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Exploring Motivation to Adhere Among CrossFit Exercise Participants

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Walden University

College of Social and Behavioral Sciences

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Lauren Falgout

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Walden University
2021

Abstract

Exploring Motivation to Adhere Among CrossFit Exercise Participants

by

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MPHIL, Walden University, 2019

MSW, University of Southern California, 2013

BA, Pennsylvania State University, 2012

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

General Psychology

Walden University

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Abstract

Lack of exercise and obesity are prominent social problems in the U.S. population. Therefore, understanding the experiences that promote or hinder motivation and exercise adherence is important. A total of 15 adult participants who engaged in CrossFit for a minimum of 6 months were recruited for this generic qualitative study using purposeful sampling methods. They responded to an invitation on a social media page for CrossFit participants. They shared their exercise adherence experiences and motivation through semi-structured qualitative interviews. Trustworthiness procedures included reflexive journaling, and member checking. Data analysis proceeded from transcript reading to working with broad themes and phrases from the text to identify codes, categories and themes related to the research questions. Results of this study revealed that study participants found motivation to adhere from a variety of different sources, including autonomy, pride, and the physical and mental health benefits produced. Use of self-determination theory to guide the analysis revealed that autonomy, connection, and competence were present in CrossFit and support motivation and exercise adherence. Implications of this study suggest future research to better understand exercise adherence and motivation which can positively impact physical and mental health parameters of adults. Application of the results of this study could encourage people better select and better design exercise programs that lend to increasing the likelihood of adherence leading to positive social change.

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Dedication

Jeremy, my incredible husband, there are no words to express the role you've played in completing this milestone. There are no words to express my adoration and appreciation for you. I love you very much. Thank you for your support, flexibility, acceptance, constant motivation, and consistency in being here for every obstacle and triumph on the way. You have made this possible for me and for our family.

Riley my beautiful baby girl. This is for you Peanut - everything I do is for you. I love you.

My mom and dad. You two are the greatest people in the world. Everything I have ever been able to do in this life has been a direct correlation to your consistent love, sacrifice, understanding, and support. I love you both beyond words.

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Chapter 1: Introduction to the Study

Exercise has known positive effects on physical and mental health. Physical exercise has been correlated with increased self-esteem, wellbeing, and mental health (Guiney & Machado, 2012; Penedo & Dahn, 2005). Physical exercise is also linked a decrease in other health deficits, such as heart attack, diabetes, and stroke (Geevar, & Anoop, 2017; Langoni et al., 2019). Mental health is also impacted by exercise engagement in terms of decreasing symptoms of current disorders such as depression, anxiety, and PTSD, as well as increasing self-esteem and overall sense of wellbeing (Mander & Motta, 2005; Murri et al., 2019; Whiteman-Sandland et al., 2018; Yigieyer, 2014).

With this stated, only 31% of American adults adhere to the CDC recommended required amount of exercise, which is 150 minutes of moderate-level exercise, or 75 minutes of high-intensity exercise, per week (CDC, 2015; Whiteman-Sandland, et al., 2018; WHO, 2015). Additionally, research shows that 50% of adults who do begin a workout program will drop out within the first 6 months of participation (Wilson & Brookfield, 2009). Obesity, a side effect linked to lack of exercise, is rising worldwide at a prevalence of 42.8% in middle-aged adults (CDC, 2015). In sum, despite the considerable amount of research demonstrating that exercise is empirically linked to increasing mental and physical health and reducing the risk of obesity and other health deficits, Americans still predominately do not engage in the minimum recommended amount of physical activity.

CrossFit is an exercise style that combines strength, cardio, weightlifting, and gymnastics components. CrossFit has gyms currently in 142 countries, is rapidly growing, and is considered one of the best fitness training methods since its introduction in the year 2000 (Claudino et al., 2018). CrossFit is a highly popular sport that is engaged in by athletes of various ages, gender, and skill level. While the costs of engaging in CrossFit are higher than that of traditional gyms, it is still a popular type of exercise program. CrossFit has been described as having industrial style gyms with no high-end amenities, a strong social component, and an environment specific to this exercise style (Crockett & Buttryn, 2018). The CrossFit environment has been identified as one that increases motivation (Patridge et al., 2014). CrossFit differs from current exercise modalities in the means of its layout environmentally, social aspect, inclusivity across age and gender, format of class, use of varying exercise styles such as gymnastics, weightlifting, and cardiovascular activities, marked short intense workouts programmed each day (WODs), and focus on open competitive nature (Claudino et al., 2018; Crockett & Buttryn, 2018). CrossFit is similar to current forms of exercise in terms of low risk of injury rate and link to positive attributes gained mentally and physically from exercising (Murri et al., 2019). At present, there are limited studies focusing on participant motivation to engage in CrossFit.

Motivation to adhere to exercise has a crucial role in maintaining the recommended amount of exercise for adults. Motivation plays a role in an individual's decision to maintain and sustain exercise, and therefore is an important aspect needed to reach positive health outcomes (Teixeira et al., 2012). Looking at motivation through

the framework of self-determination theory (SDT), understanding an individual's ability and decision to adhere can be derived to the presence of feeling autonomous, connected, and competent. Autonomy can be defined as a sense of control over one's decisions, behaviors, and goals. Connectedness refers to feeling a sense of belonging, attachment, or relationship. Competence can be defined as a feeling that one is able to learn or master or driven to take part in an identified skill or task (Teixeira et al., 2012). A recent study confirmed that CrossFit athletes have higher levels of intrinsic goals, psychological need satisfaction, competence, and potentially autonomy basic need satisfaction (Sibley & Bergman, 2018).

In this study, I sought to better understand the motivation to adhere to regular exercise among CrossFit athletes. This study explored motivation through a SDT lens as this is a good model for understanding exercise behavior (Teixeira et al., 2012). The results of this study can contribute to a better understanding of exercise adherence with the goal to improve health outcomes associated with fitness commitment. Prior studies suggest that fitness leaders could make more efforts to enhance the feelings of competence and autonomy for their participants, and this study would aid in doing this (Sibley & Bergman, 2018).

In this chapter, I provide an understanding of the background with the use of a problem statement. I explain the nature of the study and provide research questions in the form of a central research question and sub-questions. I also explain the purpose of this study and the conceptual framework and provide operational definitions of key terms. Next, I explain any assumptions, limitations, and the scope of delimitations associated

with this study. This section ends with an explanation of the significance of this study and a summary, to aid with transitioning to Chapter 2.

Background

Exercise engagement has been empirically linked to an overall increase in positive health outcomes. Such health outcomes include physical improvements such as increased heart health, lower cholesterol, improved body weight, improved cognition, decreased chances of diabetes, decreased chance cancer, obesity, and osteoporosis, and a decrease in premature death due to health deficit (Langoni, et al., 2019; Warburton et al., 2006). Psychologically, some positive effects of regular exercise can include a decrease in depression, anxiety, and other mental health concerns' symptoms, and an overall increase in stress management, self-esteem, and quality of life (McArdle & Gaffney, 2011; McGale, Murri et al., 2019; Yigieyer, 2014). Exercise adherence, fielded by motivation, plays a critical role in an individual's choice to continuously engage in fitness (Oman & McAuley, 1993). Aspects of connectivity, autonomy, and competence play a critical role in intrinsic motivation leading to exercise adherence (Teixeira et al., 2012).

CrossFit is an exercise style marked by characteristics of various fitness styles in a unique social context. CrossFit can be defined as an aerobic exercise style marked by short intense workouts, group class style, unorthodox fitness characteristics compared to current popular gyms, and possessing gymnastic, weightlifting, and cardiovascular elements (Claudino et al., 2018; Crockett & Butryn, 2018). Some unorthodox characteristics of CrossFit can include open layout of the gym to encourage social interaction, high level of competition, adaptability for various genders, ages, or fitness

levels, a minimalistic gym mentality, and the use of high intense workouts paired with strength components (Borras et al., 2017; Claudino et al., 2018; Crockett & Butryn, 2018).

CrossFit is a newer avenue that differs from current exercise methods to explore exercise adherence/ motivation. Due to the novelty of CrossFit, being only 15 years old, as well as its unique characteristics, there is a gap in exploring how this may impact exercise adherence to better understand motivation to engage in physical fitness. In the few current studies on CrossFit, there is identification that these athletes have higher levels of intrinsic goal setting and competence needs satisfaction. It is also suggested that further work on feelings of competence and autonomy be explored in the realm of maximizing participant motivation (Sibley & Bergman, 2018). In sum, this study is needed to better understand motivation to adhere to fitness via the use of CrossFit participant experiences to better understand aspects that promote exercise adherence. Results of this study could be useful in designing exercise modalities that support adherence to exercise to increase overall health.

Problem Statement

Exercise engagement is an important aspect of life for adults and improves multiple aspects of a person's overall health parameters across a variety of avenues. Some areas that are highly impacted by exercise include improved executive brain functioning, increased physical health, decreased physical disease, improved mental health, and improved wellbeing (Guiney & Machado, 2013; Penado & Dahn, 2005). Physical exercise is linked to higher positive affect, self-esteem, and well-being and

reduced risk for mental health conditions such as anxiety, stress, and depression (Koteles et al., 2016; Whiteman-Sandland et al., 2018). After 5 weeks of exercise exposure, adult men noted a decrease in depression, as measured by Beck's Depression Scale, an improvement in mental state, improved positivity, decreased hopelessness, and a greater perception of social support (McGale et al., 2011; Murri et al., 2019; Yigieyer, 2014). Current studies show that aerobic and non-aerobic exercises yield lower anxiety and depressive symptoms and serve as effective stress management tools (Mander & Motta, 2005; Murri et al., 2019). In sum, physical exercise improves depression, mood, self-esteem, self-image, quality of life, and cognitive functions for those who participate (Biddle, 2016).

CrossFit has characteristics that traditional gyms and exercise styles do not possess. Such characteristics include the social involvement of the training style, the more industrial gym layout, lack of high-end amenities that traditional gyms have, the promotion of competition among members, openness of performance, and general structure (Claudino et al., 2018; Crockett & Butryn, 2018). Additional aspects of CrossFit include the organization of their short intense workouts, group class style, and unorthodox fitness characteristics (Crockett & Butryn, 2018). CrossFit workout of the days (WOD) includes core elements from gymnastics, weightlifting, and cardiovascular activities (Claudino, et al., 2018).

To understand CrossFit's popularity and the motivation to engage in it, it can be compared to similar exercise methods. The positive physical effects of CrossFit are identified as similar to current methods of exercise, such as traditional gyms (Borras et

al., 2017). The risks associated with participation in CrossFit related to traditional exercise styles are comparable and considered normal. Therefore, the injury rates and health outcomes of CrossFit and other high-intensity exercise models are similar (Meyer et al., 2017). CrossFit has been associated with a sense of community satisfaction and increased levels of exercise motivation (Claudino et al., 2018). In sum, the rewards and risks of CrossFit are considered average, while the social climate can be identified as different from current methods.

Despite the rapid growth and high popularity of CrossFit, there are few peer-reviewed research studies on this fitness model or literature focused on CrossFit and the practice of it (Claudino et al., 2018; Simpson, et al., 2017). Several studies have been done to identify the physical effects of CrossFit; however, there is a gap in the literature regarding specific aspects of CrossFit that impact motivation to adhere. There is a need for further studies on CrossFit in general (Meyer et al., n.d). Specifically, there is a need for more studies on CrossFit as related to motivational factors (Box et al., 2018; Crockett & Butryn, 2018; Eather et al., 2016; Koteles et al., 2016).

Prior research shows that there are positive health outcomes associated with engaging in exercise, including CrossFit (Teixeira et al., 2012; Whiteman-Sandland et al., 2018). CrossFit has been empirically linked to adults who yield high levels of motivation, high levels of engagement, and positive health outcomes physically and mentally (Claudino et al., 2018). CrossFit presents with nontraditional fitness aspects such as open competition, industrial gym space, and HIT group classes that differ from the norm in gyms in the fitness industry today. Little is currently known as to how CrossFit's format

is experienced by participants or how they may experience motivation to adhere (Oldale, 2015). Research to further understand CrossFit participants' motivation to adhere may offer insight for public health promotion of exercise engagement by non-active individuals. The purpose of this generic qualitative inquiry is to explore the experience of exercise adherence for adults who participate in CrossFit.

Purpose of Study

The purpose of this generic qualitative inquiry was to explore the experience of exercise adherence for adults who participate in CrossFit. Research suggests that there is a correlation between motivation and exercise adherence (Oman & McAuley, 2019; Teixeira et al., 2012). The CrossFit environment has been identified as one that fosters motivation; however, there is currently a limited amount research studies done of CrossFit in general (Claudino et al., 2018; Patridge et al., 2014; Simpson et al., 2017). Prior research provides support for more research to develop an in-depth understanding of adherence in the CrossFit setting (Crockett & Butryn, 2017; Patridge et al., 2014). Results of this study could aid in identifying how the experiences of CrossFit participants impact their exercise motivation with implications for increasing exercise engagement to yield the positive health benefits that coincide.

Research Question

How do adults who participate in CrossFit describe exercise adherence?

Subquestions:

SQ2- How does the experience of competence contribute to adherence?

SQ3- How does the experience of connection contribute to adherence?

SQ4- How does the experience of autonomy contribute to adherence?

Conceptual Framework for the Study

Exercise motivation was considered through the theoretical framework of self-determination theory (SDT). SDT is an empirically supported theory of understanding human behavior through motivation, wellness, and personality across different social contexts (Deci & Ryan, 2008; Deci & Ryan, 2012). This theory describes the rationale factors that are involved in motivation for specific behaviors based upon aspects of autonomy, relatedness, and competence levels. The theory focuses on the type of motivation as predictors of performance, relational, and well-being outcome types across social conditions that may enhance or diminish these motivations (Deci & Ryan, 2008). This model identifies factors that influence a person's behavior, which can be intrinsic (inherent satisfaction, joy, challenge, etc.) or extrinsic (achievement rewards, social recognition, punishment avoidant, etc.; Maltby & Day, 2001).

It is key to construct, learn, and assimilate intrinsic motivation. Some aspects of intrinsic motivation are relative to autonomy, control, or self-regulation (Ryan & Deci, 2000). Other main areas of SDT are understanding how autonomy, competence, and relatedness foster or delay motivation and engagement in an activity. SDT focuses on how social and cultural aspects can either promote or hinder a person's well-being, commitment, or quality of performance (Deci & Ryan, 2008). SDT can be used to explore the critical role motivation plays in supporting long term, sustained exercise behaviors.

Much of the research on exercise motivation focused on how people shift from extrinsic to intrinsic motivation to maintain adherence (Richard et al., 1997). Thus, intrinsic motivation is proven to be a healthy predictor in successful program adherence when looking at the behavior of exercise participants (Oman & McAuley, 2013). Considering trends in exercise motivation through the lens of SDT point toward autonomous exercise, levels of competence, and intrinsic modalities leading to increasing exercise behavior (Teixeira et al., 2012). When looking at exercise adherence through SDT it is found that where characteristics that promote autonomy are present, adherence and increased engagement is found. (Zhong & Wang, 2019). With the known psychological and physical health benefits of regular exercise, it is important to understand how adult exercisers experience adherence to maintain health and well-being.

Nature of the Study

This study was a generic qualitative research study aimed at exploring the nature of exercise adherence and the ways participants experienced motivation to adhere to the CrossFit model of fitness. Focus was on the roles autonomy, competence, and connectively play in exercise engagement among CrossFit participants. The phenomena being explored were adherence, competence, connection, and autonomy. These aspects of autonomy, competence, and connection are contrived from the SDT that has been used to explore motivation to adhere to exercise (Teixeira et al., 2012).

The exercise examined in this study was the CrossFit program. CrossFit was defined in this study as a style of fitness marked by short intense workouts, group class style, nontraditional fitness characteristics compared to current popular gyms, elements of

fitness from gymnastics, weightlifting, and cardiovascular fundamentals, and heavy competition and interaction (Claudino et al., 2018; Crockett & Butryn, 2018). I specifically looked at adherence to exercise among adults who participated in CrossFit as an exercise model for at least 6 months and how they experienced autonomy, competence, connectivity, and motivation to engage.

Qualitative research was used as it is best used for fieldwork and naturalistic engagement, descriptive explorations, and a better understanding of phenomena processes and relationships. Further, qualitative research is used for inductively building concepts to identify meaning and understanding (Ravitch & Carl, 2016). The data were gathered from voluntary individuals who met the criteria of being 18 years old or older, currently taking part in CrossFit for at least 6 months regardless of the modifications needed due to COVID-19, who were available for interviews via virtual means, and those who did not know me. The data were collected via semi structured qualitative interviews carried out by me over a virtual platform to account for safety during COVID-19. Additional sources of data were my notes and reflective journaling done before, during, and after interviews. I analyzed the data in a manner that actively encompassed the preparation of this study, organization of this study, management, and presentment of all collected data. Data were categorized into patterns of themes that emerged from the data as a means of constructing meaning (Saldana, 2016). This process of data collection was done to reduce all data and aid in decreasing any bias I may have had. Therefore, qualitative research was deemed appropriate for this study because this approach would aid in obtaining a better understanding of the experiences of exercise adherence in

CrossFit participants, particularly the motivational aspects that support or hinder exercise adherence.

Definition of Key Terms

Adherence to exercise: maintain a compliance to an exercise program over a specific, or extended, period of time (Chapman et al., 2015).

Autonomous: a sense of being in control of one's behaviors and goals (Teixeira et al., 2012).

Competence: feeling a need to, and ability to, gain mastery and learn differing tasks (Teixeira et al., 2012).

Connectivity: an experience of being connected to others. This promotes a sense of belonging and attachment to other individuals (Teixeira et al., 2012).

CrossFit: an aerobic exercise style marked by short intense workouts, group class style, and unorthodox fitness characteristics, compared to current popular gyms, with gymnastic, weightlifting, and cardiovascular elements (Claudino et al., 2018; Crockett & Butryn, 2018).

Motivation: the psychological phenomena which builds inside an individual that leads to action. The complex force that directs one's behavior or can cause a person to repeat a behavior. The degree to which a human is ready to engage in or pursue a designated goal, which requires determination, focus, and readiness (Vincent & Kumar, 2018).

Assumptions

Qualitative research is used to analyze and express meaningful descriptions of a phenomenon to be able to better understand and evaluate the process, meanings, or understanding of those experiencing said phenomena (Ravitch & Carl, 2016). In this study, I assumed that all participants would provide honest feedback regarding their experiences to adhere to exercise as well as with their engagement in the CrossFit exercise program. I assumed they would be open and truthful so that their responses could provide clear and authentic descriptions of the experiences they had with the above-noted areas of interest. I also assumed that the motivation to adhere to exercise among participants would be understood in terms of SDT. This was assumed because Teixeira et al. (2012) discussed the key role feeling connected, autonomous, and competent play in a person's decision to adhere to exercise. I assumed all work on my end would be authentic, bias free, and done to effectively collect specific data based upon experiences of motivation and exercise adherence in adults. I also assumed that my methodology strategies, that will be later describe in Chapter 3, would decrease any potential bias that I, as the researcher and instrument, may have had to avoid any issues in the data collection, interviews, and data analysis phases.

Scope and Delimitations

Potential barriers included any partner site agreements that would be needed. Diversity of participants or the inability to find various CrossFit participants from differing gyms could be a limit as well. CrossFit was selected as an avenue to explore exercise adherence due to the novelty of the exercise, the differences between CrossFit

and traditional methods, and the lack of current research. CrossFit is considered a relatively new form of exercise when compared to traditional gyms that was introduced by Greg Glassman in 1996 with a simple goal to prevent diseases prior to experiencing them, increase overall health, and identify an effective fitness option that differed from current models in the fitness community. This idea was not developed fully into the sport that is now known as CrossFit until 2000 (Claudino et al., 2018; Glassman, 2006). CrossFit did not gain its rapid popularity until around 2005 when it quickly reached over 10,000 affiliates, or “boxes,” in over 142 countries, capturing a variety of different genders and ages (Kuhn, 2013). CrossFit is different from traditional methods, referred to as a radical fitness movement, in ways such as the use of short intense workouts (WODs) and strength components, social environment that promotes interaction and competition, fixation on menial labor movements, “beat the clock” mentality, minimalistic industrial style gym layout, maximum intensity, and using various components from different sports (Crockett & Butryn, 2018). CrossFit, being relatively novel, and being identified as one of the best fitness training models, still lacks empirical support and is recommended to further explore (Borras et al., 2017; Whiteman-Sandland et al., 2018). Due to the nontraditional aspects of CrossFit, the lack of current research, and the novelty of the sport, it may offer new understandings and insight on the experience of motivation and adherence to exercise.

SDT is one of many theories used to explore, understand, and explain motivation. SDT identifies an understanding of human behavior as a predictor for preformation or specific behavior outcomes across social context that may increase or decrease these

motivating factors (Deci & Ryan, 2008). SDT argues that autonomy, competence, and connectivity are factors that increase intrinsic motivation to engage in a behavior (Deci & Ryan, 2012). These aspects of autonomy, connectivity, and competence are identified as related to intrinsic motivation that provides higher levels of increased regular physical activity (Teixeira et al., 2012). SDT has proven to be a positive model to use with exercise adherence according to several studies on physical activity (Teixeira et al., 2012; Zhong & Wang, 2019).

Limitations

I used the purposeful sampling method of criterion sampling to identify adult CrossFit participants who had been adhering to exercise for at least 6 months. Transferability in qualitative research is identified as when a study is bound contextually and creates authentic meaningful descriptions and relates completely to the context and context statements (Ravitch & Carl, 2016). To aid with increasing transferability, I provided a well-documented, clear, and concise account of all aspects of this study to aid with it being able to be replicated. It is suggested that transferability can be achieved by use of a data enriched full background, context of the study, clear detail of the phenome being studied, all steps in the given study, and high level of description to aid with using later comparisons or repeating the study (Shenton, 2009). The high level of detail description included several areas including transcribed notes, all steps of the study, data gathering processes, in depth interviews, origin of my research questions, and any observations of participants and during self-reflections that I noticed.

Another limit in this study was dependability. Dependability is similar to quantitative studies' reliability and refers to an ability to replicate the results of a given study across time (Morse, 2015). Steps I took to ensure increased dependability included providing research that aids in showing that the study aligns with the design, implementation techniques, and methods of research were carried out well. Additionally, I used documentation at every phase of the research process to ensure that all things that occur in the field internally by the researcher and externally with the participants were carried out properly and ethically. Additionally, these documents provided ample time to reflect on patterns and evaluations to process any patterns I noticed (Shenton, 2009). To aid with increasing dependability, I carried out the above noted tasks, providing a detailed audit trail, and safeguarded all documents to protect privacy of participants. These documents aided in ensuring authentic representation of participants' responses while decreasing any bias.

Further, bias could limit this study. I may have biased opinions due to the fact that I have participated in CrossFit for 3 years and that I am currently a CrossFit coach. To limit this bias, I kept detailed journals for reflection before, during, and after interviews to ensure no bias, assumptions, or opinions persuaded my view of the data being collected. Additionally, after all interviews were carried out, I took part in a member checking process, sending drafts of my written chapters to my dissertation chair. Further, I shared my data and data analysis with my other committee member to aid with member checking and identifying any potential bias in my results. Other sources of bias could have come from the participants. This could come in the form of participants feeling

pressure to answer in a specific way that may please the study or researcher. To decrease this, one of the criteria I used for participants was to exclude any persons that may have a prior or existing relationship with me. This lack of dual relationship with any participants could have aided in them feeling safe to openly share their authentic experiences with adherence to exercise in the CrossFit program.

This research occurred during the COVID-19 health pandemic. This pandemic led to some CrossFit gyms being closed for health concerns, limiting in the number of class participants, and in some areas had left highly motivated members using alternate means to carry out home CrossFit workouts. Some examples of alternate means of CrossFit include the use of Zoom meetings for class, class style and size alterations, and the use of different equipment than the traditional equipment found at CrossFit gyms. This offers insights into motivation to adhere to exercise in the face of adversity and obstacles.

Significance of Study

The purpose of this generic qualitative inquiry was to explore the experience of exercise adherence for adults who participate in CrossFit. Exercise adherence, and the motivation required to adhere, is a crucial factor in reaching the positive effects that correlate with physical fitness (Oman & McAuley, 1993). Dropout rates of traditional gyms are high, with 50 % of those joining a gym dropping out within 6 months. Other exercise programs are estimated to have a 20-50% withdrawal rate within the first 5-6 months (Whiteman-Sandland et al., 2018).

Exploring CrossFit as an avenue of fitness is key in exploring if the CrossFit experience impacts exercise adherence. CrossFit differs from current exercise modalities

in ways such as social involvement, programming, competitive nature, gym layout, inclusivity across age and gender, and class structure (Crickett & Butryn, 2018). CrossFit is similar to current exercise modalities in terms of the risk and reward factors associated with this program. For example, CrossFit has a similar injury risk factor percent of 2.10 per 1000 hours of training, which is considered relatively low and conducive with other current methods (Moran et al., 2017). Further, exercise also impacts physical health and mental health in ways comparable to current exercise methods (Borras et al., 2017; Claudino et al., 2018; Eather et al., 2016; Koteles et al., 2016). Therefore, this study used CrossFit as a context to better understand exercise adherence in particularly stressful times, such as this time of COVID-19. Additionally, better understanding motivation to adhere to this level of fitness via the use of participant experiences could aid in better understanding aspects that promote exercise adherence. Results of this study could be useful in designing exercise modalities that support adherence, and engagement, to facilitate exercise interventions as preventative healthcare measures or ways to increase overall health. For example, I plan to publish the results of this study so that other researchers can build upon this empirical foundation to continue to explore ways to better understand motivation and exercise adherence. This step could lead to positive social changes in the way exercise programs are designed, or how adults engage in exercise, to increase the likelihood of more adults complying with exercise to yield the positive health outcomes associated with prolonged exercise engagement. Furthermore, on a smaller scale, I coach CrossFit twice a week at my local gym. I can use the results of this study to improve my coaching ability and the coaches around me. I can be mindful of

these results and aid in increasing an environment that fosters autonomy, competence, and connection for participants.

Summary and Transition

A gap in the literature exists regarding motivation in respect to exercise adherence among CrossFit program participants. With the use of qualitative interviews as a means to gather data for this study, I was able to explore the perceptions and responses of participants as to their motivation to adhere to CrossFit. The findings and information gained from this study can aid in better understanding exercise adherence for adults who participate in the CrossFit program with the goal of better understanding exercise adherence and motivation and improving healthcare outcomes.

In this chapter, I provided an introduction, problem statement, and background for this study. I also included the purpose, the significance, the conceptual framework, the research questions, the assumptions, the limitations, and the scope and delimitations of this study. In the following chapter, I will carry out an extensive exploration of literature regarding motivation as it related the exercise adherence across the CrossFit program. Further topics that will be described in Chapter 2 will be search strategies I used, the conceptual framework, and a detailed outline of exercise, CrossFit, and motivation. Chapter 2 will be an in-depth literature review of current literature exploring the gaps and identifying key patterns and concepts that may be presented.

Chapter 2: Literature Review

Introduction

The purpose of this generic qualitative study was to better understand the experiences and motivation to adhere in adults who participated in CrossFit. I used SDT as the theoretical framework to better understand the role that autonomy, relatedness, and competence play in the experiences of adults who participate in CrossFit.

This chapter will provide information about the group selected for this study through the use of empirical research and current literature. This chapter will explore lack of exercise as a current prevalent social problem. A relationship between exercise engagement and overall health will be identified, outlined, and supported. Information about CrossFit as an exercise will be provided with current literature to justify this study as necessary. Other topics in this chapter will include the recommended amount of exercise, effects of lack of exercise, SDT, mental health and exercise, physical health and exercise, and current CrossFit aspects and studies.

Many studies exist that support the known relationship between engaging in exercise and the positive effects it has on a person's overall physical and mental health. Exercise improves physical health, well-being, and mental health when the suggested minimum requirements of physical fitness recommendations are regularly met (Appelgvist-Schmidlechner et al., 2017; Biddle, 2016; Kianianet al., 2018; Murri et al., 2019; Weir, 2011). However, obesity is a current social problem that is on the rise in the United States, with prevalence rates of 35.7% in young adults, 42.8% in middle-aged adults, and 41% in older adults (CDC, 2015). With this said only 22.9% of adults in the

United States meet the minimum requirements for exercise per week (CDC, 2018).

Further, research shows that 50% of adults who begin to exercise will discontinue this activity within 6 months of starting (Wilson & Brookfield, 2009). Further, more than 190 billion US dollars per year are used to treat obesity and other obesity-related health complications (Smith & Smith, 2016).

CrossFit is currently a popular exercise style among adults that has spread to over 10,000 affiliates worldwide (Claudino et al., 2018). The CrossFit training model is noted as one of the best fitness training models that are engaged in by adults across varying ages, races, skill levels, and genders (Crockett & Butryn, 2018). Therefore, with the current social problem of lack of exercise in the U.S., it is important to understand the motivational factors in adults who adhere to CrossFit as a current exercise model.

Literature Search Strategy

The literature collected for this review was found via the Walden University Student Library and Google Scholar. Within the Walden Student Library, searches were carried out across the following databases to identify articles related to the topic of exercise motivation and CrossFit for adults: Dissertations & Thesis, PsychARTICLES, PsychINFO, Thoreau Multidatabase search, SAGE Journals, Psychology databases, Health Science databases, and ProQuest Central. Key terms used to find these articles were *CrossFit*, *exercise*, *physical fitness and mental health*, *solo exercise benefits*, *motivation*, *exercise and health*, *group exercise benefits*, *exercise adherence*, *physical activity*, *sedentary activity*, *well-being and exercise*, *obesity rates*, and *self-determination theory*.

Despite the high number of studies identified on exercise, there were few studies found regarding CrossFit and motivation. Topics covered in this Literature Review are SDT, exercise motivation, physical health benefits to exercising, mental health benefits to exercising, lack of exercise, obesity, costs of lack of exercise, CrossFit, the prevalence of CrossFit, risks and benefits of CrossFit, characteristics of CrossFit, and current research on the CrossFit community.

The Modern Physical Fitness Industry

History and Origins

Exercise engagement is an important aspect of life for adults and is noted to improve multiple aspects of a person's overall health. There is a well-documented correlation between exercise engagement and increased health benefits. There is a research-based relationship between physical exercise and psychological functioning that highlights the positive impact engaging in fitness has on mental health functioning. Regular exercise has been outlined by current literature to positively impact aspects of self-esteem in areas of cognitions, outlook, behaviors, and body esteem (Koteles et al., 2016). Additionally, engaging in exercise is linked to leisure-time physical fitness and improvements to physical and mental health in young adults (Appelgvist-Schmidlechner et al., 2017).

Evolution of the Modern "Gym"

In current times, fitness gyms are seen as closed spaces where bodies of all type can go for the specific purpose of working on the body. However, the idea of gyms can be traced to the gymnasiums of the Greeks and the palaestra of Roman times that looked

very different. These gyms were dedicated to muscular building for warfare, violence, and strength and were used by men only (Sassatelli, 2010). Through the 19th century, gyms were of the physical culture and aimed at an all-male population with the goal of body building. Body building and the idea of Strong Men were further celebrated by circus acts and competitions featuring muscular men such as Arnold Schwarzenegger (Andreasson & Johansson, 2014). However, since the late 1970s, there has been a noticeable increase in exercise premises which have moved from a sub-culture to a leisure activity and pop culture driven field (Sassatelli, 2010). Gyms began to move away from the typical male population to a mass leisure hobby embraced by different genders and body types. This global shift generated an estimated \$75.7 million in gym-based revenue in 2012 and produced more than 153,000 health clubs (Andreasson & Johansson, 2014). Currently, gyms, known as the commercial fitness gyms, focus on the “fitness” and “club” aspects, as opposed to strength aspects of the past. They continue to become more diversified as Western modernity embraces rationalization and asceticism in the fitness field (Sassatelli, 2010). These modern gyms comprise of commodities that are key to the consumer culture of the modern world, and which did not exist in prior history (Sassatelli, 2018). Therefore, this fitness driven field has moved from strength driven to folk driven. This shift led to a rapid growth in the physical cultural of shaping and sculpting bodies for health purposes and began to appeal to different classes of people. The involvement of different classes and types of people led to greater variety in the types of exercise gyms (Andreasson & Johansson, 2014).

Benefits of Exercise

Physical Benefits of Exercise

Cardiovascular fitness is considered a major influential factor for overall public health and disease outcomes (Salonon et al., 2011). Exercise engagement reduces mortality rates in a variety of ways and improves the physical aspects of health (Murri et al., 2019). Adults and adolescents with a more active lifestyle have higher physical health scores than those who are predominantly inactive (Ineceli & Ziyagil, 2017). Engaging in exercise decreases the chances of cardiovascular disease as well as mitigates and supports current cardiovascular disease status (Geevar & Anoop, 2017). Other benefits from regular exercise engagement include increased heart health, lower cholesterol levels, improved body weight, improvements in balance, cognition, and mobility and decreased chances of chronic illness such as diabetes, cancer, hypertension, obesity, osteoporosis, as well as a reduced risk of a premature death (Langoni et al., 2006). Long term effects of exercise also include a reduction in mortality rates stemming from chronic illness, reduction of accidents, improvement in healing from physical ailments, and improvement of overall mobility in adults (Whiteman-Sandland et al., 2018). Additional physical effects of exercise are found in increasing mobility and balance to decrease the risk of falls or injury (Langoni et al., 2019). In sum, exercise yields a variety of physical improvements to those who participate regularly.

While the benefits of exercise are empirically known, engagement in exercise is decreasing worldwide. There is a relationship between stagnant physical activity and decay in mental and physical health (CDC, 2016). The recommended amount of exercise

is a minimum of 150 minutes of moderate level exercise, or 75 minutes of high-intensity exercise, per week for adults (16-64 years old; CDC, 2015; Whiteman-Sandland et al.,2018).In the United Kingdom, only 31% of adults engage in the minimum required exercise (WHO, 2015) and only 22.9% of American adults engage in the recommended amounts of exercise each week (CDC, 2018). Research shows that 50% of adults who begin exercising will discontinue exercise within 6 months of participating in a program (Wilson & Brookfield, 2009). Additionally, research shows that the obesity rate worldwide is rising with a current prevalence of 35.7% in young adults, 42.8 % in middle-aged adults, and 41% in older adults (CDC, 2015). There is significant literature supporting how participating in regular exercise yields significant positive health benefits (Zhong & Wang, 2019). However, despite this well supported causal relationship, there are many people who engage in inactive lifestyles (Anderson et al.,2016). Choosing to lead an inactive lifestyle leads to several health deficits. Some identified health deficits increased by lack of exercise include obesity, psychological states, risk of injury related to accidents, mortality, mood, cardiovascular health, and increased blood pressure (Biddle, 2016; Weir, 2011). In conclusion, while the positive effects of exercise are well documented, most individuals do not meet the minimum level of physical activity necessary to experience those benefits.

Obesity as a Social Problem

Obesity is a serious, and growing, social problem in the United States of America (Wang et al., 2020). In 2001, the Surgeon General announced a “Call to Action” as a needed response to this health epidemic. In 2010, the Surgeon General followed up

identifying that statistics on obesity had gone in the wrong direction and placed a high need for optimal health and wellbeing being a priority and set the goal of being a “healthy and fit nation” (Wishner, 2019). The prevalence of obesity in the United States has consistently been on the rise since 1999 across ages, groups, and regions. Based upon recent trends in overweight and obese humans, by 2030 it is estimated that most Americans will be obese with prevalence being 50% of adults, 33% of children 6-11, and 50% of adolescents (Wang et al., 2020). Obesity and overweight are associated with deficits in overall health, mental health, and physical health. Obesity/Overweight are associated with the development of anxiety symptoms, depression symptoms, psychological concerns, and sleep hygiene issues (Sharafi et al., 2020). Additionally, 23-28% of new cases of asthma are attributed to childhood obesity, 18% of case contribute to deaths in adults, and excess body weight leading to cancer causes 7% of cancer-related deaths yearly (Stafford et al.,2000; Wishner, 2019). Physically, obese individuals are considered high risk for diabetes, hypertension, coronary heart disease, sleep apnea, cigarette smoking, and osteoarthritis (Stafford et al.,2000). In conclusion, obesity and being overweight can be a consequence of a lack of exercise. Obesity, and being overweight, is a national health crisis, social problem, and highly prevalent concern that can lead to several health deficits.

Psychological Benefits of Exercise

Physical exercise is linked to higher positive affect, self-esteem, well-being, and reduced risk for mental health conditions such as anxiety, stress, and depression (Koteles et al.,2016; Whiteman-Sandland et al.,2018). There is a correlation between exercise

level engagement and depression and mental health ranking in adults (Michelle & Kenneth, 2016). For example, after 5 weeks of exercise exposure, adult men noted a decrease in depression, as measured by Beck's Depression Scale, an improvement in mental state, improved positivity, decreased hopelessness, and a greater perception of social support (McGale et al., 2011; Murri et al., 2019; Yigieyer, 2014). Current studies show that aerobic and non-aerobic exercises yield lower anxiety and depressive symptoms and serve as effective stress management tools (Murri et al., 2019). In sum, physical exercise improves depression, mood, self-esteem, self-image, quality of life, resilience, and cognitive functions for those who participate (Biddle, 2016; Weir, 2011).

More specifically, there is much research correlating engagement in exercise to decrease in frequency and intensity of mental health conditions. Exercise is linked to decreasing symptoms, decreasing the likelihood of development, and increasing functionality of mental illness. Some mental health conditions that can be alleviated to some degrees by exercise are depression, ADHD, anxiety, PTSD, stress, and mood (Archer & Kostrzewa, 2012; Inceli & Ziyagil, 2017; Martinsen, 2005; Rethorst, 2019; Whitworth et al., 2017). On a small scale, single bouts of exercise can improve cognitive functioning, mood, depression, and self-esteem (Biddle, 2016). Small but significant relationships exist between short-term exercise exposures on global self-esteem. Long-term exercise can be linked to specific self-esteem and self-image improvements (Biddle, 2016). Exercise has also empirically been shown to decrease depressive symptoms, improve mortality gap, and improve clinical outcomes of existing mental health disorders (Murri et al., 2019; Ranjbar et al., 2015).

According to the American College of Sports Medicine, via a meta-analysis, exercise is a feasible intervention for fighting depression in older adults. Supporting evidence, with results pre-intervention and post-intervention, in studies, confirm the use of sports in addition to current treatment methods are effective in decreasing depressive symptoms (Heinzel et al.,2015). A randomized control study was carried out by Kavosi et al. (2015) where results confirmed that ongoing regular aerobic exercise increased self-esteem in college aged men. These men were exposed to an exercise program compiled of regular aerobics and measured by Copper's Self-Esteem Scale. These results were further confirmed by Yorks et al.,(2017) in which a randomized 12-week study was done on medical students. The groups exposed to exercise, group exercise, and no exercise were all given a stress perception scale and surveys to assess the mental, physical, and emotional quality of life. The experimental group regularly exercised for 4 weeks, and results showed group exercise decreases stress perception, increases quality of life, and was an effective coping mechanism for stress among medical students. Additionally, Whitworth et al., (2017) found that exercise has an ongoing, complex, and positive association with post-traumatic stress disorder (PTSD) symptoms. Their study consisted of 182 adults of varying ages that screened positive for PTSD. The participants completed surveys monitoring their symptoms, psychological distress, sleep, exercise behavior, and alcohol use at baseline and again 3 months later. Results showed that those engaging in exercise, with sleep and intensity of exercise as a moderating factor, showed significant improvements in presenting symptoms. In sum, there is a significantly

positive impact on depression, anxiety, stress, quality of life, PTSD symptoms, and happiness associated with engaging in exercise (Kianian et al.,2018).

Examples of How Exercise is Used in Therapeutic Applications

Studies have shown that the use of exercise can be applied to therapeutic environment such as being used as a means for improving anxiety, stress, depression, PTSD and mood disorders (; Hearing et al., 2016; Mikkelson et al.,2017; Shivakumar et al.,2017;Stohle, 2008). For example, a 12 week structured exercise program was piloted on female veterans of childbearing age who had been diagnosed with post-traumatic stress disorder. This study began with 31 women and later had 16 women complete program. Baseline scores were taken prior to the 12 week trial beginning, as well as after, on clinically administered PTSD scales. Exercises given were moderate level brisk walking to be done 4 times per week as well as weekly symptom assessment. This study resulted in a significant decrease in both PTSD and depression scores after the 12 weeks of exercise with no adverse events which aids in supporting exercise's role on improving mental health and emotional health symptoms (Shivkumar et al.,, 2017). Further, Stohle (2008) sought to test the general belief that exercise can positively affect mood and anxiety. This study sought to review current data and found that exercise correlates to decreased incident rates of depression and some anxiety and positive effects associated with exercise and exercise training on depression and anxiety (Stohle, 2008). Mikkelsen et al., 2017, further supported the vast evidence of exercise impacting mental health disorders. They found that exercise positively impacted mood states such as anxiety depression, and stress via physiological and biological means such as with endorphin

release, mitochondria, mammalian targets, neurotransmitters, the hypothalamus, etc.

Other results, aside from mental health impacts, are a decrease in inflammation

(Mikkelsen et al., 2017). Hearing et al., 2016, explored exercise as an adjunct intervention

for mood disorders such as bipolar and major depressive disorder. This looked at current

literature that associated the comorbid use of current treatment avenues for mood

disorders paired with exercise to aid with mood disorders and biological mechanisms.

This found that exercise impacts both the physical and mental outcomes associated with

treatments of mood disorders. This provides evidence that exercise can mitigate increased

health issues associated to having mood disorders as well as improving the long term

outcomes of these mood disorders when paired with treatment avenues (Hearing et al.,

2016).

Social Aspects of Exercise

Society today benefits from and interacts with many forms of social applications

(Hamari & Koivisto, 2015). Additionally, in the area of fitness group settings have been

present and traced back to as early as 1968 when the concept of group aerobic classes

were introduced by Kenneth H. Cooper. Group fitness was created by Kenneth Cooper to

encourage social involvement, encourage exercise, and encourage disease prevention as a

model as oppose to disease treatment. From this other group fitness regiments arouse

such as kickboxing, resistance training workouts, jazz dance classes, and group fitness

classes for strength cardio or stretching movements (Wing, 2014). Further, modern

exercise styles, such as CrossFit, use the social component and idea of community to

encourage competition and involvements (Crockett & Butryn, 2018). Hamari and

Koivisto,2015, identified that even socialization through an application or game can be impactful in maintaining difficult habits such as exercise and healthy diet. Further, findings showed that those individuals with more “friends” on these services, the larger these effects were. Hamari and Koivisto suggest the role social involvement, recognition, and receiving reciprocal benefits from social interactions and networks contribute to a persons continued use or involvements (Hamari & Koivisto, 2015). Wing, 2014, further supports this concept in sharing how group fitness classes can be adjusted to every exercise program and can be formatted to include socialization, fun, safety, effective workouts, a consistent exercise schedule, and accountability for those participating in the exercise (Wing, 2014). Additionally, Greg Glassman, founder of CrossFit, states the use of a website and an ability for users to upload and share videos of the exercises and interact was the initial means that created a powerful community that later drove the fitness program to grow (Glassman, 2005). In sum, there is a history of social aspects in exercise impacting participation.

What is Known About Exercising Alone/ at Home

Exercise can be done in a variety of settings. Exercise at home, supervised, or in a public place may rely on different physical activity habits. Heath et al., (1987), explored this with a 65 patient study that divided in two three groups. These groups included a control group with no testing or follow up, an at home group with supervision and exercise testing instructions, and a third group that received exercise testing and prescription which was also followed up by a gym-based supervision 1-3 times per week. Results showed that groups two and three reported more leisure time exercise than group

one. Group 3 was higher than the at home exercise significantly in regards to greater improvement on overall peak capacity (Heath et al.,1987). Further, a study carried out by Dunton et al., 2009, was done to explore environmental influences on exercise due to the alarming rising rates of inactivity and obesity among those living in the United States. This study investigated in duration and intensity of exercise were impacted by with whom and the environment someone exercises; such as at home, at outdoors, at work, or at a health club/gym. Data were collected by a series of surveys and results showed that intensity and duration were affected by social contexts and physical settings that suggested social context (Dunton et al.,2009). These studies suggest that home exercise alone is less conducive to exercise adherence.

CrossFit

Description

CrossFit is a new style of exercise. It can be defined as a strength training exercise program that includes strength and conditioning, stamina, flexibility, power, speed, cardiovascular endurance, coordination, agility, balance, and accuracy. This exercise uses elements of gymnastics, weightlifting, and cardiovascular activities (Claudino et al., 2018). CrossFit can be categorized as an aerobic and anaerobic exercise that has scarce scientific literature that would support this modern sport as being associated with positive or negative psychological states for participants (Koteles et al.,2016). Three major themes are promoted by the use of CrossFit's industrial open style gym that include optimizing a place for physical labor, a place that encourages all participants regardless age or gender, and a hyper-competitive environment that correlates to non-sedentary bodily movements

at a high speed. These aspects have aided in CrossFit's popularity by the underlying promotions that an open space and exposure to view one another in a socially acceptable way. CrossFit supports the mentality that as long as the human body is moving it is working and supported (Crockett & Butryn, 2018).

With that said, CrossFit is a group fitness program that is based upon a place that experiences hard labor, encourages all people of various backgrounds to participate, is hyper-competitive, promotes social engagement, and uses weightlifting and gymnastics movements at high intensities to become a subculture of fitness that aims to evolve the body, health, and fitness (Crockett & Butryn, 2018). Additionally, according to a systematic review, males, females, adults, professionals, novice athletes engage in the sport recreationally (Meyers et al., n.d.). As stated prior, the specific use of space for exercise was developed by Greg Glassman to promote a unique opportunity to bring in social contradictions to current gymnasium based exercise by leaving a large open concept where exercise can be viewed by all participants unanimously while placing focus on social competition and not on added gym amenities. These gyms are referred to as "boxes" and they often inhabit old warehouses and maintain the industrial space feel. This specific gym space, paired with use of clock and social involvement allow for a fixation on manual labor and the spirit of professional sport, as the creator Greg Glassman encourages (Crockett & Butryn, 2018). Glassman's use of the clock and structured workouts of the day, or WODs, are characteristics that lead to improving physical and social health. Every class is designed to fit within an hour's time and is led by one trainer among 15-30 participants of varying ages and genders. The WODs include a strength

portion and various short exercise programs that can vary from 2-3 minutes to 45 minutes and are aimed at promoting maximum intensity and effort. These are urged, modified, occasionally score, are supervised by the trainer, and change daily. The use of trainers and the clock are designed specifically to promote “beating the clock”, competing with peers, and using high intensity exercise to complete the WOD. Therefore, the designed WOD’s, social patterns, and layout of the gym promote an opportunity for participants to challenge social contradictions and use the multifunctional space to serve fitness (Crockett & Butryn, 2018). In sum, CrossFit can be seen as reclaiming the simplicity of fitness and exercise and returning to the reductionist view of fitness, picking something heavy up and exercising without the amenities of treadmills and machines in current gyms. The use of open space, a clock, and competition aid in reducing risk of injury in the “gym” space, push for community, and use of high intensity movements. (Crockett & Butryn, 2018).

When looking at studies to understand the costs, compared to other exercise regimens, and look into the benefits of CrossFit this was deemed capable of risks and gains of other sports such as weight lifting, running, etc. Some risks were that injury was prevalent in 19% of athletes, higher in males and higher in those with prior injuries. Benefits were aerodynamic capacity, strength, vascular health, lean body mass, and endurance in all athletes. Additionally, there is an increase of brain-derived neurotrophic factor in younger athletes, a protein in the body that builds neurons, iris, physical performance, and muscle composition. In sum, CrossFit ranked among the average amount of risks and benefits in comparison to other similar physical fitness activities.

CrossFit can be labeled as an effective form of exercise for healthy adults (Meyer et al., n.d.). CrossFit utilizes similar class based aspects seen in yoga, Zumba, and other fitness boot camps, however it is leader driven, promotes strength as well as maximum intensity and effort, and uses scoreboards, a clock for timing workouts, and a competitive nature to promote the CrossFit community culture (Crockett & Butryn, 2018).

CrossFit gyms are currently located in 142 countries across the world as of 2018 (Claudino et al., 2018). CrossFit has been noted as one of the best fitness training methods since its introduction to the industry in 2000 (Borras et al., 2017). The popularity of CrossFit appears to span across age, gender, and ability level. However, the cost to take part in CrossFit gyms can have monthly payments of around \$200.00 (Crockett & Butryn, 2018). This is high compared to other fitness options; for instance, 24 Hour Fitness, a more traditional gym franchise, offers a membership cost ranging from \$24.99 - \$29.99 per month (24 Hour Fitness USA, Inc., 2012). Similarly, LA Fitness is a fitness club marked by cardio equipment, strength equipment, high-end amenities, and a variety of fitness classes that, not including a \$49.00 initial fee, costs roughly \$29.00 per month (LA Fitness, 2017). Therefore, when compared to other gyms, CrossFit is significantly more expensive and could exclude certain populations and limit access. Therefore, while the financial cost of CrossFit is higher than typical traditional gyms, the physical risks and costs are about the same (Meyer et al., n.d.).

In sum, CrossFit is considered a radical fitness movement that is based upon a set of principles and belief that counter the current status quo of conventional gyms. The idea of taking a proactive health outlook by eliminating unhealthy foods, cleaning up diet,

boosting similar-minded social support with the use of community, and combining a variety of exercise styles is specific to being the all-inclusive fitness regimen Greg Glassman created (Kuhn, 2013).

History

CrossFit was developed in 1996 by Greg Glassman. Initially, he created the exercise program and launched it with the use of partners and an online website. He shared he created CrossFit as an ex-gymnast to create a means to prevent diseases, increase overall health, and identify a new effective fitness option (Glassman, 2006). Glassman identified being inspired by Sylvester Graham's health response during the 1800's that pushed for a positive change in American health, diet, and lifestyle that was developed in response to disease sweeping the nation at the time (Kuhn, 2013). The work of CrossFit aims at forging compound functional movements with high intensity speed. CrossFit chose these aspects to further support the goal of prescribing an alternative to battling physical health deficits after diagnosis by means of preventative medicine. Pairing with the physical fitness aspect of CrossFit, Greg Glassman further supported his goal by incorporating a nutrition, Paleolithic inspired diet. Through his decision to pair healthy exercise and diet he strove to build program that would encourage all athletes to reach an elite, or optimal, level of fitness and personal health (Kuhn, 2013). Further, the use of social support has been a core competent of CrossFit. Initially, social interaction was experienced through an online website where all participants could upload videos, comments, and scores to promote competition and interaction (Glassman, 2006). As CrossFit evolved and affiliate gyms rose from 18 to 1700 during the years of 2005 and

2010 the social aspect became a promotion of community within each “box”, of gym. For example, community can be experienced by the group class environment, competition internally, and togetherness of CrossFit in each box. The incorporation of minimalist style boxes, diet, specific exercise programming, trainers, and sense of community have been developed as the core values that define CrossFit through its history and continued development (Kuhn, 2013).

Current Research

Despite the lack of scientific research on CrossFit there are still several studies that suggest CrossFit having a positive impact on health and motivation. Eather et al., (2016), carried out a study identifying that CrossFit exposure to for teens in a control and experiment group impacted mental health. Specifically, after exposure to CrossFit during a school program yielded increased distress tolerance, increase self-esteem, and navigated total psychological difficulties and global self-esteem as indicators for mental health as evidenced by the Exercise Self-Esteem Model within teens. The study found a medium to a large significant effect on self-esteem in those teens who were marked at risk before the intervention, suggesting psychological distress as a moderating factor. Other areas of medium to the large significant effect were on the perceived body fat and perceived strength. Engagement and adherence were at 94% for the intervention group.

Additionally, Sibley and Bergman, (2018), used 322 CrossFit athletes to carry out a questionnaire based study that identified that CrossFit athletes have high intrinsic value when it comes to setting goals and identified psychological need satisfaction by being able to carry out a goal completion such as learning a new skill. This study identifies

aspects of competence and autonomy in goal setting and suggests that more studies be done on competence and autonomy and how this impacts participants and how this impacts motivation. Coinciding with this, Kotele et al., (2016), carried out a study that was mixed methods in design and used several scales including the Rosenberg Self-esteem Scale, WHO-Five Well-being Index, Body Image Ideals Questionnaire, Body Awareness Questionnaire, Positive and Negative Affect Scale, the Body Competence Scale, and an open-ended question seeking motivation for engaging in CrossFit. Results found that there was no significant difference was seen between how long people engage in CrossFit or frequency per week. All results showed significant improvements and noted high scores. Further support these results were identified in another study that explored physiological and psychological benefits associated with CrossFit training over an 8-week training period. Scales used pre- and post-intervention included Mental Health Inventory, Group Environment Questionnaire, and Motives for Physical Activity Measures, and body composition. Post-intervention significant changes in leaner body fat and lean mass were seen in males and females. Results showed CrossFit training significantly changes body composition and concurrently changes certain motivational factors for engaging in exercise. Some changes included physical abilities, being able to squat more than when they began, and motivational factors for engaging in CrossFit continuously changing to aid with adherence (Schultz et al.,2016). Further empirical evidence was found via a study that focused on the ongoing growth of CrossFit and what motivational characteristics belonged to those who take part. In this study, 14 studies on CrossFit were found and explored with meta-analysis. Results showed that an individual

who engaged in CrossFit respond well to external forms of autonomous factors and external rewards possessed by the program of CrossFit. Examples of these include competitive effectiveness, improving skills or physical abilities, well-being, and performance changes. This study explained that there is limited research on CrossFit training and suggests that more studies be done to better understand the belief and motivation of CrossFit participants (Dominski et al., 2020).

Additionally, it is found that CrossFit impacts psycho-social aspects of body composition, life, and health aspects, psychophysiological parameters, and has a risk of injury compared to similar exercise modalities. Preliminary data suggest that CrossFit is associated with higher levels of sense of community, satisfaction, and motivation (Claudino et al., 2018). Odele (2015) identified via qualitative research interviews that CrossFit yields a tribal sense of community, a source for self-care, and an increased quality of peer relationships. In sum, current findings link CrossFit to being identified as meeting NHS Guidelines for recommended exercise, yielding physical benefits, health benefits, and as a source for holistic transformation that extends to the social and mental aspects of a human (Odele, 2015). While CrossFit is a new style of fitness is leads to benefits in the areas of mental health, physical health, social involvement with benefits and risks equal to comparable current exercise methods. Further research into CrossFit and how the program may support adherence to exercise and motivation for fitness would be beneficial in understanding effective ways to lead to positive health outcomes. For example, in a study done in 2005, CrossFit participants scored higher after a 7-week exposure, in most fitness categories than they did when compared to the previous type of

exercise or physical training they were doing (Kuhn, 2013). In sum, CrossFit rose to be created as a means of combating current fitness models with a means of being a functional athlete that is proactive against physical ailments. The health movement makes a valid effort to use different exercise movements that could be used in all aspects of a person's life to aid in leading an optimal lifestyle overall. The characteristics specific to CrossFit aid in boosting health, fitness, and community involvement (Kuhn, 2013).

Theoretical Framework

What is Motivation?

Motivation is a term used to describe the psychological phenomena which build inside an individual that leads to action. Motivation is a complex force that directs one's behavior or can cause a person to repeat a behavior. Further, motivation is the degree to which a human is ready to engage in or pursue a designated goal, which requires determination, focus, and readiness. Therefore, motivation is a crucial factor to begin and adhere to a goal of any varying degree. There are two types of motivation, intrinsic and extrinsic. Intrinsic refers to behaviors that are driven by internal values and rewards. Types of intrinsic values can be desired gained knowledge, sense of accomplishment, and feel stimulated. Extrinsic motivation refers to a person engaging in behavior-based upon external rewards such as money, fame, praise, and grades. Other types of extrinsic motivation include performance or completion of contingent rewards (Vincent & Kumar, 2018). In conclusion, motivation plays a crucial role in understanding behaviors within a human's life. Further, the type of motivation can play a role in the beginning or sustaining a goal-oriented behavior.

Motivation is a critical factor in supporting the activity or exercise engagement and thus correlates with improved health outcomes (Teixeira et al, 2012). Vincent and Kumar (2018) further explain that to master motivation can lead to sustained activity or practice and thus lead to higher levels of achievement in the world of sports, exerciser, etc. Factors that lead to higher levels of motivation in sports include a positive environment, healthy communication, enjoyment, competitive aspects, avoidance of punishment when failure, a celebration of positives, and the involvement of intrinsic and extrinsic rewards (Vincent & Kumar, 2018). For example, Barnes and Cassidy (2018) found that a control group exposed to an exercise program, motivational interviewing, and diet aids were significantly more successful with weight loss and effect than the other groups not exposed to the motivational interviewing factor. Teixeira et al. (2012) further supported these results in identifying that current literature supports the value of finding the motivational factors that support exercise behavior to regulate and foster long term physical activity. In sum, motivation is crucial to begin the desired activity, adhering to the desired activity, and maintaining exercise.

Theories Used to Explore Motivation

Motivation in the field of psychology is a broad area with many theories seeking to explain aspects of motivation. Several theories that have been used that include McClelland's Achievement Motivation Theory, Locke's Goal setting theory, and Victor Vroom's Expectancy theory. McClelland's theory aids in attempting to explain how an individual's behavior can be predicted and performed based solely on their need and drive for achievement, power and affiliation. This theory further explains that a need for

achievement would be someone succeeding or winning in a competition that yields a standard of excellence or recognition and would avoid competitions where the risk to not success and receive this excellence (Moore et al.,2010). With this said, Victor Vroom's Expectancy Theory was created in 1994 and looks at motivation in a comprehensive manner to identify the role perception, efforts, and performance have in yielding reward. This theory identifies if a person perceives their expected chance for high reward or work outcomes is great they will perform with effort to achieve it. However, where expectant reward is low they will not be motivated to carry out the effort of a task (Parijat & Bagga, 2014). With that said, Locke's theory places emphasis on the persuasive role having goals has on a person's behavior or performance. This theory was developed by Edwin Locke and Gary Latham in 1990 and states that values and intentions, otherwise known as goals, are the two cognitive determinants of a person's behavior and performance. This theory states values lead to emotions and desires which lead to goals and goals direct behavior / effort and accomplishing a goal strengthens motivations and yielding satisfaction. Reversely, where there is no value or goal or goals are not met a person will yield low motivation or frustration (Lunenburg, 2011). Another theory regarding exercise motivation is that from a post-cognitivist perspective known as Affective Reflective Theory (ART). ART states that motivation and the decision the decide to engage in exercise over simply remaining stagnant is a result of reflective processes that evaluate how the action and plans of the action impact explicit data as well as any automatic thought processes that may cause an impulse to engage or not motivated by past pleasant or unpleasant interactions with this activity. This states that the thought of exercise alone

can be paired with immediate affective responses that if negative due to a past unpleasant interaction, can lead an individual to avoid the exercise (Ekkekakis & Brand, 2021).

Self Determination Theory

The conceptual framework for this study is Deci and Ryan's (2012) self-determination theory (SDT). SDT describes an understanding of human behavior through motivation, wellness, and personality aspects across different social contexts. This theory based its argument on the rationale that human beings are all motivated to engage in specific behaviors by varying degrees of autonomy, relatedness, and competence (Deci & Ryan, 2008; Deci & Ryan, 2012). This theory focuses attention on the interaction of the above-noted aspects, as well as intrinsic and extrinsic motivation sources, within an individual and/or environment to predict behavioral adherence or selection.

SDT focuses on the type of motivation as a predictor of personal performance, relational, and well-being outcomes of a specific behavior across social contexts that may enhance or diminish these motivations (Deci & Ryan, 2008). Specific types of motivation types include being intrinsic or extrinsic. Intrinsic motivational factors include motivation from within the individual such as inherent satisfaction, joy, and challenges that occur with a behavior. This style of motivation is key in constructing, learning, and assimilating (Deci & Ryan, 2000). Extrinsic motivational factors include motivation that comes from outside of an individual such as achievement rewards, social recognition, punishment avoidance, etc. (Matlby & Day, 2001). This type of motivation can be relative to autonomy, control, or self-regulation (Deci & Ryan, 2000).

SDT's model seeks to understand how feelings of autonomy, competence, and relatedness, or lack thereof, can foster or delay motivation and engagement in an activity. SDT explores these concepts within social contexts to see the role of social exposure either promotes or hinders a person's well-being, commitment, or quality of performance (Deci & Ryan, 2008). SDT introduces the idea of understanding basic psychological needs as a key finding to understand how meeting these creates satisfaction and support to create high motivation. This theory explains that people can foster self-determination to grow and change when the innate and universal psychological aspects of autonomy, relatedness, and competence are present. These aspects are identified as more closely related to intrinsic motivation than extrinsic motivation, which provides higher levels of increased regular physical activity (Teixeira et al., 2012).

Competence is identified as feeling a need to, and ability to, gain mastery and learn differing tasks. This aspect can vary based upon feedback, environment, and level of challenge, success or failure of an exercise. Autonomy is defined as a sense of being in control of one's behaviors and goals. This need can function as a result of communication style and social context. Relatedness can be seen as an experience of being connected to others. This promotes a sense of belonging and attachment to other individuals and can rely heavily on the interpersonal setting of exercise. Cumulatively, these basic needs are conceived as essential to psychological health, motivation, and task support (Teixeira et al., 2012).

Self Determination Theory and Exercise Motivation

Motivation is a crucial factor in maintaining sustained exercise and thus correlating to reaching important health outcomes. SDT aids in exploring motivation toward physical activity by understanding the critical role motivation plays in supporting long term, sustained exercise behaviors. SDT can be applied to exercise psychology to better understand causal relationships that promote engaging in physical activity, to increase adherence to fitness. Looking at exercise engagement from the SDT theory aids in understanding why the majority of adults worldwide do not meet the recommended amount of exercise (Teixeira et al., 2012). For example, when applying SDT to physical activity it is noted that specified support from an autonomy-based source can lead to psychological needs being met and self-determined behaviors being regulated to aid with exercise participation (Zhong & Wang, 2019). Further, aspects of feeling competent, autonomous, and connections have been correlated to being consistent sources between motivation and exercise. Teixeira et al. (2012) found that when a person's needs are supported by the exercise setting and social interaction, exercise goals, and participation motives this leads to feeling autonomous, competent, and relatedness. These feelings lead to exercise motivation stimulation in a positive way to promote exercise maintenance.

Current studies with SDT and exercise motivation have aided in supporting the idea that SDT can be an effective way of understanding one's behavior to adhere. Silva et al., (2008), sought to explore SDT as applied to novel obesity exercise treatments. This focused on autonomy, competence, and relatedness. Autonomy was defined as feeling a choice and responsibility for one's own behaviors. Relatedness was defined as feeling

understood, cared for, or valued by others. Competence was defined as one's ability to feel they can accomplish or reach a goal. This study based on observing these aspects and seeing how a certain behavior, obesity exercise, could be carried out if they feel confidence, they are in full responsibly and are willing to do it. Conversely, this study identified that a behavior that feels controlled by other external forces such as rewards or punishments will be predicted to not last as long (Silva et al., 2008). This study derived its program from these aspects as this clinician will derive the research questions from an ability to identify or not identify the above components of autonomy, competence, and connectivity or relatedness. This study found that motivational characteristics related to SDT were able to positively impact health promoting behavior change in the context of treatment for obesity with regards to physical activity, self-regulation, and influence on treatment success (Silva et al., 2008).

In sum, self-determination theory identifies that when psychological needs of autonomy, competence, and relatedness are present motivation is created (Deci & Ryan, 2012). When exploring motivation and exercise though an SDT perspective, previous literature supports that where self-determined behavior and motivation are predictors of exercise engagement (Teixeira et al., 2012; Zhong & Wang, 2019). Previous research shows that intrinsic motivating factors are prominently connected to adherence, while extrinsic factors are still significantly correlated to exercise behavior predictions (Teixeira et al., 2012). Therefore, with the known high psychological and physical health benefits associated with the adherence to regular exercise, it is important to understand

the factors that motivate engagement to exercise, through an SDT perspective, to support exercise adherence as a preventative health activity.

Summary and Transition

Obesity is a serious health epidemic in the United States (Wishner, 2019). Exercise is linked to positive health outcomes across physical, mental, and social aspects within humans. Obesity and lack of exercise are two social problems with largely negative consequences on varying aspects of a person's health. Despite the high amount of literature supporting the relationship between health and exercise the majority of adults in the US do not meet minimum recommendations (Rethirst, 2019). CrossFit is a new exercise style with little research but current findings suggesting positive social, physical and mental outcomes (Meyer et al., 2017). Fischer et al., (2016), found CrossFit participants had higher intrinsic motives, enjoyment and affiliation compare to one-on-one personal trainer athletes. Overarching themes as to why CrossFit participants adopted this program were accepting and overcoming challenges, overcoming self-doubt, attitudes toward self-physical activity, commitment to peers in the gym and the sport, social connection and community, and the feelings of empowerment and transformation that many reported come with joining the sport (Simpson et al., 2017). To better understand the motivational factors for exercise adherence within CrossFit athletes could be beneficial to implement an exercise regimen aimed at stimulating long term attendance and increase health outcomes.

Chapter 3: Research Method

Introduction

The purpose of this generic qualitative research was to explore the experience to adhere to exercise in adults who participated in CrossFit. The research sub questions are central to motivation to adhere through the use of SDT. The subquestions include: SQ2- How does the experience of competence contribute to adherence? SQ3- How does the experience of connection contribute to adherence? SQ4- How does the experience of autonomy contribute to adherence? This chapter presents the methodological issues and procedures I used while conducting the study. This includes research design, participant selection, instrumentation, data collection procedures, and data analysis methods that were used in this study. Additionally, a description of strategies was used to enhance and increase trustworthiness and ethical conduct of the study are described.

Research Design and Rational

Research Question

The central research question is: How do adults who participate in CrossFit describe exercise adherence?

Sub questions:

SQ2- How does the experience of competence contribute to adherence?

SQ3- How does the experience of connection contribute to adherence?

SQ4- How does the experience of autonomy contribute to adherence?

Research Design

In this study, I used a generic qualitative approach to explore the experiences of CrossFit exercise participants. Qualitative research is best applied to naturalistic engagement and descriptive explorations to better understand a phenomenon process or relationships (Ravitch & Carl, 2016). Qualitative researchers have foundational beliefs that state that an effective understanding is gained by individuals continuously participating in an activity while simultaneously making connections and meanings of their experience (Merriam & Tisdell, 2016).

Descriptive and generic qualitative research is designed to analyze and express meaningful descriptions of a phenomenon to be able to better understand and evaluate the process, meanings, or understanding of those experiencing said phenomena. The goal of this study coincides with the goals of descriptive qualitative research, which are to describe, analyze, identify themes, evaluate phenomena, and create meaning from natural participant experiences (Ravitch & Carl, 2016). Therefore, in this study I used this approach to explore the experiences of CrossFit participants with the goal of better understanding and connecting meaning to their personal stories of exercise adherence. I followed this approach when listening to their experiences and aspects that aid with exercise adherence in their perspectives. A generic qualitative approach aided in my exploration of CrossFit participants' experiences as it was the best approach for finding patterns and underlying themes that emerged during the interviews I carried out.

Role of Researcher

As the researcher, my role was complex and comprehensive. I have been paramount in identifying a gap in literature, identifying a social problem, developing this research study, designing this study, creating questions for this study, and carrying out the data collection, as well as data analysis. I am familiar with the concept of motivation through my history as a doctoral level student as well as a psychotherapist. I am familiar with CrossFit as an exercise program through my engagement as a CrossFit participant for a total of 3 years as well as being a CrossFit L1 coach via the online training model. Due to my experience engaging and adhering to CrossFit, I had to engage in a continuous self-reflection process to ensure I was not promoting any bias or countertransference to the work at hand. I used my chair and committee member as outside parties to aid in the reflective process to safeguard against potential bias in the study. The use of reflexive notes as a documentation process can aid with maintaining objectivity in qualitative research (Kortsjens & Moser, 2018). Therefore, other ways I managed potential bias were through the use of documentation in a reflective journal before, during, and after interviews, as well as throughout the entirety of this study. Reflexive journaling helped to keep a record of my experiences, reactions, potential bias, potential assumptions, or potential transference that may occur during the research process.

Effective qualitative interviewers should carry themselves in a manner that stimulates verbal activity in a trustworthy way for participants to describe their perceptions of the given area of focus (Smith & Noble, 2017). I carried out the above noted steps to maintain an ethical, professional, and unbiased role as the researcher. In

sum, the goal was to authentically describe the participants' interview responses to effectively create results that properly represent their perceptions.

Methodology

Participant Selection

The participant selection process was purposeful in nature as there were specific requirements a participant needed have in order to be considered appropriate for this study. I used the purposeful sampling method known as criterion sampling to identify a sufficient number of appropriate participants for this study.

Population: In order to be considered appropriate as a potential participant in this study, individuals must have met the following criteria:

- a) Participants must be over the age of 18 years old
- b) Participants must be currently enrolled in a CrossFit exercise program in their area. Due to COVID-19 they may be practicing the designed program at home or at their designed box.
- c) Participants must have engaged in CrossFit for a minimum of 6 months and attended classes regularly during this time frame.
- d) Participants will be available for interviews either by use of FaceTime, Zoom, or Skype.
- e) Participants will not know the researcher.

I did not recruit subjects from CrossFit boxes where I have personal affiliations, nor did I include peers that I may have encountered at CrossFit community events. Participants had to meet all the above qualifications to be considered for this study.

Participants that did not meet these criteria were excluded from the study. All the above criteria were identified via self-report by potential participants.

Sampling Strategy and Sample Size

Qualitative research often uses non-probable methods of sampling. I used purposeful methods of sampling that initially included snowball referral and criteria. Purposeful sampling is defined as a primary sampling method in the use of qualitative research studies. This method allows for individuals to be purposely selected for the study due to specific reasons that may stem from positively impacting the construction and context of the research phenomena to allow for enrichment of the study (Ravitch & Carl, 2016). However, due to the high volume of volunteer participants gained from criterion sampling, I did not need to use referral, or snowball, sampling.

For this study, I purposely selected participants who were adults, over the age of 18, and who had engaged in adhering to CrossFit for at least 6 months. Two types of purposeful sampling that I planned to use included snowball referring and criteria sampling. Snowball referral is a method of starting with a few participants that meet criteria and asking them for additional appropriate potential interviewees that the researcher could contact. This creates a chain of interviewees based on the connections a few relevant participants may have (Ravitch & Carl, 2016). I planned to use this method of recruitment by initially reaching out to local gym pages and Facebook CrossFit groups via Facebook public social media pages. I was able to recruit over 70 willing participants by posting about the study in public Facebook CrossFit groups and thus I did not have to use snowball referring. Criteria sampling is defined as a method of selecting specific

participants that meet a predetermined set of criteria that is deemed important to the study (Ravitch & Carl, 2016) I used this sampling method to identify if participants met the desired qualifications through a self-report process. I then shared informed consent, criteria, information about the study, and role and rights of participants to all potential participants to be fully aware prior to moving to the next step of data collection. I allowed time for questions and concerns to ensure they were fully aware of their responsibilities, the voluntary nature of the study, and the intensity of study prior to beginning the next phase.

Due to the field-oriented nature of qualitative research, it is not focused on statistical probability and generalization. Therefore, an effective number of participants is often selected based upon the researcher's objective (Guest et al., 2006). The purpose of this research study was to explore the experiences of exercise adherence among adults who participate in CrossFit for 6 or more months. The sample size for non-probable sampling methods is often ambiguous. For desired results, saturation is key to producing excellent qualitative work. For researchers who aim to understand commonalities within a homogenous population, 12 participants are likely to suffice (Symon & Cassell, 2012). Kvale and Brinkman (2009) suggest that 5-25 qualitative interviews be carried out for gathering data. Further, Guest et al., (2006), recommended that homogenous interviews have 12 participants. I was able to carry out 15 qualitative interviews for this study. The response to be included in this study was large, receiving over 70 total inquiries within the first 2 days of posting on just one public social media page. In sum, there are a variety of recommendations for the number of interview participants necessary for qualitative

research. For this study, I sought to have data saturation and aimed to conduct between 10-15 qualitative interviews, ending up with 15 total. During this process I continued to monitor that an adequate amount of information was present to ensure enough data has been collected.

Participant Selection

Participant characteristics for this study were they had to be adults, over 18 years of age, who took part in the CrossFit exercise program regularly for a minimum of 6 months at the time of interview. The participants met the above population criteria and engaged in CrossFit regularly. Regular exercise was defined as meeting CDC recommendations each week of at least 150 minutes of moderate-intensity aerobic exercise, or 75 minutes of vigorous exercise, or engaging in physical activity 3-5 times each week (CDC, 2015; Clapp et al.,2000). The purpose of these criteria being used were so that the sample of participants had the required aspects to allow me to appropriately examine motivation to adhere within the context of CrossFit members. Due to the Coronavirus and social distancing guidelines during the period of data collection, participants had to carry out their qualitative interviews in a virtual manner via the use of Zoom, FaceTime, or over the phone. All participants chose to use Zoom to carry out their interviews.

Participant Recruitment

For this study, I initially planned to reach out to local CrossFit gyms. I reside in Pennsylvania, so I initially planned to be locating gyms in Pennsylvania and New Jersey. However, instead I was able to acquire more than enough willing participants via the use

of public social media pages. I located public, open, social media pages of local CrossFit gyms and/or CrossFit interest and support pages, and then I openly shared with them the nature of this study, Appendix A, and asked for permission to provide further information about this study to members who were interested with the goal of recruiting participants for a volunteer study. From here I was able to leave my contact information for serious inquiries where I was able to answer all questions and provide detailed information, such as the informed consent, and identify via self-report if the participant met criteria for the study. I had to remove the postings after 2 days as I continued to have people reaching out for the study after already acquiring all needed participants.

Interested individuals reached out to me via the contact information I provide for them in Appendix A. I then explained the study, the criteria, and the voluntary nature of this study. When they confirmed further interest, I was able to schedule a time to meet with them via phone or Zoom to further screen participants to see if they were appropriate and answer all questions. During these initial calls/ interactions I shared the purpose of this study and what was being requested of their commitment to the study. I then provided an informed consent form and any additional information they needed to help them to make a well-informed decision. Once participants responded with “I consent,” we were able to schedule their qualitative interview.

These interviews were qualitative and semi-structured in nature. They were offered via FaceTime, Zoom or Skype and not in person due to the dangers of COVID-19 at the time of data collection. These interviews were conducted by me and lasted approximately 30-45 minutes. Aspects of these interviews included an introductory

portion where I reviewed the study, informed consent, and orientation. The interview protocol (Appendix B) was prior reviewed with my dissertation chair, committee methodologist, and URR member to confirm appropriateness of questions. All interviews were recorded on Zoom as well as a recorder, and I reminded participants of the recording at the start of the interview. The interview protocol included 12-15 semi-structured questions derived from my research question and subquestions. These questions were open ended in nature and included further follow up questions to aid with probing information for this study as needed on person-to-person basis. Upon completion of the questions, I debriefed participants with a reminder of what the purpose of the study was and allowed them to ask any questions. In this debrief section of the interview, I reviewed the context of this study, how storing their data is in their informed consent, and explained that they will have the opportunity to view the results once data collection was complete and I was able to complete a short write up of results. Transcript review was conducted by me within the initial weeks after the interview and continuously throughout the data collection and organization phases.

Instrumentation

Due to the nature of qualitative research, the main instrument used to gather research is the researcher (Merriam & Tisdell, 2016). There are several instruments that can be used for qualitative research such as semi-structured interviews. The purpose of qualitative interviews is to gather information on a certain topic (Blandfor, 2013). The goal of these semi-structured qualitative interviews is to create an environment appropriate for participants to openly share their experiences, meaning, and perceptions

about motivation in regards to exercise adherence. I developed a semi-structured interview set of questions that was used to guide all interviews during this study (Appendix B). These aided me in understanding the experiences of CrossFit participants and to gain objective information to better understand, find meaning, and identify patterns in their exercise adherence experiences. These questions for the interviews were developed and derived from the SDT framework. During these interviews I followed the semi-structured question format so that participants are urged to share their authentic experiences, opinions, and beliefs as to their adherence with CrossFit in a manner they felt authentically captured the information they felt pertinent to share.

Interview questions were developed from the core characteristics of SDT in regard to exercise adherence (Teixeira et al., 2012). Within this theoretical framework, the questions were open ended, to promote discussion, and to contribute insight to the research questions and subquestions of this study.

Research Developed Instrument

Transferability is a key aspect to trustworthy qualitative research studies. Transferability aids with ensuring similar aspects to what external validity would be for quantitative studies. Transferability can be ensured by including detail in all types of data such as context, the response from participants, and context to aid with readers making these comparisons to other contexts (Ravitch & Carl, 2016). To ensure positive validity and transferability, I developed an interview guide that was used for all interviews and was grounded in SDT. Due to the semi-structured nature of the interview, I used interview guide, as well as probing additional questions, to gain authentic information

from participants so that a detailed exploration of their experiences in regards to CrossFit exercise adherence had been gained.

Procedures of Recruitment, Participation, and Data Collection

Prior to any recruitment, participant activity, or data collection, I did receive approval from the Walden University Institutional Review Board. After this, my first step was to begin my participant recruitment process by identifying public CrossFit Boxes pages on Facebook, CrossFit pages, and CrossFit groups on social media. Potential participants were identified, and I was then able to ensure they met study criteria, and fully understand the informed consent and their role, and rights, in this study. I then scheduled and carried out all interviews following my interview protocol. Participants were able to discontinue at any time, as this study was completely voluntary. After this, I transcribed all interviews and reviewed each transcription, as well as my reflexive journal notes multiple times. However, since interviews were only done via virtual platforms or phone, due to COVID-19 safety measures, location parameters for participants were able to be lifted so that interviews could be used from participants in varying states to achieve data saturation.

Interviews were offered via FaceTime, Skype, or Zoom. This meant participants were able to select a virtual means that was appropriate for them. All 15 participants chose to use Zoom. They were made aware that privacy is highly important and were asked to carry out interviews in a secluded location. I conducted interviews from a secluded location, such as in a room of my home, with the door shut, where the interview content could be kept safe and private for the participant. They were made aware that

these interviews were recorded for transcription and study purposes prior to starting the interview. I carried out each interview following the specific semi-structured interview protocol guide that I have created. Each interview was conducted within a 30-45 minute window. This did not include the time needed before and after the interview to allow for introductions of selves and study, an overview of the informed consent, discussion of the volunteer nature of the study, and debriefing. Additional actions after the study included discussion of any questions they had and providing the participant with desired information. Once the results were written a participants was entitled to view them if they wanted.

Upon completion of the interviews, I began the documentation phase. This included transcribing the recordings of the sessions themselves, as well as my reflexive journaling, and field notes I had been taking before, during and after interviews. Upon completing the transcription, I converted all field notes to aid in delivering a more inclusive and comprehensive account of the overall interview experience. All notes were saved in a password protected document on a password protected computer. All information not on a computer were locked in a filing cabinet in my home office. All documents will be protected, held, and locked for 7 years, to ensure privacy is protected, at which point they will be appropriately destroyed.

Data Analysis Plan

Upon completion of data collection, the data analysis phase was ready begin. Data analysis can be identified as the active steps that encompass the preparation, organization, management, and presentment of collected data in qualitative research (Merriam &

Tisdell, 2016). The importance of a thematic analysis among qualitative research studies is described as a means of flexibly constructing meaning, patterns, or themes from data (Saldana, 2016). I used this method of data analysis to find themes, meaning, and patterns in regards to motivation and exercise adherence in the current data.

Qualitative data analysis processes include structured stages such as data reductions, data organization, and data representation, with an end goal of making sense of all the input data (Ravitch & Carl, 2016). Once I had reduced the data by putting all the transcripts, field notes, and audio recordings together, I then moved to the data organization and representation stages. Once the data were transcribed, I read and re-read them, and took notes to begin familiarizing myself with, and building, the audit trail. The purpose of this continuous re-listening and re-reading of data was to become immersed in the data, prior to beginning the analysis for organization. I used Microsoft Excel to manually code the data. Coding is one way of analyzing qualitative data into patterns or themes. This is a way that research is organized by a descriptive word or pattern theme that represents and symbolizes meaning within the translated data to be a critical link between the data collected and the meaning or explanation attached to it (Saldana, 2016). I wrote out verbal responses that each participant made in Microsoft word and began grouping them by similarities that began to arise. I used each response or field note to aid in identifying and/or supporting common themes that emerged from the data. I wrote all responses in quotes, highlighted transcripts, and sorted data. This helped categorize the transcribed data into a clear and viewable organized manner. In working with the data, I

was able to define each theme as it identified in the data to ensure that all themes are represented appropriately.

Issues of Trustworthiness

The concept of validity is challenging in qualitative research studies. Many terms can be used such as trustworthiness, validity, credibility and authenticity. Qualitative researchers often reject the term validity and use trustworthiness due to the nature of data collection being human-based and not scale/ instrument based. This use of a more appropriate term allows the focus to be on the presence of objective truth which yields high quality data (Ravitch & Carl, 2016). This can be seen as how accurately the research represents the actual experiences of the topic of study (Morse, 2015).

Credibility

Credibility in qualitative research can be defined as how a researcher approaches data to account for any complexities that are brought up in the study in a manner that effectively forms themes and patterns that are authentic to the participant responses. This correlates to the concept of internal validity, in quantitative research, to ensure that the interview questions are measuring what they are supposed to be measuring (Ravitch & Carl, 2016). Credibility aids in understanding how the findings of a study correlate with the reality of the phenomena (Shenton, 2009). Several ways to ensure credibility that I did use to be able to apply to this study such as the use of well-established research methods, the use of correct and clear operational measures and terms, a researcher developing early familiarity with the culture of those participating in the study, iterative questioning, debriefing sessions with participants, techniques to aid in honesty from

participants, the use of peer scrutiny, and a researcher being reflective with commentary (Shenton, 2009). Therefore, to ensure credibility I used well explained definitions of all terms that would be described to all participants to ensure they understood what was being asked. I used open ended statements to allow participants to describe in their own words their detailed accounts of the phenomena related to the study. I used my own involvement and history with exercising in the CrossFit program to aid with making sure I understand and do not misuse any terms. I made sure all questioning promoted discussion by using probing terms and drawing attention to the research questions. I also used peers, my committee members, to review the study for any incorrect assumptions or inaccurate terminology. I used my commentary during interviews to reflect back upon participant responses and decrease any potential transference.

Transferability

Transferability, which is similar to external validity in quantitative research, means ensuring qualitative research is completely bound contextually and develops meaningful descriptions and context related statements. This differs from merely producing generalizable true statements. Methods used to achieve transferability include having detail in all types of data such as context, the response from participants, and context to aid with readers making these comparisons to other contexts (Ravitch & Carl, 2016). Transferability can be achieved by using background data to fully establish a clear context of the actual study at hand, while providing clear detail of the study and phenomena so that later comparisons could be made with other studies (Shenton, 2009). Therefore, to ensure transferability in this study, I made sure to detail all aspects of this

study clearly, concisely, and completely to ensure all components were well documented. I worked to ensure that rich and nuanced detail was included in all steps. I was accurate and all-encompassing when dictating each participants' responses, questions, and any observations I had during the interviews.

Dependability

Dependability refers to the stability of the data at hand and is often compared to reliability in quantitative studies (Ravitch & Carl, 2016). This is the ability to replicate results across time (Morse, 2015). To ensure dependability, qualitative researchers should use appropriate research design. These includes a well-documented account of all things that occur while collecting data in the field, and spending time to reflect, evaluation and look at the process being taken for this study (Shenton, 2009). In sum, I was able to ensure dependability by doing the above noted tasks as well as incorporating an in depth description of the study in all stages to support potential replication of the study.

Confirmability

Confirmability is similar to how quantitative researchers view objectivity. Due to the nature of qualitative research, one cannot be objective. Therefore, qualitative researchers seek to be relatively neutral and not biased toward the nature of the study to the highest degree possible (Ravitch & Carl, 2016). This is difficult in qualitative research as the instrument at hand is dependent on human perception, skill, and interaction. Some suggestions to ensure confirmability is the use of reflective commentary, admission of researcher's beliefs, as well as a data oriented documented "audit trail" (Shenton, 2009). Due to my investment in this study, as well as my history of

using the CrossFit regiment, the first task I carried out to ensure confirmability was admitting I could of have potential bias and working to identify ways to decrease this at each stage. From here, I was able to maintain a journal of any of my thoughts, moods, reactions, and views I experienced before, during and after all participant interviews. This in-depth account would aid in maintaining integrity of the research by identifying any threats or short comings. Additionally, I sent themes, data, and drafts of my data analysis to my dissertation chair to aid with member checking.

Ethical Procedures

Beneficence can be defined as how a researcher maintains mindfulness of all participants' welfare throughout the research process and adheres to all guidelines that protect wellbeing (Ravitch & Carl, 2016). I was able to maintain ethics during research by complying with the IRB board and consulting with committee members throughout the research process. I utilized the Walden IRB Informed Consent form. Further, I was able to be mindful of wording, reactions, and questions while working with participants to ensure a healthy and safe environment to carry out qualitative interviews.

Confidentiality and protecting personal information is crucial in maintaining ethical research (Ravitch & Carl, 2016). I was able to work to maintain this in keeping all participants anonymous by numbering them, not sharing any personal information about participants with anyone ever, locking all information on a password protected word documents on a password-protected computer, and by making sure all personal information is encrypted and protected. Informed consent forms were processed with participants in full to ensure understanding and stored for them. All transcripts will be

locked and stored for 7 years. Additionally, I was able to make sure there were no pre-existing relationships with participants to aid in decreasing any pressure they may feel to take part in this study. In sum, I was able to take any and all steps to ensure no harm, minimal risk, and adhere to all ethical guidelines.

Summary

In chapter 3, I outlined the research design and explained the rationale for conducting this descriptive qualitative study. Additionally, I discussed methodology, my role as a researcher, participation selection, instrumentation, recruitment, participation, data collection and data analysis plan that could potentially be used in this study. Further, I presented information on lengths to be taken to ensure trustworthiness and decrease potential bias. This chapter also outlined the potential ethical concerns of maintaining and protecting the privacy of potential participants.

Chapter 4: Results

Introduction

The purpose of this study was to explore the experience of exercise adherence and motivation among adults who participate in CrossFit for a minimum of 6 months. In this chapter, I will provide detail on the procedures used for carrying out recruitment and interviews, demographics of the participants, and the results of the qualitative interviews.

The research questions used for this study are as follows:

How do adults who participate in CrossFit describe exercise adherence?

Subquestions:

SQ2- How does the experience of competence contribute to adherence?

SQ3- How does the experience of connection contribute to adherence?

SQ4- How does the experience of autonomy contribute to adherence?

In this chapter I will display the data collected from the qualitative interviews that I carried out with 15 adults who engaged in the CrossFit program for a minimum of 6 months that explored their personal experiences of motivation and exercise adherence. Information regarding the setting of these interviews, the method of data collection, and data analysis will be provided in this chapter as well. Additionally, this chapter will provide evidence of trustworthiness and the results of this study.

Setting

Participants in this study had to meet the criteria of being adults, over the age of 18, who regularly participated in the CrossFit exercise program for a minimum of 6 months at the time of their interviews. I gathered data that would provide information for

a better understanding on how this population experiences motivation and exercise adherence in the CrossFit exercise program. I conducted this study through the use of social media and other virtual means. I adhered to any online group rules, such as Facebook pages for members only. No participants signed up from Walden University's participant pool as all were acquired rapidly through the use of public social media pages. With IRB approval I posted my study flyer online in several public CrossFit related Facebook groups. In my post I shared who I was, my study, and the flyer so my role was clearly laid out (Appendix A). Fifteen of the participants signed up through Facebook pages that I posted in within 24 hours through means of emails or calls to the contact information I provided.

Demographics

Participants for this study consisted of 15 adults who participated in CrossFit for a minimum of 6 months. All participants were current members of a CrossFit gym of some type. The participants in this study were 4 men and 11 women whose ages met the criteria of being 18 years old or older. The participants' ages were between 23 and 49 years old with a mean age of 32. Participants were from several different gyms that were located in different places including Ohio, Pennsylvania, Wisconsin, Texas, the Netherlands (currently staying in Nevada), India (currently residing in Pennsylvania), and Connecticut. The majority of participants were from Pennsylvania (nine total). All participants shared they had been doing CrossFit for over 6 months. The amount of time engaging in CrossFit for participants ranged from 1 year to 10 years with the average number of years being 4.

Data Collection

I conducted a total of 15 qualitative interviews through Zoom. Zoom is a software that allows for a virtual platform to allow for interviews. I used this program due to the dangers COVID-19 placed on having face to face interactions. Participants were given a choice of carrying out interviews via Zoom, Skype, or FaceTime. All interviewees selected Zoom and stated their comfort level with Zoom prior to conducting the interview. All interviews consisted of a set series of semi-structured open ended questions (appendix B) approved by the IRB, with the occasional probing question where fit, that followed an interview protocol that I designed prior to interviews that followed the format suggested by Creswell (2013) and Merriam and Tisdell (2016). Initially all interviews were estimated to take 60-90 minutes total; however, the actual average time of interview was 20-30 minutes long. Each interview began at a prior decided scheduled time and had allotted time for any questions, comments, or concerns a participant could have had prior to beginning and upon finishing.

Upon beginning each interview, I was able to answer any questions and each participant was notified recording would begin, something they were briefed on prior. Each interview was recorded via a handheld recorder and through the Zoom recording option. The recordings were labelled with a number rather than any other identifying information and saved to a password-protected computer and a portable flash drive that was securely locked in a file cabinet in my locked home office in my locked home. I informed every participant that during the interview I would be taking notes of observation regarding their facial expressions, tone, body language, and emotional state

as they discussed their experiences in CrossFit. Additionally, I maintained a reflexive journal to document the above noted observations as well as any of my own thoughts, responses, or ideas that pertained to the current data. This reflexive journal is a tool that was used to be mindful of and control my own bias due to my own experiences as a way to focus solely on the data coming from the experiences of the participants as well as write down interesting responses in the moment. This reflective journal was labelled by a number that corresponded with each participant, not with identifying information, and locked in a filing cabinet in my personal secured home.

Upon completion of each interview, I transcribed the audio files. These were then read and read again during the coding stage to aid with accuracy. These were printed and stored in a locked filing cabinet in my locked home office.

My initial plan for data collection was to use social media and the university's participant pool to obtain 10-12 participants for this study. I was successful in collecting all 15 from public social media CrossFit pages. The public pages used were titled CrossFit AR Strength, Crossfitters, CrossFit Cliffside, Pennsylvania Crossfitters, CrossFit Workouts, CrossFit Beauties, CrossFit MET Performance Lab, and CrossFit South Mountain. Within the first 48 hours, a total of 106 individual reached out showing interest to participate; the majority were women. Seventy of these responses were from one post. I consulted with my dissertation chair and removed the postings due to the high volume and the goal number of participants being reached. From here all participants were screened for appropriateness, given the informed consent, given time to ask and have their questions answered, and then scheduled. Two did not show up for their

interviews and were replaced with two new participants. Prior to interview each participant reviewed their informed consent, as planned, and provided proof of consent by emailing me back “I consent.”

Data Analysis

I began to analyze the data as I completed it as well as while carrying out other areas of the data collection and transcription phases. As I carried out the interviews, I took detailed notes that I continuously revisited. I immersed myself in the data by re-reading these handwritten notes, re-listening to the recorded interviews, and reading the transcripts multiple times to aid in deeply exploring the data. This aided with familiarizing myself with what the participants said during their interviews which then led me to begin to note common trends emerging among the data. I then took note of these themes, wrote down exact quotes from participants in Microsoft Word, and began to separate and organize the statements in these interviews into separate potential codes, themes, and sub themes. I would send this rough coding document with raw quotes and potential themes to my dissertation chair for feedback and guidance throughout this process as I progressed. When coding, I used all passages of text, drawn from participant statements as well as my observations, related to each research question. From here I could organize the responses bases on commonalities and use descriptive codes, brief titles, and label the statements. An example of this coding process is provided in Table 1 (see page 73). This shows how I went from research question, to theme, to subtheme, and how they were supported by raw statements.

While coding the transcripts and reflective notes I was able to create a list of codes that I further analyzed based upon the commonalities and relationships that presented between the codes and the research questions. All codes that were similar were placed together, such as those that expressed similar wording or experiences, into larger categories. For example, all participants talked about seeing their friends, speaking to their friends, and bonding with their friends after class so these were all under the subtheme of friendships which was under the theme of social connection. Another example would be participants talking about stories of triumph, accomplishing a workout, or learning to master a skill they once thought was impossible. These topics were organized under the subtheme of physical accomplishments under the theme of physical competence which correlates to the research question exploring motivation through competence. Upon examining all transcripts, the major themes were social connection, competence, autonomy, and motivation. Some sub themes found were barriers to motivation, friendships/ accountability buddies, competitive push, social climate, mental competence/ confidence, and physical competence/ triumph stories. An example of this process is represented in Table 2 (page 74).

I then examined all codes in the code list and looked for those that were similar and could be grouped into larger categories. Then, I examined each more deeply and removed codes that did not fit or lacked proper support, which I defined as being supported by multiple responses from participants. Any codes that lacked enough support from participant responses were noted and discarded or placed into subthemes which are noted above. After I finished grouping codes into larger categories I then determined

which subthemes were relatable to create a flowing chart of themes and sub themes based upon codes assigned to them. During this analysis step I used judgement to place similar categories together under larger categories where they appropriately fit. This process yielded the final thematic alignment of themes, subthemes, and how they related to each research question. This is visually represented by Table 3 (page 75). These themes and subthemes, and how they support the research questions, will be further discussed in greater detail in the results section.

Table 1

Example of the Coding Process

Raw data	Code
“You get so used to seeing everyone that if I don’t show up one class I’m going to get 10 texts asking where I am”	Accountability / social
“At my gym we do this thing whereon your birthday they play a song and you have to do birthday burpees and everyone cheers you on”	Fun / community
“When I first started I couldn’t do ring muscle ups (RMU). My coach gave me small steps and tweaked the workouts and then before I knew it I was doing RMU.”	Scaling/ coaching/ personal triumph
“Before CrossFit I would wear a t-shirt at the beach. In class people take their shirts off to WOD and eventually I did too, not even thinking, and there was no judgement at all. Now I don’t feel afraid to not wear a shirt anymore I’m so much more comfortable.”	Confidence

Table 2*Example of Code Placement Into Larger Theme Categories*

Codes	Categories
-“No one is there forcing you to do what you can’t. You could quit at any time.”	Autonomy
-“Everyone knows you have the autonomy but you show up, you pay for this, you’re there for you.”	
-“you can always scale a WOD.”	
-“I feel like with CrossFit I can confidently be capable of attempting anything in my life” ,	Competence
-“Unless you’re just not being safe you cant really not be competent”	
-“There were movements I couldn’t do at first and I would think I could never do that but with practice and keep coming it eventually comes”	
-“We’re all in this together pushing each other and cheering. If I’m doing well I’m pushing the guy next to me to go harder”	Connectedness
-“It’s a community”	
-“I love getting to cheer people on. These are the same people I see everyone, they’re my friends.”	
-“It’s a lot of fun and it’s never the same boring thing, I look forward to going”	Motivation
-“I keep coming, I just show up, that’s all you really have to do.”	

-“You know you found the right exercise style when it’s actually hard to take a rest day, like I have to force myself not to go.”

Table 3

Thematic Structure Aligned With Research Questions

Codes	Themes	Subthemes
RQ: How do adults who participate in CrossFit describe exercise adherence?	Motivation	Barriers, fun, seeing results
SQ1: How does the experience of competence contribute to adherence?	Competence	Mental competence/confidence, physical competence, role of coaching
SQ2: How does the experience of connection contribute to adherence?	Social connection	Social climate, friendships, accountability, competitive push
SQ3: How does the experience of autonomy contribute to adherence?	Autonomy	Programming, scaling, structure, role of coaching (guidance)

Evidence of Trustworthiness

Establishing validity is difficult for qualitative studies, therefore researchers seek to establish trustworthiness by means of credibility, transferability, dependability and confirmability (Ravitch & Carl, 2016). Credibility is similar to content validity, in

quantitative research, and is utilized to ensure that the interview questions are measuring what they are supposed to (Ravitch & Carl, 2016). I established credibility having them reviewed by my dissertation chair and dissertation committee member. Additionally, I continuously reviewed the transcripts, recorded interviews, and my notes. These steps were done to ensure my research questions measured what they were supposed to and that I accurately represented the participants' responses in my data organization and analysis. Furthermore, I sent my coding document to my chair and allowed her to read through it so that I could increase credibility and decrease any misrepresentation or bias.

Transferability can be compared to the concept of external validity in quantitative research and it ensures that qualitative research is contextually bound and develops meaningful descriptions from the context related statements (Ravitch & Carl, 2016). I carried out transferability by keeping detailed data sources such as detailed reflective notes during, before, and after interviews, recording all interviews, and having the transcription of interview contents. Further, I provided rich detail and all-encompassing descriptions of the data that came from this study as well as by using the method of purposeful sampling which ensured I gathered these results from the population context that this study sought. Additionally, the level of detail used in documentation aids in readers and other researchers being able to identify if these results are applicable or transferable to their research or further research ideas (Morse, 2015). While conducting qualitative interviews and processing through the data I collected I was continuously mindful of data saturation. Data saturation occurs from quality data being collected and reaching saturation when the same quality data continues to surface with minimal variety

(Bobby, 2016). I believe that data saturation was achieved by interview 10 however I continued to complete 15 total as I wanted to explore more male responses. At 15 interviews I believe I had a high quality and comprehensive amount of data that resulted from participant responses.

Dependability refers to data being sound and can be compared to the idea of reliability in quantitative studies as it corresponds to an ability to replicate the found results over time (Morse, 2015; Ravitch & Carl, 2016). One way to establish dependability, that I was able to use, is through the use of an appropriate research design (Shenton, 2009). Additionally, I used detailed descriptions of my data collecting process, reflective field notes, transcripts, and data analyses process. This included notes of my own experiences, raw responses of participants, and the steps taken to collect, organize, and analyze data.

Confirmability is viewed as being similar to how quantitative researchers seek objectivity. As qualitative research researchers seek to remain relatively neutral and control for bias that could influence the authenticity and nature of the study (Ravitch & Carl, 2016). I was able to enhance confirmability was through the use of audit trails, reflective journaling, member checking, recorded interviews, and transcripts of the participant responses and interviews. I provided thick details throughout this process to clearly outline how data were collected, recorded and analyzed. The use of my reflective journal was done to aid with identifying any potential bias before, during, or after interviews. These steps were crucial in allowing me a way to focus on the actual collected data without potential of my own experiences or emotions getting in the way. The

reflective journal was highly important in creating a way for me to understand the themes from the participant perceptions rather than my own.

Results

The results gathered from the data collected during the 15 qualitative interviews lead to the identification of four overarching themes and six subthemes. The themes include motivation, competence, social connection, and autonomy. The subthemes that emerged were barriers to motivation under the theme of motivation, mental competence and physical competence under the theme of competence, and friendships, competitive push, and social climate under the theme of social connection. In this section I will outline each of these themes and subthemes while providing sample responses that aided in building each section.

Theme 1: Motivation

Theme one directly correlated to the phenomenon of motivation for the research question of this study. The results showed that adults who took part in CrossFit for over 6 months experienced motivation in a variety of different ways that occur internally and externally. This theme was emerged from the language that participants used to describe their continued motivation to attend CrossFit for many years as well as what motivated them to initially try CrossFit. All participants discussed a degree of which the following themes of competence, social connection, and autonomy played in exercise adhere and motivation that will be further discussed in this chapter. Motivation was experienced and described, aside from the prior noted ways, by means of seeing physical change, having

fun, feeling pride, and how CrossFit aids as a coping mechanisms to positively impact other aspects of life.

Ten of the fifteen participants stated they were proud to be a Crossfitter and what it represents to them. Participant 7 stated “Oh I am so proud to be a crossfitter, what we do is really hard, its bragging rights and I like going back and continuing to do this.” Along with this, other internally motivating factors that were stated by the participants were the fun experienced in going to the constantly changing workout. Participant 6 stated “other fun stuff happens here too. The WOD (workout of the day) is fast paced, always changing and keeps my attention.” Participant 2 stated “I am always happier after a WOD. I used to just weight lift and that got so boring but this never does.” Participant 8 stated “I keep going back year after year because it’s worth it. It feels so good to accomplish it, the socialization, the fun, and the ability to just keep watching yourself get better and better. That pride and enjoyment translates to every other area of my life.” Participant 9 stated “it brings me happiness and I love it.” Participant 14 stated “It’s my time. With life, being a mom, work, and everything else it’s my time to de-stress, focus on me, and cope with my anxiety.” Other statements gathered by participants that speak to the internal motivation gained from CrossFit include participant 1 stating “You really are training more than just muscles at a CrossFit gym, you train mentality, social, and so much more than just drives you to keep coming.” Participant 4 shared “CrossFit changed my life mentally, physically and socially and it just makes me want that better life now that I know it’s possible so I keep coming.”

Seven of the fifteen participants talked about how seeing the physical changes in their body acted as a strong external motivating factor for their continued adherence. This area of the motivation theme is where participants talked about how seeing the physical and biological changes in their weight, muscle mass, or skill set lead them to feeling reinforced to keep exercising and partaking in CrossFit. Participant 3 stated “I used to be over 300lbs and now I am 184lbs and I’m now finally healthy enough to become pregnant.” Participant 4 stated “I used to be much bigger when I started and now I have lost so much weight. My experience caused me to bring my friend and he’s now lost 100lbs since he’s started and he almost beat me.” Participant 15 shared “CrossFit focuses on ability and strength and not stick thin Instagram bodies that aren’t healthy, so I’ve been able to love my body now. The muscles are an added bonus too.” Participant 7 shared “I am currently in the best shape of my life.” Several other participants shared this same statement including Participant 9 who shared that at the age of 49 he is in the best shape of his life due to CrossFit even though he prior was athletic in college and did toughmudder races when he was younger. These physical changes were also noted in ability to attempt adverse physical challenges outside of the CrossFit box. Several of the participants shared these physical changes allowed them to do ruck run (a race with a weighted backpack), triathlons, CrossFit competitions, cycling, fitness runs, and marathons that they otherwise would not have done. For example, Participant 3 shared “Once I lost 180lbs and could move better I began to realize I could do a lot more than I thought. Some of my CrossFit friends and I even did a triathlon and a trail mountain marathon.” Participant 6 shared how these physical changes yielded commitment to

health by saying “To me I feel more committed to my health and nutrition than ever before. Seeing my body change makes me want to not only keep exercising but also to take care of my body in other ways like eating right.”

Subtheme: Barriers to Motivation

While every participant shared how they do experience motivation due to a variety of aspects that are offered by CrossFit, they all also mentioned experiencing barriers to the motivation as well. These were described by participants in a pattern of positivity in the sense they shared the barrier and how it is overcome to continue to comply. This meant that while a participant would identify a barrier they would then, without prompt from me, tell how they overcame it or why it could be seen as a positive aspect. Twelve participants did this in stating that what they once viewed as a barrier they, without prompting, shared how they were able to overcome it openly. For example, one person stated that the winter weather was once a barrier but now she purchased a rowing exercise machine of the same quality that is at her gym and so that on days where snow is a barrier she is able to still do the workout in her garage. These fell into the categories of barriers from themselves, cost, initial views, and COVID-19. Barriers from self were things such as negative self-talk, personal anxieties, lack of proper scheduling, their children, self-doubt, and lifestyle issues that could arise.

Ten participants gave examples of barriers that they identified as personal barriers from themselves. They gave things such as disliking the cold weather, being tired after work, being pregnant, getting “stuck” in their own heads, having a hard day prior, having kids, and being misled/ discouraged by the stereotypical CrossFit athlete. Participant 2

stated “It is a commitment so you have to actually commit and if you choose not to that’s on you not on CrossFit.” Participant 4 said “at first it was different, you go in and you see all these people doing crazy things or seeing a long workout, and you would get so discouraged and down on yourself. But then if you keep going, the more I felt the comradery and it wasn’t as intimidating, I then fell in love with it.” Participant 13 stated “I think, like anything, you get in your own way” and “I get inside my own head during the open or when I see other people get something sometimes.” Participant 14 stated “Initially I had to try it for a PT class and I was not excited because I’d only seen the extreme things about CrossFit that made it not safe in my mind but when I got there I instantly thought ‘wow was I wrong!’” This participant went on to share how during her pregnancy her energy or pregnancy symptoms were barriers as well. Participant 4 stated “It’s a mindset thing, when I got pregnant, before I made a mindset shift, I would get in my own head, get down on myself and struggle with motivation.” Participant 15 shared that as a coach she observes this and stated “It depends on the mentality of the person walking in. Some people are intrinsically motivated and I can connect with them. Others just come in hot headed and when they get humbled by the sport they don’t want to be worked with and you can see they just aren’t going to do it.” Participant 7 stated “Initially I was intimidated just looking at the WODs (workout of the day). I had a lot of self-doubt in myself initially.” They also shared “Sometimes I compare myself to others and it stings in the moment when they beat me at something, but later it motivated me. I have my own personal self as a barrier like physically as well.”

Cost was mentioned by seven participants as a barrier. Five stated they initially felt “hooked” after trying one class but were not able to actually join until they were in better financial positions. Participant 10 stated “It’s expensive. I loved it at first but I was still a nursing student so I couldn’t actually go until I got my nursing job. But like where cost is a barrier here it also weeds out the meatheads at public gyms that get in your way as a girl sometimes. People who are paying \$150.00 a month are there to exercise and not mess around so I do actually like it now.” Participant 8 stated “it’s really expensive and I have to pay for my wife and me, but I mean you get what you pay for.” Participant 9 stated “The cost is a barrier.” Participant 15 stated “I initially tried CrossFit in Paris and was hooked right away. But the cost was a barrier so I had to wait for a Groupon to try it until I was in a more stable financial place to engage in it regularly.”

Question number 9 on the interview questionnaire asked directly about March 2020 and COVID-19 and thus all the participants mentioned COVID-19 as a barrier to their prior CrossFit experience. All except one participant spoke about how training became over zoom, at home, and was altered by the pandemic. All except one participant shared that due to their gyms lending out equipment they felt connected and capable still. Only one participant shared, due to family stressors and financial stressors from the pandemic, she was hindered in her participation and thus experienced frustration, stress, and had to see her therapist again. Participant 15 further stated, “During COVID we have had two shut downs. The first was harder because the second one I knew what to expect and were able to respond better. During the first, I couldn’t go to the gym, I hated zoom, and I had to teach seven zoom classes a week on there for CrossFit. That was so bad for

me losing my gym time, socialization, and coping skill of the gym that I had to see my therapist again. For the second shutdown we did adapt and did exercising outside as soon as possible.” Contrasting, the majority of the clients shared positive experiences with COVID as a barrier. Participant 2 stated “COVID was a barrier but my gym was so awesome they lent out all the equipment without even hesitating, that’s thousands of dollars, and we got closer.” Participant 3 stated “COVID was a barrier to everything but CrossFit helped me escape it, it’s how I kept my sanity.” Participant 13 stated “COVID closed our gym but actually brought us much closer, like we did zoom classes and zoom happy hours and lent equipment out. I really felt the community.” Participant 14 stated “During COVID my gym didn’t skip a beat. They immediately lent every piece of equipment in that gym from bars to assault bikes to all the members. They started zoom meetings and they would program like five different WODs so there was something for you regardless of what equipment you had or didn’t and my transition was seamless because of this. The only struggle with COVID was just that it was harder without all the people.”

Theme 2: Competence

This theme addressed the first sub research question that was “How does the experience of competence contribute to adherence?” I created this theme based upon the responses that participants shared that directly correlated to feelings of, examples of, and experiences of how competence impacted their motivation and exercise adherence. This was one of the qualitative interview questions asked to all participants and thus all 15 shared about this experience. Their responses were either triumph stories of times they

mastered a skill or felt competence, described mental competence or confidence they've gained, or a described physical competence. Two subthemes that arose from the responses gathered were experiences describing mental competence and experiences describing physical adherence.

Subtheme 1: Mental Competence

Based upon the commonalities of responses of participants, several shared their experiences with CrossFit yielding a positive impact on their perspective when viewing challenges outside and inside the gym. These participants further shared how this novel outlook aided in making them feel more mentally competent or confident in regards to the gym and life outside the gym. Additionally, discussion about the mental aspect of CrossFit was shared by several participants. For example, Participant 1 shared "I believe CrossFit trains the body and the mind, you have an identity shift and realize you are capable of more than you thought" and "Once your values are in place every decision becomes easy." Participant 2 stated "it has brought a shift in my life", "It's where I get my high energy and self-esteem from", "it's a level of focus and a way of looking at challenges that makes the WODs and life more manageable"; "It really is a lifestyle change"; "the physical results are great it's like what can my body do now, what is my mentality now?"; "It builds a deeper confidence." Participant 4 stated "I used to be afraid to wear no shirt at the beach and now I don't have that fear because with CrossFit I learned that was just in my head." Participant 3 stated "It's like CrossFit makes you think 'what if' and opens doors"; "You start to think 'give it a try' instead of avoiding something hard"; "Going helps me maintain sanity"; "there's a mindset outside of

CrossFit to take on other things because of what you've already taken on at CrossFit"; "I'm now confident to engage in every style of exercise because of CrossFit"; "I'm still apprehensive don't get me wrong, but because of CrossFit I am capable." Participant 9 shared "The confidence aspect is huge, like you gain so much. Initially in 2010 my military job was really demanding and CrossFit pushed me out of my comfort zone and I could apply this confidence to. It translates from the gym to life in the sense of empowerment and "I didn't know I could be capable of this"; "Its strength, not just physical but mental too. It's the both strengths together that can be applied to life and are all learned through doing the CrossFit workouts and applying that mentality to life too. You start looking at things one rep at a time." Participant 8 shared "I mean you look at these workouts and you laugh and think you can't possibly do that, they're intimidating, but then you do and that accomplishment feeling carries over into life. I'm so much more confident when I do my obstacle runs too. There's been a lot of growth in me in the last two and a half years."

Subtheme 2: Physical Competence

Based upon the responses of participants several shared their experiences with CrossFit as something that has yielded a positive impact on their physical self and how they feel they can physically master or take part in CrossFit. Themes that arose here were how the role of having a guided coach plays in making these physical movements feel more achievable, how they can see physical changes and progress, and sharing their triumph stories of learning skills they once thought were not possible. Since all participants were asked a question about competence all shared a response describing

some type of competence but 12 directly shared about physical competence. Participant 4 stated “Unless you are choosing to ignore the coach’s advice and being unsafe there really is no way you can’t be competent.” Three other participants shared how having a coach there to design the workouts, provide feedback, and to teach progressions led to them feeling physically competent or in them actually being able to be physically competent and master the given skill. For example, Participant 8 shared “I’m 49 so when I came in and saw these younger people doing handstand pushups I laughed. But my coach gave me little my little progressions that I did over time and now here I am being able to do them in a workout safely. I would have felt so discouraged and not even have tried one if I wasn’t guided with small achievable steps to get here.” Participant 9 stated, since they are a coach, “as a coach it’s my job to demo movements and explain how they relate to the real world like how this will help them carry all their groceries in in one trip. Competence comes from understanding the WOD, the intention of it, and being coachable. Sometimes things have to be scaled (modified) for people and I provide that modification for them so that one day they won’t need it.” Participant 7 also stated “I think you can always have competence especially with the coach right there guiding you. In a class you may not think you’d get that kind of one on one but you do. For me my view of competence is only altered by like the type of day I personally may be having. When even the coach is cheering you on you feel competent.”

With that said, five participants shared how they saw strength build and body fat decrease through doing CrossFit and thus they were able to achieve skills or gain the confidence to feel like they later could. Participant 7 stated “I have lost and held off so

much weight because of CrossFit that it has really boost my confidence in this last year. Now I feel that even in the areas I once felt not competent in, like the rig (which is a piece of equipment found in a CrossFit gym), I've been now working on." Participant 2 stated "I'm currently pregnant and I still can go and modify every workout and it's still doable and I never go and regret it. I think competence is just showing up. I feel like with CrossFit I can confidently be capable of attempting anything in my life." Six participants stated the same sentence "you just have to show up and you can achieve anything" and four participants stated "you really exceed your expectations of yourself and what you can do with your body."

Theme 3: Social Connection

Theme three addressed sub research question two which stated "How does the experience of connection contribute to adherence?" I created this theme based upon the ways in which participants described their experiences and emotions in correlation to peers, socialization, and connection that they shared. Three themes emerged in the data in this theme that were coded and categorized as friendships, competitive push, and social climate.

Subtheme 1: Friendships

This subtheme corresponds to the second sub research question of "How does the experience of connection contribute to adherence?" Several qualitative interview questions correlated directly to asking about connection as well as gave space to openly share experiences that could describe a social interaction to some degree. Fifteen out of fifteen participants mentioned friendships they have with their peers, formed with their

gym friends, and maintain in and outside the gym. Every participant spent several minutes talking about their “friends” and the important role they play in motivation, providing accountability, attributing to a sense of “a community”, and exercise adherence. For example, discussion of socialization and friendships were mentioned by all fifteen participants. Common themes of communication arose in regards to being greeted by peers, talking about the WOD’s, bonding over the shared suffering during the WODs, and all sharing the same mindset, language, and interests. Participant 1 stated “everyone catches up and talks before class, everybody comes together”; “the social aspect drew me to it, it’s a community, these are my friends, and I’m there for it and here for my friends.” Participant 2 stated “everyone talks before class, everybody is on the floor after the WOD and you high five and laugh, except during COVID then there’s no high five.”; “we’re a family” Participant 3 stated “starting my day seeing my friends, the same people every day”; “It’s a whole community, I am excited to be a Crossfitter and I get excited like when I see another person with a Rogue shirt on or Metcons (a type of CrossFit shoe) on in public”; “Close knit group of people that become family, accountability partners”, and “We have universal conversation.” Participant 15 stated “I love that everyone is there to work and make friends. Everybody knows everybody at my gym and if you don’t then it’s your job to engage and find out who they are and why they’re here. Find your people because the people are there to motivate you even when you aren’t feeling motivated.” Participant 4 also supported this by stating “I was weight lifting but it got boring alone, CrossFit is fun and there’s other people.”

Further, the role friendships play in being held accountable was mentioned by twelve of the fifteen participants. Participant 14 said “you are seeing a lot of the same people every single day so if you don’t show up your getting called out and it’s not just accountability from coaches but also from your friends” Participant 4 stated “These are my friends. My best friends now. At the gym it’s fun and they will rag on me if I don’t show up like ill wake up to a bunch of texts. But also these are people who I’m meeting their babies, spending Easter together, and creating lifelong memories with. These are lifelong friends.” Participant 2 stated “It’s a family, every gym is a family” Participant 12 said “these are my friends now. When you go every day, see the same people, and suffer and grow together you can’t not grow to build friendships.” Participant 3 stated “Our friendships run deep in and outside the gym. I mean we all like the same things, I know for me I’ve done so many fun things with my friends from the gym like doing a triathlon, signing up for competitions, having family dinners, and making these crazy memories.” Participant 8 stated “The classes are small so you can socialize and look forward to that interaction and exercise.” Participant 6 shared “the relationships with other people is why I continue. You’re all there suffering together. It’s the atmosphere, the people, you’re not going to be judged and you’re not alone.”

Subtheme 2: Competitive Push

Feeling a push from peers as a positive source of motivation for exercise and adherence was mentioned by all fifteen participants to some degree. This was mentioned as a means of pushing themselves to complete a workout that they may have been intimidated by, to try a skill, when they feel motivated during the WOD, and how they

feel a motivation to adhere and return to class in the future. Fifteen out of fifteen participants, 100%, identified this as a source for personal growth that has lent to ongoing motivation to continue. These was described as being displayed by peers cheering for one another as well as feeling a race or competitive comradery while working out. For example, Participant 1 said “were all in this together pushing each other and cheering. If I’m doing well I’m pushing the guy next to me to go harder”, and “my performance impacts the guy next to me and vice versa.” Participant 2 shared “you get to race and compete with people. With that comes this energy that pushes you.” Participant 4 further supported this by stating “its comradery and competition. Like I want to cheer for this person but I want to push and beat them.” Participant 13 further supported this by stating “You compete with others and it pushes you.” Participant 13 went on to give this example “You could want to quit but then one person, even if they aren’t the coach, cheers you on and it motivates you and you feel like you can keep going. Like the other day I was doing the WOD and just being at the gym, all going at once I was able to do things that I have never been able to do before like string together more reps than usual.” Participant 9, who is also a coach at their gym stated “the encouragement of being cheered on and as a coach it’s my job to push my athletes.” In sum, this push appears to come from peers, cheers, and coaches and is noted as yielding internal motivation, by pushing self and feeling confident, as well as external, by yielding measurable results that are higher than usual.

Subtheme 3: Social Climate

This subtheme correlates to the qualitative interview question number four which coincides with sub research question 3 regarding experiences of connection. All fifteen participants answered this question. Fourteen shared positive remarks requiring the social climate as a key factor to motivation both initially and continuously. Two participants, number 8 and number 14, noted that in their experiences the social climate varies from gym to gym and in gyms that are more competitive this was noted to be a less welcoming place than the gyms they currently attended. Universal terms used were “welcoming”, “friendly” “Supportive” “friendly” and “community” by participants number 1, 2, 3, 4, 6, 7, 14, 11, 10, and 8. In regards to aiding initial motivation Participant 7 shared “It’s intimidating at first to walk into a CrossFit gym but the atmosphere is the perfect mix of having fun and staying on track and the members make an effort to accept and introduce themselves to newcomers.” Participant 8 stated “Some people take it way too seriously and it could make the gym not enjoyable but the gym I go to now is accepting of newcomers, welcoming, and helps you make progress to master skills but not all gyms are like this.” Participant 14 shared “as a coach it’s my job to engage new people, partner them up and introduce them to other members like them, and be approachable.” In regards to continuous connection participant 4 described their social climate as “it’s a group of my peers that are a broad range of people that have fun.” Participant 3 stated “they are great people, all diverse, and they become your friends.” Participant 7 stated “They don’t judge you, in or outside the gym.” Participant 14 stated “It’s a family, a community and they all encourage and push each other.” Participant 12 stated “It’s a tight knit group of people all supporting each other.” It was noted that each class has their own

dynamic as they see the same people daily. For example, Participant 15 stated “As a coach I can see how the dynamic of the social climate changes based on the class. For us the morning people call themselves the rooster crew and it really creates comradery from the second someone just comes to try it out.” Participant 8 stated “I continue because of my gym dynamic. People are positive and show and teach you.”

Theme 4: Autonomy

Theme four directly addressed sub research question: “How does the experience of autonomy contribute to adherence?” This was directly asked in qualitative interview question number six. All fifteen participants shared how they did experience autonomy in CrossFit. Common categories that emerged from participant response as sources of autonomy were scaling, coaches and self-awareness. Ten participants ,67%,stated they viewed CrossFit as a “very autonomous sport.” Participants discussed the ability to scale and modify a workout as a means of “making the workout your own” and thus feeling autonomous. For example, Participant 1 stated “No one is making you do it. No one is making you come to class and do it; you can quit at any time. You have autonomy to scale too so all you have to do is show up, I mean you pay for it so you may as well be there for you.” Participant 2 stated “You make it your own, it really is for everyone.” Participant 14 stated “CrossFit is infinitely scalable with all the movements so it really is for everyone. It’s for the 70 year old, the elite athlete, the pregnant person, the new mom, and the average Joe. The scaling options and a simple conversation about your goals with your coach make this possible for you.”

Participants further discussed how having communication with a professional coach as a source of modification suggestions and guided progression exercises was a source of feeling autonomous. For example, thirteen out of fifteen participants talked about scaling as an option. Participant 1 stated “you can scale any WOD.” Participant 2 stated “You are your leader, you can talk to your coaches, but it is all different for everyone based upon what you choose.” Participant 3 stated “modifications are always available.” Participant 13 stated “guidance helps you stay committed. We have a choice to change things we don’t want to do or can’t do yet. A coach will talk to you and show you other options.” Participant 3 shared how she broke her hand and was able to still take part 6 days a week. Participant 4 also shared a story of when he first begun and was too overweight to run so his coach allowed him to ride the bike until he was able.”

Additionally, four of the fifteen participants, 26%, discussed how certain seemingly not autonomous factors, like set strict class times, were sources of motivation leading to their continued adherence. Participant 8 stated “I personally like that it is so structured. It takes the thought out so I just have to show up and it’s all decided for me.” Participant 15 stated “You really just have to show up and the structured class times make it so you can’t push it off.” Participant 11 stated “The set class times are scheduled and it makes it habitual so overtime it’s just routine and you show up and it’s easier.” Participant 13 stated “I think the things that aren’t in your control, like the class time or the WOD itself that day, make it easier for you. I don’t have to spend time planning out a workout routine or bopping around the gym wasting time. I just go and it’s all set out for me.”

Summary

In this chapter I presented the findings that were gathered from this research study. These findings represented the shared authentic experiences of motivation and exercise adherence in adults who participant in CrossFit. These fell into themes of motivating factors, barriers to motivation, social connection, competence, and autonomy. These experiences of motivation were further characterized by things such as welcoming community, friendships, scaling options, coach guidance, variance in programming, ease of set programming, personal triumph, mental competence, physical change, etc. Participants were able to share how these characteristics of CrossFit impacted their continued motivation to adhere to exercise. Participants also shared barriers initially as well as continuously that were described as such things as personal thoughts, cost, personal schedule concerns and shared how they were and are able to overcome these barriers with the use of other motivating factors mentioned above.

Chapter 5: Discussion, Conclusion, and Recommendations

The purpose of this generic qualitative research study was to explore the experiences of motivation and exercise adherence within the population of adults who engaged in CrossFit for a minimum of 6 months. This study was carried out to explore and better understand the perceptions of motivation and exercise adherence within the framework of the SDT among adults who took part in CrossFit. In Chapter 4 I was able to report and display the findings gathered and coded from qualitative interviews with participants. In Chapter 5 I interpret these findings, discuss limitations of this study, provide recommendations for future studies, detail the implications of this study, and conclude this study.

Generic qualitative research studies are best used for researchers interested in gaining understanding and meaning behind a certain identified phenomenon (Merriam & Tisdell, 2016). I chose to conduct this qualitative research study to examine and better understand the meaning behind motivation and exercise adherence in adults who participant in CrossFit. I believe that the information gained from participant feedback data reached my goals for this study. My goals for this study were to explore perceptions of motivation in adults who take part and comply with CrossFit as well as to gain a better understanding of exercise adherence experiences among these adults who take part in CrossFit.

Previous studies, discussed in Chapter 2, support evidence that exercise has shown positive effects on physical and mental health in ways that have been correlated with increased self-esteem, wellbeing, and an increase in mental health (Guiney &

Machado, 2012; Penedo & Dahn, 2005). Other benefits of exercise have been linked to a decrease in health deficits, such as heart attack, diabetes, and stroke (Geevar, & Anoop, 2017; Langoni et al., 2019). With that said, exercise adherence and engagement are social problems. Only 31% of American adults adhere to the CDC recommended required amount of exercise, and research shows that 50% of adults who do begin a workout program will drop out within the first 6 months of participation (Whiteman-Sandland, et al., 2018; Wilson & Brookfield, 2009). CrossFit is an aerobic exercise style marked by short intense workouts, group class style, and unorthodox fitness characteristics, compared to current popular gyms, with elements from gymnastics and weightlifting as well as cardiovascular elements (Claudino et al., 2018; Crockett & Butryn, 2018). CrossFit is an exercise style that differs from other exercise styles in many ways such as environmentally and socially (Claudine et al., 2018). The CrossFit environment has been identified as one that fosters motivation, and limited research is currently done on this exercise style (Patridge et al., 2014). This was reported by participants in the current study; increased self-esteem, continued exercise adherence, ongoing engagement, and how these differing aspects of CrossFit were positively impactful. Recommendations for further research in this area are discussed later in this chapter.

All 15 participants in this study provided data that their perceived sources of motivation and exercise adherence, based upon their experiences, came from sources of feelings of autonomy, feelings of enjoyment, seeing results, feeling mentally and physically competent, experiences of social connection, coaching, or programming. All 15 participants identified that they feel motivation to adhere to CrossFit. Eleven out

of 15 participants identified barriers to motivation being cost, COVID, and personal factors that they have experiences with and have overcome. Twelve out of 15 participants identified friendships as a motivating factor, 100% of the participants identified the social climate as a source of motivation, and 100% of the participants identified competing with peers as a source of motivation and exercise adherence. Additionally, 100% of participants identified experiencing feelings of competence in CrossFit. Eleven out of 15 participants identified feeling mentally competent, while 12 out of 15 identified experiencing feelings of physical competence in the CrossFit setting. All 15 participants experienced feeling autonomous, three shared that things that appeared not autonomous were actually sources of motivation for them, and 13 out of 15 participants shared that coaches and scaling options made them feel autonomous.

Interpretation of Findings

The results of this study have shown that perceived experiences of motivation and exercise adherence were identified in adults who participated in CrossFit. These findings further showed that participants identified factors that promoted motivation, and barriers to it, within several common themes related to feelings of competence, feelings of autonomy, feelings related to social connection, as well as in their perceptions of broad motivation such as enjoyment, physical change, and the programming. These participants were able to not only identify barriers to motivation but also identify how they have overcome these to commit to CrossFit for a period of over 6 months with a range of 1 year to 10 years.

In my literature search, detailed in Chapter 2, I found very little research on how Crossfitters experience motivation and only found a study identifying those who take part in CrossFit as having higher levels of intrinsic motivation (Odele, 2015). Additionally, in a study by Claudino et al (2018), the differing characteristics that define CrossFit as an exercise style were presented. Such things included a possession of a unique, compared to traditional gyms, social component, the use of various exercise styles, the set programming, the notably different environment that lacks high end amenities of traditional gyms, etc. Exposing teens to CrossFit positively impacted their mental health and self-esteem and led to 94% of the group adhering to the intervention (Eatheret al.,2016). Koteleet al., (2016), identified a significant improvement in motivation associated with engaging in CrossFit. Other studies link CrossFit to feeling a sense of tribal community, being a source of self-care, and being linked to high levels of motivation, high levels of engagement, and positive health outcomes (Claudino et al., 2018; Odele, 2015). Preliminary data suggest that CrossFit is associated with higher levels of sense of community, satisfaction, and motivation (Claudino et al., 2018). The findings of this current study further explore and support these topics to better understand them in relation to motivation and exercise adherence.

Findings in this study presented information on how some CrossFit athletes complied with exercise through feeling competent. Sources of competence were specifically identified for the context of CrossFit. Competence was identified as being sources by coaching and one on one guidance, varying from gym to gym, physical mastery and mental mastery. Physical sources of competence were seeing weight loss,

measurable muscle increase, accomplishing a skill, or being able to decrease times on WODs over time. Mental sources of competence were identified as feeling more confidence at the gym and adapting a mindset for viewing the WODs as doable that was later identified as being replicated with viewing real life challenges outside the gym as doable as well. Participants identified that these specific aspects caused them to feel competence and further comply with the CrossFit program.

The findings of the present study also indicated that some athletes complied with exercise through feeling socially connected. In this study this was defined as the friendships formed, friendly competition, and peers seen regularly in the classes the participants attended. This study shows that these themes lead to an increase in accountability, enjoyment, community, comradery, and physical push during the workouts. The role of social connection was further explained in this study as a factor of the gym that transcends taking place only in the gym and was linked to friendships and events carried out with these peers outside the facility as well. Other ways participants showed a social connection was through the use of common language themes among them. For example, they would all call their work out of the day a WOD and would refer to CrossFit specific terms such as rig and ring muscle up which further expands a sense of connection and understanding.

Additionally, confirming prior data on SDT and exercise, the research in this study further showed that athletes complied with exercise due to experiencing feelings of autonomy. All 15 participants explained that they feel autonomous in their experiences with CrossFit. The results revealed that sources of autonomy in CrossFit were specific to

the avenue and context of CrossFit. These included the ability to scale workouts to aid with making them manageable for each individual, open communication with coaches, the programming, and the support available from coaches and peers to be able to participant in CrossFit as desirable for each athlete and their specific limits, needs, and goals. Further, participants shared that some non-autonomous aspects, such as the set times of classes and the premade programming, were actually aids in adhering to exercise as these allowing them to adhere to exercise by diminishing other potential barriers like procrastination; and that providing a pre-determined program allows for “thinking less” and “just showing up” as the rest of the day is already planned.

Theoretical Framework

The findings of this study are consistent with and relevant to SDT. This study supports that there are aspects of competence, autonomy, and connection factors found at CrossFit in the experiences of the adult participants who take part in this exercise style for over 6 months. Further, these participants explained that these elements exist, are experienced, and they have complied with CrossFit for over 6 months, with a mean time of 3 years for these participants. Participants identified feeling connected socially to their “community” and “friends.” Participants identified feeling physically and mentally competent in CrossFit as well as shared stories of how they achieved skills. Participants identified feeling autonomy as evident by the power of their choice to attend, choice to scale, or ability to communicate with their coaches.

The findings of this present study suggest that the absence of feelings of autonomy and community, as well as cost, COVID, and personal internal issues could

lead to a decrease in motivation and a lack of exercise adherence. This study further showed how CrossFitters experience autonomy, competence, and connectivity and identified participants' ability to simultaneously identify motivation and exercise adherence present.

SDT states that a human's behavior is best understood across differing social context. This theory goes on to empirically state that where specific aspects of autonomy, connectedness, and competence are present the behavior motivation will be enhanced and where these factors are not present the behavior will be diminished or discontinued (Deci & Ryan, 2008; Deci & Ryan, 2012). Intrinsic motivation is proven to be a healthy predictor of persons' successful adherence to a given program especially when they move from external motivation to internal (Richard et al., 1997). Viewing trends in exercise adherence and motivation through an SDT lens reveals that experiences of higher levels of autonomy, connectedness, competence, and intrinsic motivation lead to an increase in the exercise behavior (Teixeira et al., 2012).

Adherence to exercise is defined as an ability to maintain a compliance to an exercise program over a specific, or extended, period of time (Chapman et al., 2015). In this study, all participants engaged in CrossFit for over 6 months of time. For the participants in this study, the shortest period of engagement was 1 year, the longest period of engagement was 10 years, and the average amount of engagement time was 4 years. Therefore, the participants of this study represent a group of individuals who currently display long-term exercise adherence to CrossFit.

Autonomy is defined as experiencing a sense of being in control of one's behaviors and goals (Teixeira et al., 2012). In this study, all 15 participants identified as feeling autonomous in the setting of CrossFit. They shared they experience choice in their attendance as well as their participation level. Things the participants identified as aiding with their autonomy are things such as having communication with their coach, guidance from their coach, the structure of CrossFit, scaling options, and the programming of CrossFit. Due to these options available to the participants, they felt in control and felt autonomy regarding their engagement in CrossFit.

Connectivity can be defined as having an experience of being connected to others. This promotes a sense of belonging and attachment to other individuals (Teixeira et al., 2012). All 15 participants in this study shared several positive experiences related to feeling connected to CrossFit, their peers, their classes, and their friends at the CrossFit gym. Participants positively associated CrossFit with words such as community, friends, and family. Participants discussed a welcoming social climate, building friendships with their peers, being connected through the CrossFit exercise experience, social factors leading to accountability, and social factors leading to improving their performance through competitively pushing each other. Therefore, these participants presented data solidifying feelings of connectedness associated to their CrossFit experience.

Competence is identified as feeling a need to, and ability to, gain mastery and learn differing tasks presented in a specific context (Teixeira et al., 2012). In this study all fifteen participants identified feeling competent in association with CrossFit. Participants identified feeling physically competent to carry out, and/ or learn, the specific movements

used in CrossFit. Further, all fifteen participants identified experiencing mental competence both at the gym and outside of the gym due to their participation in CrossFit. Such factors identified as being associated with feeling competent are having a coach present, feeling confident, learning skills, acquiring a new mindset based from continued exercise adherence, witnessing physical growth/ change, accomplishing workouts, and peers cheering them on.

Motivation in this study was defined as a term used to describe the psychological phenomena, which builds inside an individual that leads to action. It was further described as the complex force that directs one's behavior or can cause a person to repeat a behavior. The degree to which a human is ready to engage in or pursue a designated goal, which requires determination, focus, and readiness (Vincent & Kumar, 2018). All fifteen participants discussed and displayed an ability to feel motivated and adhere to CrossFit for an extended period of time. Aside from the above noted factors, other factors mentioned as positively impacting motivation are friendships, routine, the programming, the set class times, the importance of a healthy/ fit lifestyle, having fun in class, the variance of the programming, seeing physical changes, the positive coping mechanism CrossFit is to some participants, and the ease of “just showing up” that the structure offers as mentioned by six of the fifteen participants. Participants did discuss barriers to motivation that they do experience such as COVID, internal personal barriers, scheduling conflicts, poor weather, prior stereotypes, initial feelings of intimidation, and cost. However, the participants discussed how these are things they overcome as evident by their ability to have adhered to CrossFit for 1-10 years.

Limitations of the Study

This study was limited to only exploring adults over the age of 18, with a mean age of 32, who participate in the CrossFit exercise program for at least 6 months. I did not explore those outside of this age group or time frame. My study did not include or focus on those under the age of 18, teens, new participants, long term participants, or older adults. This study took place during the COVID-19 pandemic and thus created limits in participants' ability to carry out CrossFit due to the quarantine. Additionally, due to COVID-19 restrictions, I conducted this study using Zoom, a computer program, or FaceTime so I was limited in not being able to meet in person. This created limits in only being able to see those who had access to these technology programs and limited my ability to conduct this study in any other location aside from virtual setting, which could limit generalizability. Using participants of different age, acquiring more male participants for a more even gender sample, being in person, or collecting data from those not hindered to participate in CrossFit due to the pandemic could have yielded different findings. This study did have two participants identify as homosexual but did not include any non-binary or transsexual individual. To include these genders and other genders, as well at the above noted age groups and participation time frame in CrossFit, could be relevant for future studies. However, with that said, the population for this study was what I originally sought after and supplied data that was rich in their experiences of motivation and CrossFit.

Credibility

Credibility is described as ensuring the interview questions measures what they intended to (Ravitch & Carl, 2016). Data from this study supports this as all participants were asked the same questions and very clear themes were revealed through the analyses. This supports that all participants, fifteen total, interpreted these questions the same way as they were intended to be viewed. For example, all participants when asked about connection shared things regarding feelings of friendships, family, community, competitive pushes, and a positive social climate. This ensured that the question was clear and measured what it was intended.

Transferability

Transferability is a means of making sure that qualitative research is bound contextually in nature and leads to meaningful descriptions and context specific statements (Ravitch & Carl, 2016). The data supported this as seen by the shared language used by all participants as well as the way several participants, without knowing one another, reported the same answers. For example, all participants shared jargon specific to CrossFit such as using terms like rig, WOD, ruck, ring muscle up, etc. These are terms contextually bound and meaningful to CrossFit. Being that I am a person who has taken part in CrossFit for several year and has an online L1 trainer certificate I was able to ensure that terms were properly used, bound contextually, and context related in nature.

Dependability

Dependability is seen as stable data that can be replicated across time (Ravitch & Carl, 2016; Morse, 2015). The results of my study confirm that dependability was ensured. I carried out 15 different interviews over the course of 2 weeks, over Zoom with different individuals of varying ages, location, ethnicity, and gender. Due to my interview questions, reflexive note taking, and data analysis I was able to see that while the time frame and participant type changes from interview to interview the same codes, themes, patterns, and responses emerged from the data. This ensured that within my study the results were dependable. I further used my notes, documentation, and high level of description to enable future researchers to replicate this study and further confirm dependability.

Confirmability

Confirmability is the way that qualitative researchers aim to be as neutral and unbiased towards the subject of research as possible (Ravitch & Carl, 2016). I was able to ensure this by taking reflexive journaling notes, following the pre-approved research questions, and allowing all participants to share their own personal experiences. I submitted drafts of my themes, transcripts, and coding process to my dissertation chair as a form of member checking. My data supported this by the way I was able to quote their exact words and accurately portray their feelings and their life experiences and not those of my own.

Recommendations

Recommendations for future research in this area would be to conduct a similar study carried out in a time not impacted by a pandemic, such as COVID-19. The presence of COVID-19 caused gyms to close for a variety of different time frames which impacted eligibility of participants as well as impacted the experiences of participants as they were not able to carry out CrossFit in the given physical space. Additionally, due to COVID-19 all qualitative interviews had to be held via Zoom, or other online platforms, which could have been barrier to potential participants. To recreate this study when a pandemic is not present with in person interviews could further validate these results as well as potentially identify more authentic results that represent CrossFit when the barrier of a pandemic is not present.

In addition, this study had predominantly female participants and only four of the fifteen were males. I would recommend recreating this study with more male clients as a way to better reflect the perceptions of male Crossfitters more accurately. I would further recruit more men by either seeking only men, changing the criteria of participants, or exploring the recruitment methods used in this study to aim at attracting a more male audience. To redo this study with more male participants, or including non-binary and other genders, could further validate these results as well as better understand the motivation and exercise adherence factors across different genders of Crossfitters more authentically.

Future studies could also look at adult CrossFit participants at all levels of their engagement. In this study I sought adults who had been engaging in CrossFit for a

minimum of 6 months and those who had been participating less than 6 months were not included in this study. Exploring people who have been engaging in less than 6 months or much longer than 6 months could provide different useful understandings of exercise adherence. Exploring those who do not make it to the 6 month adherence could help identify barriers getting in the way of long term exercise adherence and could yield other important information about motivation and exercise adherence at these levels of engagement. In addition, further research on CrossFit exercise adherence and motivation could support efforts towards these newer athletes in ways to increase retention for exercise.

Studies should also be conducted on exercise adherence across differing exercise styles, such as yoga, running, orange theory, and attending the traditional gym alone. Participants identified the cost of CrossFit as a barrier and this suggest looking at other styles with less of a cost barrier could be beneficial. Participants in this study discussed their prior exercise styles as boring, easy to not go, monotonous, or “a chore” and this study could help to better understand these phrases. Exercise has proven health benefits associated with long term engagement and thus to explore factors of these differing styles that promote or hinder adherence could aid with better designing programs for long term adherence and acquisition of the health benefits associated with exercise.

Adults who engage in CrossFit identified positively associating feelings of competence, connectedness, and autonomy with their motivation to continue adherence. Seeking ways to appropriately provided these, or identify these, in other exercise styles could make a difference in the lives and health of adults. Providing means of exercise

styles that have these characteristics could make them easier to comply with and thus improve health of adults physically and mentally.

Implications

Findings from this study have several ways of positively impacting social change. This study's results aided in understanding motivation and exercise adherence with regard to factors suggested by the Self-Determination Theory such as connectedness, competence, and autonomy. The results of this study discussed how CrossFitters experience these characteristics as well as motivation and barriers to motivation in the context of the CrossFit exercise style for a minimum of 6 months. In regards to exercise style selection, this could help people better select and better design exercise programs that lead to increasing the likelihood of a participant's adherence. With the known positive impact exercise engagement at the CDC's recommended minimum amount has on mental and physical health the results of this study could aid in effectively addressing the social problem of obesity and adults who do not engage in exercise. The results of this study can yield social change in regards to better identifying a program that promotes motivating factors as a positive tool to those selecting, how people can further design exercise programs with regard to ways to promote connectedness, competence, and autonomy as expressed by these study participants, how CrossFit gyms/ programmers with can continuously promote these positive factors as well as bring awareness to the barriers identified by these participants, and bringing a better understanding to ways society can counter the social problem of obesity and adults who lack exercise

engagement and thus increasing the positive health outcomes associated with exercise adherence.

With that said, data from this study could be positively impactful in identifying a program that promotes motivating factors as a positive tool to those selecting. Participants in this study were able to give examples of specific aspects of CrossFit that have increased their ability to adhere. Such aspects identified included the social context, the pre-made programming, the one-on-one coaching, the ability to scale and modify workouts, and the community. Therefore, if an individual is seeing to add exercise into their life for a long term period, they may use this information to identify exercise programs in their area that possess these in hopes it would cause an increase in motivation and adherence. Further, in correlation to how individuals select exercise programs, results from this study could be useful in how people design exercise programs with regard to ways to promote connectedness, competence, and autonomy as expressed by these study participants. This could mean coaches could promote autonomy, connectedness, and aspects that promote feelings of competence within their gym to aid with members adhering to exercise. This could specifically be used in the CrossFit program with regards to ways to continuously promote these positive factors as well as bring awareness to the barriers identified by these participants. Two participants in this study shared that the positive factors of autonomy, connectedness, and competence that they currently are experiencing were on a “gym to gym basis” and thus gyms that had tried in the past did not possess these and this resulted in them changing gyms/ not complying with exercise. Therefore, gym owners could be more mindful of the social

context and motivational factors their gym promotes or hinders when reflecting on the results of this study.

This study provided data that were gathered from adults' who have engaged in exercise for over 6 months, with an average of 3 years. A social problem that currently exists is that the majority of adults do not meet the CDC recommended minimum exercise and the presence of obesity is on the rise (Odele, 2015). This study provided information as to why these participants were able to, and continue to, adhere to ongoing exercise. The use of this information could be used to better design programs of exercise that could also increase involvement as well allow adults who are about to choose an exercise program make a more well-informed decision. Therefore, this data could help adults select exercise styles that promote autonomy, connectedness, and competence and thus ideally increase their motivation and ability to adhere. In sum, this study yields a better understanding of what positively impacts motivation to adhere and what are some barriers are to motivation. This could help in countering the social problem of obesity and adults who lack exercise engagement promoting positive effects of exercise by making better decisions in creating exercise programs or selecting programs that also promote these areas. I personally can be an agent of social change by publishing this study so that future researchers can build upon these results as an empirical foundation to further research on this matter. The use of my study, as well as my recommendations, could be useful in further researchers engaging in exploring CrossFit, motivation, and exercise adherence as well. For me personally, CrossFit, exercise, and health are topics I find interesting and I would personally also like to further research in this area.

Additionally, as an individual who has an Online L1 CrossFit trainer I can be mindful of these factors of autonomy, competence, and connection as I coach my future CrossFit classes. Sharing the results of this study, paired with carrying out suggested factors noted in the data, can be a step toward implementing social change to aid individuals in engaging in exercise and thus yielding the positive health outcomes associated with long term exercise engagement.

Conclusion

Based upon the data collected in this study, adults who participate in CrossFit experience a variety of motivators and influential factors on their exercise adherence. Additionally, adults who participant in CrossFit identify few barriers internally and externally to them as people that could be a hindrance to exercise adherence. Some factors that have been identified as promoting motivation and adherence include the social climate, friendships, friendly competition with peers, other social factors, feelings of autonomy, ability to have choice in workouts, variety, enjoyment, coaching/ guidance, seeing results mentally or physically, and experience competence. Some factors identified by participants as barriers to motivation include the initial intimidation, cost, COVID, and personal factors such as scheduling issues or self-doubt. It is apparent that participants feel connected to this exercise style by means of social connection which was identified as enjoyable, a source of accountability, feeling a sense of community, and identifying how this enhanced their exercise performance. Participants identified the role these connections have played in the gym as well as outside the gym. Evidence revealed that this connectivity and communication among members was a promoting factor of

ongoing engagement in CrossFit. Additionally, participants all identified feeling capable, competence, and autonomous in their participation in CrossFit. They shared these factors allowed them to feel the workouts were attainable, approachable, and achievable and thus prompted motivation for them to adhere. Further, participants identified the programming style of CrossFit to be enjoyable, not monotonous, and allowed them to “just show up” and thus comply easier with exercising.

The participants further reflected on past exercise styles and identified that where these factors were not present it was easier for them to “skip” exercise and not comply. The discussed specifically how going to the gym alone was difficult to continue due to barriers such as going alone, not having a “plan” when they walked into the gym, being too crowded, the type of crowd at traditional gyms, and the ease of just not going. They shared these were factors that led them to move to trying CrossFit and adhere. Further barriers identified were COVID-19, cost, and the initial stereotype/ intimidation associated with CrossFit. This shows that preconceived ideas of what CrossFit is do not accurately represent the sport and thus could turn people away. Advice given by all fifteen participants, as an answer to qualitative interview question 10, were all similar in stating they feel newcomers should “stick it out”, “just show up”, “keep going and you’ll love it”, etc. Being mindful of such activities that can promote or hinder motivation to adhere to exercise might improve health outcomes associated with ongoing exercise engagement could be useful to athletes, gym owners, and/or individuals seeking to better their health.

Prior to this study there was little research that was conducted on CrossFit.

CrossFit is a newer exercise style that had little known about it empirically. This study sought to better understand the motivation to adhere to regular exercise among CrossFit athletes. This study explored motivation through a Self Determination Theory lens with regard to being a good model for understanding exercise behavior (Teixeira et al., 2012). The results of this study can contribute to a better understanding of exercise adherence with the goal to improve health outcomes associated with fitness commitment. This study addressed the gap in literature that prior research provided support for more research to develop an in-depth understanding of adherence in the CrossFit setting with regard to exercise engagement (Crockett & Butryn, 2017; Patridge et al., 2014). This sought to address the gap in understanding the correlation between CrossFit and the known positive health outcomes associated with exercise. This gap was addressed by exploring adults who have engaged in CrossFit for over 6 months' perceptions of motivation, autonomy, competence, and connectedness. Data gathered from these adults who had an average CrossFit engagement time of three and a half years supplied information that identified certain themes, patterns, and codes that were associated with their perceived feelings of motivation, autonomy, connectedness, and competence within their experiences with CrossFit. Adults who engage in CrossFit for a minimum of 6 months feel autonomous, competent, and connected to the sport and see these as factors that have positively impacted their ability to adhere and stay motivated to engage in CrossFit over time. They were able to give specific examples of how the specific aspects of CrossFit promote these feelings in a way that enhances their motivation. Information that was obtained from this

study might provide a means for individuals or exercise facilities to improve exercise adherence rates. Each participant of this study wanted to share their experiences and they openly provided answers to the qualitative research questions presented to them in this study. All the participants were given the ability to discuss their experiences and any other areas of importance related to these topics through the use of scheduled Zoom interview sessions. The feedback provided from these participants may not only help improve exercise rates but could also aid in improving the positive effects associated with exercising as well as diminishing the negative impact of lack of exercise, such as obesity. It appears to be vital for exercise programs and fitness facilities to establish a means of promoting connectedness, competence, and autonomy among their members to build stronger connections and increased motivation to adhere to continued exercise.

In sum, the findings from the data in this study supported the prior research on understanding exercise behaviors through the lens of the Self Determination Theory. These results further supported prior results on CrossFit that there are positive health outcomes associated with engaging in exercise, including CrossFit (Teixeira et al., 2012; Whiteman-Sandland et al., 2018). Further these results supported prior research stating CrossFit had been empirically linked to adults who yield high levels of motivation, high levels of engagement, and positive health outcomes physically and mentally (Claudino et al., 2018). This research further explored how CrossFit's nontraditional fitness impact motivation and exercise adherence. Additional research is needed in this area to further understand motivation and exercise adherence in regards to CrossFit in both a quantitative and qualitative manner. Quantitative research would be useful in measuring

motivation perceived by CrossFit participants. Qualitative research would be further useful in increasing study size and better understanding motivation and exercise adherence on a larger scale. This study adds to the currently scarce research on the topic and does provide a foundation for future researchers to address this issue and further expand on the issues of motivation, exercise adherence, and CrossFit.

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Appendix A: Invitation to Participants/ Outline of Study

Greetings, my name is Lauren Falgout and I am a doctoral student conducting my dissertation at Walden University. My dissertation is a study of exercise adherence and motivation among adults who take part in CrossFit for a minimum of 6 months. I am seeking adults who are 18 or older who have complied with engaging in CrossFit for 6 months minimum and are willing to share about your experiences, particularly related to CrossFit, exercise adherence, and motivation. Participation will take place in the form of a 60-90 minute interview with me, which will be recorded, over virtual platforms of Zoom, Skype, or FaceTime to ensure safe social distancing. Information gained from this process will be confidential and participants will have the ability to withdraw from this study at any time. If you are an adult who takes part in CrossFit, or know someone who would be interested, and would like to learn more about this research study or participating I encourage you to contact me at [REDACTED] or via phone at ([REDACTED]). I thank you so much for your time.

Appendix B: Interview Guide

1. How long have you been doing CrossFit?

How old are you?

What is your relationship status?

What gender do you identify as?

2. Can you describe the typical class as a CrossFit participant?

What are some key characteristics of class for you?

What are your favorite parts of class? Can you give an example

What is most unpleasant about class? Can you share an example?

3. What motivated you to try CrossFit?

What motivated you to continue with CrossFit?

What did the experience mean to you to identify as a CrossFitter?

What makes this exercise style meaningful to you?

Are there barriers you experience to your motivation?

4. Can you tell me about the social climate at your CrossFit box?

Can you describe the physical atmosphere of your CrossFit box?

5. Can you tell me about a time your confidence was impacted by CrossFit?

Can you tell me what makes you feel confident at CrossFit?

Can you explain anything that negatively impacts your confidence at CrossFit?

6. Can you tell me about how you experience autonomy in CrossFit?

7. Can you tell me what competence means to you in CrossFit?

8. Can you tell me about any other exercise styles you engaged in or currently engage in?

What motivated you to try these exercise styles?

Can you tell me about how your experience with CrossFit is compared to these styles?

9. Can you tell me what happened to you in March when the COVID-19 pandemic became more prominent?

How did your role as a Cross Fitter change?

Can you give an example of what happened to your training?

10. Is there any advice you would give individuals who are just starting out with CrossFit or looking to join?

11. Is there anything else you would like to share that would help me better understand your experience with CrossFit?

12. Do you know any other adults who participant in CrossFit who you feel might be willing to participate in this study?