were in their homes and some in their offices at the time of the interview. Some of the participants during the interview were interrupted by work calls or children at home, so we paused the interview. I also allowed them to reschedule, but none of them needed to do so.

Demographics

The study participants consisted of eight working mothers who met the inclusion criteria of working at least 30 hours a week, exercising regularly, and living with their children. No other demographic data were collected. All participants were members of mother-focused groups on Facebook. They all had access to computers and the internet and chose Zoom to conduct their interviews.

Data Collection

I interviewed eight participants during the month of May 2022. The first six participants contacted me after my first post with the recruitment flyer on Facebook. After completing the initial interviews with six participants and developing codes, I decided to continue recruiting more participants because the coding indicated that some participants reported new information, and the goal of a qualitative study is to reach saturation in which no further information is forthcoming. Some participants knew other mothers who would be interested in the study, which allowed me to recruit more participants, resulting in eight total participants. These participants were also from a working mother-focused Facebook group. After I reviewed and coded all eight interview transcripts, I felt no new information was being reported, and saturation was reached.

Once the participants expressed interest in being a part of the study, I scheduled a date and time for the initial interview based on their availability. All participants expressed wanting to interview via Zoom because of convenience and availability. Each initial consultation took approximately 60 minutes. I audio recorded the interviews on my phone using an app called voice memo that recorded from my computer's audio and I recorded in Zoom. I used the same interview protocol and questions for all participants. The main interview question was open ended: Describe your experiences with exercise as a working mother during the pandemic. I encouraged participants to share as much information as they felt comfortable with as it related to their exercise during the pandemic. Even though I encouraged participants to be alone during the interview, some of the participants had interruptions from work and children. I asked if they would like to reschedule, but they did not. After each initial interview was completed, I scheduled follow-up interviews within 2 weeks. The follow-up interviews were also audio recorded with both voice memo and Zoom. These follow-up interviews lasted approximately 10–15 minutes and used the follow-up and clarifying questions in the interview protocol (Appendix B). The follow-up interviews were shorter than I had planned initially, but each follow-up included just a few questions from me and none of the participants asked questions. Many of them had no new information to add.

Data Analysis

The data collected from the interviews used a pragmatic mode of analysis, which is a type of narrative analysis. To begin this type of analysis, the audio recordings of the interviews had to be transcribed. I organized the data using the Otter.ai program. This

program transcribed the audio recordings into file formats so I could review the interview data. Each interview was transcribed the same day it was completed and filed to use for data analysis. Once an interview was transcribed, I began the hand-coding process. I checked the audio recording and the transcription of each interview and compared them to my field notes and observations from the interviews. I reviewed the interview transcripts to extract key terms and phrases from the participants. I checked each transcript, line by line, to develop codes, and then I repeated this process two more times on two different days to see if any new codes emerged. Table 1 includes some examples of how I coded the participant responses, the categories I used, and the themes that emerged from the data. The rest of the examples of participant responses, codes, categories, and themes are listed in Appendix C.

Table 1

Examples of Participant Responses, Codes, Categories, and Themes

Responses	Codes	Category	Theme
"During the time my kids were taking physical education classes I exercised. It was a good way for them to see I exercise it is important." "I use early mornings before anyone wakes up to exercise and now exercise is just something I do without thinking. It is also so peaceful when no one is up and allows me to have me time I need."	good way for them to see I exercise it is important." early mornings before anyone wakes up to exercise	Perceived barriers/PBC	Role model for kids/others Exercising at home Self-care
"I biked with my kids and bought a trailer now so they can see me exercise," "I walked every day with my kids, and we would play games outside to get out and enjoy the weather too" "I would run outside every morning despite the weather because it was what I needed."	bought a trailer now so they can see me exercise walked outside everyday Run every morning	Self-efficacy: Physiological/emotional health	Role model for kids/others AND utilizing built environment

As listed in Table 1, the key terms and phrases from the participants were used to develop narrative phrases/codes. These terms or phrases were the common perceptions and experiences participants expressed. Then the codes were categorized based on the conceptual framework. These categories included: (a) self-efficacy, which included mastery experiences, emotional/physiological health, social persuasion, and vicarious experiences; (b) perceived behavior control; and (c) perceived barriers

I developed themes and then followed up with the audio recording from Zoom and the transcripts to review if there was any missed information and to check for accuracy. To review the developed codes and check if anything was missed, I used the program MAXQDA to code and develop themes, to review for accuracy, and to see if any new themes emerged. The data analysis resulted in nine themes: (a) exercising at home, (b) experience with exercise, (c) utilizing the built environment, (d) setting an example for kids/others, (e) self-care, (f) scheduling and preparation, (g) both physical and mental benefits, (h) family support, and (i) managing mom guilt.

Evidence of Trustworthiness

Credibility involves confidence in the truth of the data and its findings and accurately reflecting the concepts being investigated (Connelly, 2016). Member checking was done during this study a few times to review the data and ensure its accuracy. During the initial interview, I used follow-up and clarifying questions such as “What did you mean by…” to ensure I understood their experiences. After the discussions, I emailed the participants a summary of the analyzed and coded data to review for accuracy. I did not receive any corrections or additional information from the participants. I also used the

follow-up interviews with each participant to clarify the information they provided during the first interview.

To address transferability, I ensured that the study findings were complete descriptions of these working mothers' experiences with exercise during the pandemic. I provided accurate details on the inclusion criteria of the participants, the participants, and the methods and procedures conducted to collect data. The assumptions made in this study were based on the findings aligned with the study's conceptual framework, problem, and purpose.

Dependability was achieved during this study by reviewing the interview protocol and questions with a health professional peer and by using the established narrative interview protocol and its phases. I reduced participant bias by explaining to the participants during their interviews that all experiences were welcome. I worked with a third-party health education professional who is my peer to review my codes, and I coded and developed themes with the program MAXQDA to ensure accuracy and determine if new regulations and pieces were missed.

Confirmability was achieved during this study in several ways. Data collection was done using interviews at two points to gather more information and ensure the accuracy of the data. My journal reflected observations and experiences and served to recognize and address any researcher bias. Using theories such as self-efficacy theory, health belief model of perceived barriers, and perceived behavior control theory of planned behavior helped me to manage theoretical triangulation by using multiple approaches that may help understand the data more effectively and thoroughly.

Results

All participants were asked the same question: Describe your experience with exercise as a working mother during the pandemic. Participant responses were reviewed to reveal codes, categorize them, and create themes. I reviewed the research questions to see if any of the themes addressed these questions. The following section is organized by the research subquestions.

Research Subquestion 1

The Sub RQ #1: What are the sources of self-efficacy that support working mothers to sustain exercise during a pandemic? These sources include mastery experiences, vicarious experiences, social persuasion, and social/physiological wellness. The data results indicate that these working mothers use mastery experiences and social/physiological health to sustain exercise during the pandemic. All eight participants said they had previous exercise experience and exercised regularly before the pandemic. The participants indicated that their previous mastery experiences with exercise provided them with a foundation of how exercise was beneficial. Participant #5 said, “When I became a mother, I found that exercise was a great way to reconnect with myself, and I used the experience I had running track and sports to remember how to change up my routine and challenge myself.” Looking back on my journal as a researcher, I noted that all of these participants were excited to talk about their exercise; they talked fast with excitement in their voices and how much they loved to exercise.

The participants also talked about how exercise made them feel, mentally and physically. Participant #1 reported, “I used exercise as a coping mechanism, and then it

became a habit I could not live without, or my health began to deteriorate." Participant #3 indicated "Exercise improves my quality of life." Participant #6 said, "I've always struggled with depression and anxiety, which I know is better when I am exercising. I also have energy, and my mood is better." Participant #2 said,

> I feel better like my body feels better when I'm healthy, when at a healthy weight, and when I'm active, and I sleep better. My body feels better when I exercise, and I feel like I have more energy. Exercise, for me, is a mental health practice. It's a stress reliever for me.

Participant #1 said,

> So it started with a goal of losing weight, which I did, and it was awesome. But now, it has become just truly a part of my routine, and if I don't do it, I miss it. My mind and body feel different. I make time for exercise as much as I possibly can. Still, I don't stress if it doesn't happen.

I noted in my research journal that one participant had tears in her eyes and expressed passion for exercise and self-care, saying, "I just want to be an advocate for moving at least 5 to 10 minutes; I can't explain how that is good for you overall, you will feel different, and it will feel good." The participant responses answered this research subquestion and were organized into these themes: (a) experience with exercise, (b) mental and physical benefits, and (c) self-care.

Theme 1: Experience with Exercise

All eight participants indicated that they had previous experience with exercise and exercised regularly before the pandemic. Participant #3 said, "When I was in grad

school, there was a big focus on self-care, and I began walking and running and felt it was so beneficial; I knew I always needed to keep doing this in my life, being active." Participant #5 said, "When I became a mother, I found that exercise was a great way to reconnect with myself, and I used the experience I had running track and sports to remember how to change up my routine and challenge myself." Participant #6 said, "I've always been active in my life as a dancer, and I wanted to continue that into motherhood." Participant #8 reported, "I 've joined various gyms throughout the years and used what I knew to create new workouts for myself and create goals." I observed each of the participants share their experiences with a sense of gratitude and a feeling of accomplishment. One participant said, "I really enjoyed talking about my experiences. It helped me realize that I actually do accomplish something amidst all of the other responsibilities I have." Looking back on my journal as a researcher, I noted that all of these participants were excited to talk about their exercise; they talked fast and talked about how much they loved to exercise.

Theme 2: Benefits, Both Physical and Mental

All eight participants indicated how important exercise was for their mental and physical health, addressing Sub RQ #1: what are the sources of self-efficacy for working mothers to sustain exercise during the pandemic. One participant reported, "I used exercise as a coping mechanism, and then it became a habit I could not live without, or my health began to deteriorate." Participant #3 indicated that "exercise improves my quality of life." Participant #4 said, "I do feel better physically and mentally if I exercise regularly." Participant #6 said, "I've always struggled with depression and anxiety, which

I know is better when I am exercising. I also have energy, and my mood is better." Participant #2 said, "I feel better like my body feels better when I'm healthy, when at a healthy weight, and when I'm active, and I sleep better. My body feels better when I exercise, and I feel like I have more energy. Exercise for me, is a mental health practice. It's a stress reliever for me." Two participants reported that their families, particularly husbands, understand that exercise is important to them, saying, "my husband calls my walks my mental health time." Another mom said, "my husband just knows when I don't exercise, and moves our schedules around so that I can get it in." Participant #1 said, "so it started with a goal of losing weight which I did, and it was awesome. But now, it has become just truly a part of my routine, and if I don't do it, I miss it. My mind and body feel different. I make time for exercise as much as I possibly can, but I don't stress if it doesn't happen."

Theme 3: Self-Care

Six participants indicated that their exercise was a part of their self-care routine. This aligns with the Sub RQ #1: What are the sources of self-efficacy that support working mothers to sustain exercise during a pandemic and the concept of physiological health, one of the sources of self-efficacy. One participant indicated that "exercise was one of the most important aspects that helped me stay sane." I noted in my research journal that one participant had tears in her eyes and expressed passion for exercise and self-care, saying," I want to be an advocate for moving at least 5 to 10 minutes; I can't explain how that is good for you overall, you will feel different, and it will feel good.

You can't convince someone; you must let them feel it for themselves. But taking care of yourself truly feels amazing; I wish more people felt like that."

Many of the participants showed emotion when talking about exercise and taking care of themselves. Participant #6 got emotional, apologized, and noted in my journal that she took a long pause before responding, "You have to be selfless as a mom, and we do everything. I do everything for my kids, but you have to be a little selfish at times and say, This is important to me. This is what we are doing. You have to include them, or you say ok, you sit over there, you play over there, you do whatever, but this is what I need for myself." Participant #7 said, "I know I am a better person, and I feel better when I exercise. I am a better wife and better everything. I know I need it for myself." Another mom indicated, "this is my time, my alone time, and I need it to continue to be the mom they need and want." A participant reflected on her past exercise and knowledge of self-care, saying, "I am a psychologist, and I preach about self-care to my patients. I need and want to be doing the same thing in my life. I know how important self-care is for health."

RQ# 2 and RQ# 3

The sub RQ #2 is What are the perceived barriers of working mothers who sustain exercise during the pandemic? All participants reported that they know working mothers' barriers to supporting practice. The barriers mentioned were time, childcare options, and accessibility to exercise. These participants seemed aware of the barriers but did not indicate that any of them were barriers to their ability to sustain exercise.

This sub-research question also can be related to sub-research question #3: What is the PBC of working mothers who sustain exercise during the pandemic? PBC involves

beliefs about the presence of factors that may foster or hinder behavior performance (Ajzen, 2019). These participants did not report barriers to exercise but noted that they developed strategies that addressed them, indicating that they feel they have PBC over their exercise. One participant said, “I can stay at home and do nothing, or I can create opportunities to exercise and show my family how we can get through this together, healthy.” Another participant said, “As hard as this experience has been, I need to show my kids that exercise and health are still important and are in your control.” Participants were aware of their perceptions of their ability to exercise and developed strategies to foster that behavior during the pandemic. They didn’t focus on the barriers but on how they could control their exercise with techniques such as exercising at home, utilizing their built environment, their family support system, and scheduling their exercise in their lives—working with their family and planning. The strategies these participants used to include training in their daily regimen that helped address barriers and relate to their PBC towards practice are included in the themes listed in this section: family support, exercising from home, preparation, and scheduling, utilizing the built environment, setting an example for kids/others, and managing mom guilt.

Theme 4: Family Support

Five participants indicated that family supports their exercise routine and helps them manage their schedules and fit in exercise. Participant #1 said, “My husband is so supportive of my exercise routine. He makes sure our schedules are open to incorporating it in our families’ schedules.” I noted in my research journal that one participant smiled when responding to this question, saying, “My wife supports me going to the gym and

will help if the kids are upset when I leave. She reminds them that everyone has something they love to do, and this is mommy's favorite thing to do." Three participants indicated that they sit with their families to plan the week with them: "we sit down and write down how the week will look, and I always include my exercise routine each day."

Theme 5: Exercising from home

All eight participants provided the common theme of exercising at home in some way. In my research journal, I noted that five participants were in the room they worked out in and showed me. Participant #1 indicated, "I purchased the mirror to help provide a variety of workouts I needed at home with the flexibility and availability I needed." Another participant said, "I immediately bought a treadmill at the beginning of the pandemic with my tax return money to keep me on track," Another participant said, "I turned my exercise room into a workout room because I know that is the only way I could get exercise in my day." Participant #8 said, "My husband and I decided to buy a Peloton because well, we are kinda glued to our kids a lot. We don't have many childcare options here and exercising at home was the only one I could get it done." Three participants said they walked with their families, biked, and did videos online as part of their exercise routine. One participant said, "Each day, my kids would pick what activity we did, and they loved it. We got them involved. It wasn't perfect, but it helped them. I stay active." Two participants involved the kids with games and activities in the house, saying, "I loved playing exercise games with my kids, like running games, tag, and we made it fun, and I challenged myself to keep moving for at least 20 minutes each time."

Theme 6: Scheduling and Preparation

Six of the participants indicated that there is scheduling, and preparation involved in their exercise regimen. One of the participants showed me the planner through the ZOOM video that she uses with her husband, saying, "I work hard with my husband to look at the week and schedule time for me to exercise that won't challenge our schedules, meaning It won't involve much rearranging." I noted that many participants worked during their lunch hours to get in exercise. One participant said, "I use my lunch break very intentionally. I block off the lunch hour in my calendar, so my peers know I am busy and also does not take away from my time at work." Participant #4 indicated, "I moved our dinner back so I could work out before, and it worked well for my kids too." Participant #6 reported, "During the time my kids were taking physical education classes, I exercised. It was a good way for them to see I do the same thing they do, which is important." I observed one participant smiling while saying, "I use early mornings before anyone wakes up to exercise, and now exercise is just something I do without thinking. It is also so peaceful when no one is up and allows me to have the time I need."

Theme 7: Utilizing the Built Environment

All eight participants indicated that they used their environment, such as walking, running, and using a stroller with their kids, to foster their exercise behavior. Participant #3 said, "I kept thinking, ok, since all the gyms are closed, I should get a stroller, and now I feel like every mom should have a stroller and a good running stroller." Participant #5 said, "I biked with my kids and bought a trailer so they can see me exercise." Participant #6 said, "I walked daily with my kids, and we played games outside to get out

and enjoy the weather, too." One participant said at the end of the interview, "I would run outside every morning despite the weather because it was what I needed." Three participants walked or cycled in their neighborhood and used online workouts to go outside and use the space to get out of the house and exercise.

Theme 8: Setting an Example for Kids/Others

Six participants indicated that they wanted to set an example for their kids, peers, and co-workers on exercise when asked to describe their experience with exercise during the pandemic. I noted that some participants paused, and one participant had years in her eyes when responding, "I hope my kids see me and know how important exercise is for health." I noted in my journal that another participant responded with high energy and excitement, saying, "I feel really passionate about exercise- my kids needed to see me active because they were constantly with me. They need to see how important exercise is for me and my health, so hopefully, they can like it, and do it as they grow up."

Three of the participants mentioned showing others especially their kids about how their exercise may influence other people. Another participant stated, "And honestly, now that I have kids, I do it [exercise] for them, too. For many reasons, I want to set a good example. So that is motivating." Participant #5, I feel I know how crucial it is for them to watch me. They should be watching me. Even if they are not saying anything at that moment, they are watching me." Two participants stated that they wanted to use their lunch break and show their co-workers and peers that they are balancing their life too and set an excellent example for others. One of the participants, a supervisor on a shift, stated, "I want to set an example for my co-workers that exercise is important, and they see me

take time for me, take my lunch break and break from work and exercise. Exercise should be celebrated, and I hope they see that and are motivated to fit it [exercise] in their lives, despite having families and other roles that may take them away from their self-care." Participant #8 said, "I wanted to make sure my kids either worked out with me or saw me working out to make sure that they know its importance in life. So I mean from the beginning of their life, I included them and tried to make it fun; they can pick music and moves."

Theme 9: Managing Mom Guilt

All eight participants reported that despite being able to exercise regularly, they still experienced the feeling of 'mom guilt,' the guilt felt after they left their kids to exercise or, for some, modified schedules in their families' lives for them to exercise. As noted in a few other responses, some participants got upset during these responses. When responding, one participant paused for a minute and, with a few tears in her eye and voice cracking, said, "Even if they're sad, I'll still leave sometimes. It's not easy. Like I feel bad saying that, but I'll look back and say, I'm sorry guys. I'm leaving. I'll be home in an hour. It goes back to like, if that's what you need to be a better person, wife, mom, do it. I need it to feel better about myself. And you know, I sacrifice so much for the kids. We do much for them I believe for an hour at the gym you are going to be ok. I do feel bad, but then, I don't, ya know?"

The pandemic was noted as being a difficult time being a mom let alone maintaining healthy habits such as exercise. I noted in my journal that one participant was so emotional she needed to take breaks to answer. She apologized and said, "this

pandemic has been harder than I thought. When I really sit and reflect, despite how lucky I am, I feel like talking about the time we went through makes me sad. I have mom guilt all of the time, 24 hours a day. But I work from home mainly, and the advantage is I can mostly exercise at home when they are at school. So that way, I don't feel like I am taking time away from them, but again, I still feel guilty in other ways. The mom guilt is awful, just awful. But I think because I know how important it is to set an example for them, I don't feel as bad." Participant #5 reported, "sometimes I feel bad for exercising and leaving my kid, but sometimes I don't. Like I said, I know it's a good thing for him to see me exercising and taking time for myself." Participant #6 said, "so if one of my kids is crying at my door when I am exercising in the room, we say, what makes mommy happy? They yell, exercising. And we laugh, and I can finish my workout. It's now a running joke."

Summary

This qualitative narrative study aimed to explore the lived experiences of working mothers who sustain exercise during the pandemic. Chapter 4 provided the research results, including the nine themes that emerged from the data. This section included participant demographics, data collection procedure, data analysis, evidence of trustworthiness, and interview results. Chapter 5 will provide more information on the study's findings, limitations, social change implications, and future research recommendations.

Chapter 5: Discussion Conclusions, and Recommendations

Introduction

In this study, I aimed to explore working mothers' lived experiences with exercise during a pandemic. My literature review revealed that research is limited regarding working mothers who sustain exercise, and there is little research on their experiences during the pandemic using a qualitative approach (Faulkner et al., 2020; Limbers, 2020; Mailey et al., 2016). I conducted this study to give participants, working mothers who exercised during the pandemic, an opportunity to share details of their lived experiences in their own words. The key findings were that these participants used the physical and mental benefits they experienced during exercise and mastery experiences to motivate them to sustain exercise during the pandemic. The participants indicated being aware of the common barriers to exercise for working mothers, such as time, childcare options, and accessibility to exercise. Still, participants shared how they developed strategies such as preparation and scheduling, using their family support system, and building an environment to overcome these barriers and sustain exercise during the pandemic.

Interpretation of the Findings

The previous literature on working mothers and exercise was focused on barriers or self-efficacy and reported that working mothers have low levels of activity due to many roles and responsibilities and perceived barriers (Limbers, 2020; Mailey et al., 2016). The results of this study can help address the gap in the literature on working mothers who exercise. This study provided a unique approach to gathering information on working mothers who sustained exercise during the pandemic. In addition, this

qualitative narrative study provided the personal experiences of working mothers compared to previous research that was done using quantitative methods (Gierc et al., 2016; Limbers et al., 2020; Mailey et al., 2016). Previous literature on working mothers and exercise indicated many barriers for this population. While this remains true for the participants in this study, the strategies they use to overcome these barriers may be helpful for future interventions and health education and promotion professionals. In addition, few studies have involved PBC, working mothers, and exercise. This study provides a glimpse into how working mothers' PBC affected their exercise levels during a pandemic.

Study participants had prior experience with exercise, and some referred to their history. Participant #3 stated, "I knew that all I needed to do was to get past the first week and create the habit. I would see the benefits slowly, but it's all worth it." One of the themes that emerged from the data was the experience with exercise, related to mastery experiences, one of the sources of self-efficacy. Mastery experiences include being successful at a behavior or task (Bandura, 2012). These participants used their previous experiences to develop their workouts and remain active during the pandemic. Studies on self-efficacy and exercise report that mastery experiences are considered the most influential in developing high self-efficacy toward a behavior (Bandura, 2012). Mastery experiences provide authentic evidence that one can perform the behavior (Bandura, 2012).

In addition, the data indicated that the physical and emotional health benefits of exercise helped motivate participants to sustain their exercise practice. Some themes that

emerged from the data include self-care and mental and physical benefits, which relate to emotional and physiological health, another self-efficacy source (Bandura, 2012). The participants knew and felt the benefits of exercise both mentally and physically, and they were motivated by these benefits. Working mother participants recognized that exercise is an essential part of self-care and made it a priority, which helped foster this behavior. Many felt that exercising with or in front of their kids helped them exercise, motivate themselves, and improve their overall emotional and physiological health. The participants could draw on previous mastery experiences, use self-care, and work on their emotional health to motivate themselves to exercise. As mentioned, all the participants sometimes experienced mom guilt when leaving or putting exercise before their families. Still, they recognized that the time away was more beneficial and helped their overall health and well-being. These working mothers' sources of self-efficacy included mastery experiences and emotional and physiological wellness.

The participants reported being aware of barriers to exercise for working mothers, such as time, accessibility, and childcare responsibilities, and they were able to address these barriers with effective strategies. These working mothers addressed barriers to exercise by using their resources, such as family, their environment, and techniques such as scheduling and preparation to sustain exercise during a pandemic. Despite keeping their exercise routine during the pandemic, these working mothers still experienced barriers to exercise, like most working mothers do (Limbers, 2020; Mailey et al., 2016). All participants indicated that they had been aware of common barriers for mothers to exercise, such as lack of time, childcare responsibilities, transportation, and even money,

which are similar barriers for most working mothers to exercise (Hosseini et al., 2017). Participants reported still having days of not working out due to these barriers, but all participants indicated that they did not focus on the barriers. Participants used their homes, purchased equipment, and used their environments such as sidewalks, hiking trails, and groups in the area to stay active during the pandemic. They took their kids and pets for walks and runs and continued to be active by using what they had available.

In some cases, the barrier for working mothers to exercise is not having support or help with childcare responsibilities (Limbers, 2020). Participants had family and peer support systems and asked for help when needed. Participants admitted they were different people and mothers if they did not ask for help, so using the available support system was crucial for them to exercise. During the interview, all participants reported having support to help them with their exercise regimen. Previous research reports that families who support each other with exercise are more active, and exercise levels go up for the families, particularly mothers (Mailey et al., 2016).

In addition, participants indicated that co-workers and peers at work were an essential support system for working mothers who sustain exercise during the pandemic. A few participants expressed that a boss or co-worker who can understand how vital exercise is critical when managing exercise along with work demands during a pandemic. Participants acknowledged these common barriers for working mothers to exercise but perceived that they could manage them by using their resources to continue to exercise.

PBC involves perceiving the difficulty of performing a specific behavior (Ajzen, 2019). The participants in this study knew that it might be difficult to include exercise in

their schedules as many responsibilities and tasks arise as a working mother. As mentioned, all the participants sometimes experienced mom guilt when leaving their families to exercise. Still, they recognized that the time away from their family and work benefited them and their relationships, improving their overall health and well-being. Participants reported exercising from home and using their outside environment to make the exercise fun, easy, and different from their usual routine during the pandemic. Participant #4 said, "I know I will get bored at home, so I have to change it up; then exercise doesn't become difficult." Many working mothers have reported that exercise can be expensive, and they lack the time and transportation (Curtis, 2021; Limbers, 2020). Participants in this study overcame these barriers by using what was available to them to exercise and maintain their health. Participants controlled their exercise behavior by using techniques and resources to remain active. With their PBC toward exercise, participants focused on strategies to address perceived barriers for working mothers. These participants have a good level of PBC to be able to exercise regularly during the pandemic, which may affect perceived barriers to exercise.

Limitations of the Study

There were limitations to this study. A limitation of this study was that the demographics were not reported and may have provided different results specific to a population or group. The findings should not be generalized to all working mothers. The subjective data of this study may only be the opinions of the participant in the study. Recruitment of participants was done only using social media from Facebook and Instagram, which limited the analysis to participants with access to these technologies.

This study did provide unique experiences of a working mother who sustained exercise during the pandemic. My journal reflections and researcher observations during the interviews may help future researchers understand this population and apply the findings to future research (Creswell, 2015).

Recommendations

A future research recommendation is to conduct a study with working mothers that focuses on specific age, ethnic geographic location, or socioeconomic group to see their lived experiences with exercise during a pandemic. Looking at a particular group may provide precise results and more details on how working mothers of different populations or groups sustain activity during a pandemic. Another future research recommendation is to explore the sources of PBC for working mothers who support the practice. The results of this study indicate that PBC may influence perceived barriers for working mothers, and knowing the sources of PBC may help working mothers develop strategies to overcome the obstacles to exercise.

Implications

Health education and promotion involve developing interventions and strategies to improve health for individuals, families, organizations, and society. The participants in this study reported that they could address common barriers to exercise by using their sources of self-efficacy and high levels of PBC. Interventions for working mothers to improve exercise levels should focus on enhancing PBC, which may address common barriers. Working mothers can benefit from exercise as stress increases once a woman becomes a mother (Limbers, 2020). Health education professionals can use the results of

this study to focus more on strategies to help mothers exercise by utilizing available resources, resources, and the environment that can improve their PBC. Using self-efficacy, PBC, and perceived barriers provided a comprehensive approach and a practical framework for understanding the lived experiences of the working mothers who sustain exercise during the pandemic. The narrative design provided detailed information that can be helpful for other populations and groups with multiple roles and responsibilities like working mothers. The results of this study show that recognizing barriers to exercise is helpful and should be managed effectively. Using strategies to help manage negative emotions such as mom guilt and focusing on the health benefits of exercise to motivate working mothers may be helpful for future interventions. The findings of this study can help other working mothers exercise despite barriers, improve their health, and possibly influence their families' exercise levels. This could potentially help improve working mothers' overall quality of life and mortality rate, which can affect families and society with less burden on healthcare expenses.

Conclusion

This study explored working mothers' experience with exercise during the pandemic using a narrative approach. This approach was practical as it allowed the participants to share their own because it allowed the participants to share their thoughts and ideas. The results revealed unique findings that added literature on working mothers and their experiences with exercise during the pandemic. By providing their own stories, the participants indicated that their PBC over their exercise regimen helped them address the barriers of movement working mothers face, such as time, accessibility, and childcare

responsibilities. The participants revealed that they were aware of the barriers to exercise and could address them with strategies and utilize their resources to sustain exercise during the pandemic. The participants expressed passion and excitement during these interviews, indicating how important exercise is to them and their health. The narrative interviews helped these working mothers express how exercise influenced their daily schedule and how interactions with family and peers were influential to their exercise. These participants said how their physical and emotional health and previous experiences influenced their exercise regimen during the pandemic. These findings could help understand what sources of self-efficacy influence other working mothers to exercise. This study can provide health education professionals with new information on supporting and developing PBC that may affect perceived barriers to working mothers who sustain exercise.

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Appendix A: Recruitment Flyer and Email to Potential Participants

Working Mothers & Exercise Research Study Participants Needed!

Your input is needed to explore the lived experiences of working mothers with exercise during the pandemic!

If you can answer "yes" to all the questions below, your participation is needed in a voluntary, confidential, academic research study on working mothers and exercise.

Are you working full-time, at least 30 hours a week?
Do you live with your child(ren)?
Have you been exercising at least three days/week for at least 30 minutes for the past three months?

If you have answered "**yes**" to each of the questions above, you are invited to an interview with the researcher, and contact information is below.

As a token of appreciation, you will receive a $10 gift card to participate in this study.

This study will involve:

- 45- 60-minute interview, whether face to face, phone, or virtually
- 20-minute follow-up interview over the phone, face- to face, or virtually.
- Approximately 20-minute review of data and results to ensure accuracy done virtually

All answers will be confidential.

Questions? Contact the researcher:
Sabrina Cali, sabrina.cali@walden.edu

Appendix B: Interview Protocol and Questions

Interview Protocol

Date of Interview: **Location of Interview:**

Start Time: **End Time:**

Name of Interviewee:

Recording Mechanism:

Phase 2: Introduction & Explanation about the Research

This phase involves:

- Purpose of the study
- Discussion of interview process: narrative interviewing is uninterrupted storytelling. Interview questions may be asked to guide them along.
- A reminder of the informed consent form
- Inform that the interview will be audio-recorded and transcribed, as well as field notes taken
- Remind participants that participation is voluntary and have a right to stop participating at any time

Interviewer:

Thank you and Purpose of Study: *Thank you for taking the time to meet with me today. As you know, this interview will contribute information for a research study intended to provide information on the lived experiences of working mothers' exercise during a pandemic.*

Recording of the Interview: *I will be audio recording this interview, and the interview transcription will be made available to you for your review. I will also take field notes of any observations during the interview. I will need you to choose a number I will use in the transcription notes to identify you and keep your identity private.*
Informed Consent Form: *Remember you consented to informed consent form, which protects your privacy during the study; no personal information will be shared. Your participation is voluntary, and you can leave the interview at any time. This is a narrative interview where you will have the opportunity to share your story without interruption.*
Narrative Interview Explanation: *In this interview, I will ask you repeatedly to recount situations in which you had experiences with exercise during the pandemic. Examples of this included obstacles and challenges to exercise and ways you have been able to overcome these and maintain your exercise regime.*

Interviewer:
Before we begin the interview, do you have any questions or concerns that I can help address?

Phase 3: Main Narrative

This phase involves:
A participant tells their story uninterrupted. Some interview questions may be asked to guide them along.
Interviewer:

We will move on to the next phase, the main narrative phase. This phase is also called uninterrupted storytelling. You will answer this question by sharing your experiences and story; I will write a few notes down as you talk.

Interview Question: *Describe your experience with exercise as a working mother during the pandemic, starting at the beginning of the pandemic to the present time.*
Include any influences and ways you have managed to include exercise in your regime as a working mother during the pandemic.

Interviewer:
Is there anything more you want to add about your experience as a working mother during the pandemic?

Phase 3: Questioning Phase

This phase involves:
Active listening by the interviewer becomes valid, and the interview uses participants' language to fill in gaps or ask for more detail or information about an issue of interest

These types of questions use the participant responses from the narration.
What happened when …?
Can you say a little bit more about …?
You mentioned…?

Phase 4: Conclusion
This phase includes:

- Thank the participant for their time and participation

Thank you for your time as a participant in this study. I will be reviewing the audio recording and transcribing the interview. I will share with you the transcript notes. We also need to set up our follow-up meeting for the following discussion in two weeks.

2-week follow-up Interview

Since we last talked, what is your experience as a working mother with exercise?
Two weeks after the initial interview, this follow-up interview will ask participants if any changes, additions, or experiences affect their exercise participation.

Phase 1: Preparation
As the researcher, I will review the audio transcription from the initial interview to prepare for this following interview.

Phase 2: Introduction
Thank you for coming today for our follow-up meeting. I just want to remind you of a few things:
Purpose of Study: *As you know, this interview will contribute information for a research study intended to provide information on the perspectives of working mothers and their sources of self-efficacy and barriers to exercise during a pandemic*.
Recording of the Interview: *I will be audio recording this interview, and the interview transcription will be made available to you for your review. I will also take field notes of any observations during the interview. I will need you to choose a number I will use in the transcription notes to identify you and keep your identity private.*
Informed Consent Form: *Remember you consented to the informed consent form, which protects your privacy during the study; no personal information will be shared. Your participation is voluntary, and you can leave the interview at any time. This is a narrative interview where you will have the opportunity to share your story without interruption.*
Narrative Interview Explanation: *In this interview, I will ask you repeatedly to recount situations in which you had experiences with exercise during the pandemic. Examples of this included obstacles and challenges to exercise and ways you have been able to overcome these and maintain your exercise regime.*

Phase 3: Main Narrative

Interviewer: *These questions reflect the past two weeks since the first interview.*

Interview Question: *How has your experience with exercise as a working mother been since we last interviewed?*
Include your influences and ways you managed your exercise regime as a working mother during the pandemic.

Interviewer:

Is there anything more you want to add about your experience as a working mother during the pandemic?

Phase 3: Questioning Phase
This phase involves:

- Active listening by the interviewer becomes valid, and the interview uses the participant's language to fill in gaps or ask for more detail or information about an issue of interest

These types of questions use the participant responses from the narration.

What happened when …?
Can you say a little bit more about …?
You mentioned…?

Phase 4: Conclusion
This phase includes:

- Thank the participant for their time and participation.

Interviewer:
Thank you for your time as a participant in this study. I will be reviewing the audio recording and transcribing the interview. I will share with you the transcript notes. Here is your $10 gift card for your participation. I will be sending you an email with the final study document for your review, and you can let me know if there are any discrepancies or changes.

Appendix C: Examples of Participant Responses, Codes, Categories, and Themes

Responses	Codes	Category	Theme
"I've always been active. When I was in grad school there was a big focus on self-care and I began walking and running and felt it was so beneficial, I knew I always needed to keep doing this in my life, being active,"	Always been active	Mastery experience	Experience with exercise
"When I became a mother, I found that exercise was a great way to reconnect with myself and I used the experience I had running track and sports to remember how to change up my routine and challenge myself"	used the experience I had running		
"I 've joined various gyms throughout the years and used what I knew to create new workouts for myself and create goals"	always been active in my life		
"I've always loved exercise. I really enjoyed talking about my experiences. It helped me realize that I actually do accomplish something, amidst all of the other responsibilities I have."	always loved exercise		
"I do feel better physically and mentally if I'm exercising on a regular basis"	feel better physically and mentally	Physiological/emotional health	
"I've always struggled with depression and anxiety which I know is better when I am exercising. I also have energy and my mood is better,"	have energy and my mood is better	Physiological/emotional health	Benefits: Physical and Mental
"I feel better, like my body feels better when I'm healthy when at a healthy weight, and when I'm active and I sleep better. "	body feels better, sleep better	Physiological/emotional health	
Exercise for me is a mental health practice. It's a stress reliever for me," my husband just knows when I don't exercise, and moves our schedules around so I can get it in."	Exercise for me is a mental health practice	Physiological/emotional health	

"So it started with a goal of losing weight which I did, and it was awesome. But now it has become just truly a part of my routine and if I don't do it, I miss it. My mind and body feel different. "	My mind and body feel different.		Physical and mental benefits
"Exercise was one of the most important aspects that helped me stay sane," "I just want to be an advocate for moving at least 5 to 10 minutes, I can't explain how that is good for you overall, you will feel different, and it will feel good. But taking care of yourself truly feels amazing, I wish more people felt like that,"	aspects that helped me stay sane	Physiological/emotional health	Physical and mental benefits
	taking care of yourself truly feels amazing	Physiological/emotional health	Physical and mental benefits
"You have to be selfless as a mom and we do everything. I do everything for my kids, but you have to be a little selfish at times and say, This is important to me. This is what we are doing. You have to include them, or you say ok, you sit over there you play over there, you do whatever, but this is what I need for myself,"	a better person and I feel better when I exercise	Physiological/emotional health	Physical and mental benefits
	better person		physical and mental benefits
"I know I am a better person and I feel better when I exercise. I am a better wife and better everything. I know I need it for myself,"			
"My husband is so supportive of my exercise routine. He makes sure our schedules are open to incorporating it in our families' schedules,"	incorporating it in our families' schedules,"	Perceived barriers/PBC	Scheduling and preparation Family support
"My wife supports me going to the gym and will help if the kids are upset when I leave. She reminds them that everyone has something they love to do, and this is mommy's favorite thing to do."	always include my exercise routine each day		Scheduling and preparation
	schedule time for me to exercise		Family support

"We sit down and write down how the week will look, and I always include my exercise routine each day."	include my exercise routine each day		
"I work hard with my husband to look at the week and schedule time for me to exercise that won't challenge our schedules, meaning It won't involve much rearranging."	Schedule time for me to exercise		Family support
			Scheduling and preparation
"I use my lunch break very intentionally for exercise. I block off the lunch hour in my calendar, so my peers know I am busy and also did does not take away from my time at work."	my lunch break very intentionally for exercise		Scheduling and preparation
"I moved our dinner back so I can exercise before, and it worked well for my kids too."	moved our dinner back so I can exercise		Scheduling and preparation
"I purchased the mirror to help provide a variety of workouts I needed at home with the flexibility and availability I needed,"	variety of workouts at home		Exercising at home
"I immediately bought a treadmill at the beginning of the pandemic with my tax return money to keep me on track,"	bought a treadmill		Exercising at home
"I turned my extra room into a workout room because I know that is the only way I could get exercise in my day,"	extra room into a workout room		
"My husband and I decided to buy a Peloton because well we are kinda glued to our kids a lot. We don't have a lot of childcare options here and exercising at home was really the only one I could get it done."	exercising at home was really the only one I could get it done		
"Each day my kids would pick what activity/exercise we did, and they loved it.	my kids would pick what		

We got them involved. It wasn't perfect but it helped them, and I stay active."	activity/exercise		
"I loved playing exercise games with my kids, like running games, tag, and we made it fun, and I challenged myself to keep moving for at least 20 minutes each time."	played exercise games with kids		
"During the time my kids were taking physical education classes I exercised. It was a good way for them to see I exercise it is important."	good way for them to see I exercise it is important."		Role model for kids/others
"I use early mornings before anyone wakes up to exercise and now exercise is just something I do without thinking. It is also so peaceful when no one is up and allows me to have me time I need."	early mornings before anyone wakes up to exercise		Exercising at home Self-care
"I biked with my kids and bought a trailer now so they can see me exercise,"	bought a trailer now so they can see me exercise		Role model for kids/others AND utilizing built environment
"I walked every day with my kids, and we would play games outside to get out and enjoy the weather too, "	walked outside everyday		
"I would run outside every morning despite the weather because it was what I needed."	Run every morning		
"I hope my kids see me and know how important exercise is for health,"	kids see me and know how important exercise is for health		Set example for kids/others
"I feel really passionate about exercise- my kids needed to see me active because they were constantly with me. They need to see			

how important exercise is for me and my health so hopefully, they can like it, and do it as they grow up”	my kids needed to see me active		Set example for kids/others
“And honestly now that I have kids I do it [exercise] for them, too. For many reasons, I want to set a good example. So that is motivating,”	want to set a good example		Set example for kids/others
“I feel I just know how crucial it is for them to watch me. They should be watching me. Even if they are not saying anything in that moment, they are watching me,”	I feel I just know how crucial it is for them to watch me		Set example for kids/others
“I want to set an example for my co-workers that exercise is important, and they see me take time for me, take my lunch break and break from work and exercise. Exercise should be celebrated, and I hope they see that and are motivated to fit it [exercise] in their lives, even despite having families and other roles that may take them away from their self-care.”	set an example for my co-workers		Set example for kids/others
“I wanted to make sure my kids either worked out with me or saw me working out to make sure that they know its importance in life. So I mean from the beginning of their life I included them and tried to make it fun, they can pick music and also moves.”	saw me working out		
“Even if they’re sad, I’ll still leave sometimes. It’s not easy. Like I feel bad saying that, but I’ll look back and be like, I’m sorry guys. I’m leaving. I’ll be home in an hour. It goes back to like, if that’s what you need to be a better person, wife, mom, do it. I need it to feel better about myself. And you know, I sacrifice so much for the kids we do much for them I believe for an hour at the gym you are going to be ok. I do feel bad, but then, I don’t, ya know?”	feel bad	Physiological/emotional health	Managing mom guilt
			Managing mom guilt
	important it is to set an example	Physiological/emotional health	

			Managing mom guilt
"This pandemic has been harder than I thought. When I really sit and reflect, despite on how lucky I am, I feel like talking about the time we went through makes me sad. I have mom guilt all of the time, 24 hours a day. But I work from home mainly and the advantage is I can mostly exercise at home when they are at school. So that way I don't feel like I am taking time away from them, but again, I still feel guilty in other ways. The mom guilt is awful, just awful. But I think because I know how important it is to set an example for them, I don't feel as bad, "	mostly exercise at home when they are at school	Physiological/emotional health	
		Physiological/emotional health	
			Managing mom guilt
"Sometimes I feel bad for exercising and leaving my kid, but sometimes I don't. like I said, I know it's a good thing for him to see me exercising and taking tie for myself,"			Managing mom guilt
"So if one of my kids it crying at my door when I am exercising in the room, we say, what makes mommy happy? They yell, exercising. And we laugh and I can finish my workout. It's now a running joke. I need them to see that I need this and that this is important. That is ok that they cry because I know they know I still love them."	Sometimes I feel bad for leaving		
	ok that they cry because I know they know I still love them		