

DISSERTATION

FACTORS THAT INFLUENCE OVERWEIGHT AND OBESE MEN'S PARTICIPATION IN
HEALTHY EATING, EXERCISE, AND WEIGHT MANAGEMENT PROGRAMS

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ABSTRACT

FACTORS THAT INFLUENCE OVERWEIGHT AND OBESE MEN'S PARTICIPATION IN HEALTHY EATING, EXERCISE, AND WEIGHT MANAGEMENT PROGRAMS

Despite the high prevalence of overweight and obesity in men, little is known about eating and exercise behaviors in this population. Additionally, research indicates that men are resistant to seeking help for weight concerns. Few studies, however, have assessed the need for specialized weight interventions designed for overweight and obese men. The present study attempted to gain an in-depth understanding of factors that influence overweight and obese men's engagement in healthy eating, exercise, and weight interventions through the use of qualitative methods.

Research questions were developed using a framework that combined components of the theory of planned behavior and PRECEDE-PROCEED model. Six focus groups were conducted with 42 overweight and obese men living in Northern Colorado. Focus groups were recorded, transcribed, and analyzed using Ethnographic Content Analysis. Time, convenience, knowledge, social support, stigma, and masculinity emerged as important factors that influence men's weight-related health behaviors and help-seeking. Results provide support for the development of gender-sensitive weight interventions that take these factors into account.

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CHAPTER 1: INTRODUCTION

As the prevalence of obesity in the U.S. has dramatically increased in recent decades, researchers have attempted to better understand the etiology, prevention, and treatment of this disease. Given that an unhealthy diet and sedentary lifestyle are strongly associated with obesity, research on health behavior change plays an important role in working toward possible solutions. One major focus of obesity research has been to contextualize behaviors leading to obesity using various health behavior theories and to develop weight interventions according to these theories. Many of these theories acknowledge the powerful impact of the social environment on behavior. As such, a burgeoning focus of the literature has examined obesity in specific populations due to their differing social contexts. Although men comprise a significant proportion of the overweight and obese population, little is known about factors that influence men's eating, exercise, and weight management.

Literature Review

The pervasiveness of obesity is problematic, especially considering the extensive evidence for medical conditions associated with the disease. Public health officials have declared obesity to be a nationwide epidemic. In the U.S., thirty-four percent of adults are obese and 68% are either overweight or obese (Flegal, Carroll, Ogden, & Curtin, 2010; Ogden, Yanovsky, Carroll, & Flegal, 2007). By 2015, obesity prevalence is projected to increase an additional six percent.

Obesity accounts for 280,000 deaths annually in the U.S. (Manson, Skerritt, & Willett, 2002). After tobacco smoking, it is the second most preventable cause of death (United States Dietary Association [USDA], 2005). Obesity is also a risk factor for numerous health complications including cardiovascular disease, dyslipidemia, hypertension, stroke, Type 2

diabetes, and some cancers (McMillan, Sather, Lean, & McArdle, 2006; Must, Spadano, & Coakley, 1999; Soloman & Manson, 1997). It is estimated that obesity will soon exceed tobacco smoking as the leading preventable cause of disease and death if effective measures are not taken to control it.

Obesity in Men

Because health complications can be reduced if weight is properly managed, researchers have attempted to identify specific populations that are at risk for developing obesity. Although obesity is a problem for both sexes, statistics show that men are more likely to be overweight or obese (Flegal et al., 2010). Compared with women, men die six years earlier (World Health Organization [WHO], 2007) and have higher mortality rates for the leading 15 causes of death, with the exception of Alzheimer's disease (Sadovsky, 1999). Additionally, men are more likely to store fat abdominally, a variable that independently increases the risk of disease (USDA, 2005).

Definition of Obesity

Individuals with obesity are characterized by having excessive adiposity. Obesity is frequently assessed by using height and weight values to calculate a measure of Body Mass Index (BMI) which is closely correlated with body fat (Wang & Beydoun, 2007). Obesity is defined by the United States Dietary Association (2005) as a BMI greater than 30 kg/m^2 . Overweight is defined as a BMI between 25 and 29.9 kg/m^2 , and normal weight is defined as a BMI between 18.5 and 24.9 kg/m^2 . Although calculating BMI is the most widely used estimate of body fat, other methods of assessing obesity include obtaining skinfold or waist circumference measurements, determining waist-to-hip circumference ratios, and utilizing various imaging techniques.

Causes of Obesity

Obesity results from a complex interplay of genetic, psychological, and environmental factors. However, on a physiological level, increased body fat is the simple outcome of energy imbalance. Specifically, weight is gained when there is insufficient energy expended compared with energy consumed (Flegal et al., 2010). On a behavioral level, individuals typically gain weight when they do not engage in sufficient physical activity to compensate for the number of calories consumed in their diet.

Behavioral Weight Management in the Treatment of Obesity

Because weight gain is the result of energy imbalance, weight reduction is most commonly addressed by increasing energy expended and decreasing energy consumed through modifications in eating and exercise behavior. Research indicates that improved weight management in overweight and obese individuals has beneficial effects on health (Eckel, 1997). Studies show that even slight reductions in body weight (2-10%) can improve health and lessen the risk for disease (Blackburn, 1995; WHO, 2000). For example, weight loss in individuals with overweight and obesity has been demonstrated to improve blood pressure, cholesterol, physical functioning, back pain, and glucose metabolism (Valdez, Gregg, & Williamson, 2002).

Evidence supports the effectiveness of behaviorally-based weight management programs, which focus on modifying dietary and physical activity habits (Levy, Finch, Crowell, Talley, & Jeffery, 2007). Behavioral weight management programs typically yield average weight losses of 10% body weight and have been shown to be more effective than interventions that only focus on diet or exercise (Kirk, Penney, McHugh, & Sharma, 2012; Wadden, Crerand, & Brock, 2005). Following program initiation, individuals typically demonstrate maximum weight loss at six months (Wadden et al., 2005). However, research indicates that at two years, individuals tend to

regain five percent of their body weight. Therefore, continuing to increase knowledge regarding effective weight management strategies is an important research direction.

Health Behavior Models

Health behavior models have provided the basis for the development and evaluation of weight management programs. Researchers have used health behavior change models to better understand dietary and exercise behavior as a means to manage weight (Baranowski, Cullen, Nicklas, & Thompson, 2003; Palmeira, Texeira, & Branco, 2007). Some of the more popular models are the transtheoretical model/stages of change (TTM/SOC), health belief model (HBM), social cognitive theory (SCT), and the theory of planned behavior (TPB).

The transtheoretical model/stages of change theory (TTM/SOC), pioneered by Prochaska and DiClemente (1984), postulates that behavior change can be conceptualized in terms of progression through stages (precontemplation, contemplation, preparation, action, and maintenance). Decisions that facilitate forward movement in the stages are based on leveraging advantages and disadvantages of the behavior. Research has demonstrated support for using TTM/SOC with physical activity behavior (Marshall & Biddle, 1991). However, the evidence for using TTM/SOC to describe dietary behaviors and predict success with weight control is lacking (Baranowski et al., 2003; Wilson & Schlam, 2004). One of the biggest criticisms associated with this model is that weight-related behaviors fall on a continuum rather than in a particular stage, such that study respondents often endorse characteristics in multiple stages (Wilson & Schlam, 2004). For this reason, many researchers favored other models over TTM/SOC for weight management.

The health belief model (HBM; Janz, 1984) postulates that self-efficacy and perceived risk are central to behavior change. According to the HBM, individuals who perceive themselves

to be at risk for a specific health condition are more likely to be motivated to change their behavior. Self-efficacy is the resource for change, and individuals who have greater self-efficacy are more likely to engage, persist, and maintain a behavior. The application of HBM with weight management research has demonstrated inconsistent findings. One common criticism is that an individual's level of perceived risk does not necessarily translate into behavior change (Baranowski et al., 2003). In general, the utility of the HBM with weight management warrants further inquiry.

The social cognitive theory (SCT; Bandura, 1989) is one of the most popular frameworks for evaluating behavior change, particularly in dietary intervention research (Contento, Balch, & Bronner, 2001). SCT postulates that behavior is the result of a constant interaction between an individual and his/her environment. Behavior change is more likely to occur when an individual has better skills, greater self-efficacy, and positive outcome expectancies. SCT has been shown to have good predictability with behaviors related to weight loss (Baranowski, 2003).

Theory of Planned Behavior (TPB)

In addition to TTM/SOC, HBM, and SCT, researchers have been attracted to the theory of planned behavior (TPB; Ajzen, 1991) due its emphasis on intention in behavior change (Hardeman, Johnston, Johnston, Bonetti, Wareham, & Kinmahn, 2002). Behavioral intention, also referred to as implementation intention (Gollwitzer, 1999), has been shown to be a strong predictor of health goal achievement (Sullivan & Rothman, 2008).

TPB has been used as a theoretical framework for conceptualizing weight loss behaviors and developing weight interventions. Although the majority of research conducted with TPB has utilized quantitative methods, there are some mixed-method and qualitative studies published in

the literature (Renzi & Klobas, 2008). Most of these studies have used the TPB to specifically examine attitudes and beliefs (Ajzen, 2002).

TPB postulates that behavior is most directly predicted by intention, which is predicted by attitudes, subjective norms, and perceived behavioral control. Attitudes reflect an evaluation of performing a behavior and beliefs about positive or negative outcomes of performing the behavior. Subjective norms are based on beliefs about what important others expect from an individual and the degree to which the individual desires to comply with these expectations. Perceived behavioral control is determined by control beliefs (i.e., whether there are variables that facilitate or inhibit the behavior) and perceived power (i.e., how powerful each variable is in facilitating or inhibiting the behavior). Attitude, subjective norms, and perceived behavioral control combine to produce the degree of behavioral intention (i.e., the degree to which an individual intends to perform a behavior). According to TPB principles, an individual is more likely to perform a behavior if s/he strongly intends to do so. This is likely to be the case if s/he has a positive attitude regarding the behavior, perceives that relevant/important others think s/he should perform the behavior, and believes that s/he has control over performing the behavior.

A systematic review conducted by Hardeman and colleagues (2002) examined use of the TPB and behavior change, including smoking cessation, condom use, testicular self-examination, breast self-examination, oral health behaviors, and vitamin consumption (Hardeman, et al., 2002). In this review, it was found that half of interventions were effective at changing intention and two-thirds were effective in changing behavior. Godin & Kok (1996) also examined the TPB and health behaviors through a meta-analytic study, and found that TPB explained 41% of the variance in intentions and 34% of the variance in behavior across different

health behaviors (Godin & Kok, 1996). Thus, research lends support for the utility of TPB for conceptualizing weight management and program development.

TPB also has been used as a framework for conceptualizing behaviors related to overweight and obesity. Multiple studies have used a TPB approach to investigate changes in exercise behaviors (Courneya, Bobick, & Schnicke, 1999; Hoyt, Rhodes, Hausenblas, & Giacobbi, 2009; Rhodes & Courneya, 2003), eating habits (Conner, Norman, & Bell, 2002; Rodgers & Brawley, 1993) and weight (Baranowski et al., 2003; Gardner & Hausenblas, 2004; Schifter, D. & Ajzen, 1983). These studies have found that attitudes, subjective norms, and perceived behavioral control predicted intentions to lose weight, exercise, and healthy eating (Conner, Norman, & Bell, 2002; Courneya, 1999; Hunt & Gross, 2009; Rhodes & Courneya, 2003). Schifter & Ajzen (1983) also found that TPB variables predicted actual weight loss. However, one criticism of the TPB is that it overemphasizes individual factors and minimizes the influence of community, societal, and interpersonal factors on behavior.

PRECEDE-PROCEDE Model

In contrast to health behavior models which seek to explain behavior, the PRECEDE-PROCEED model (PPM; Green & Kreuter, 1991) has been used as a framework for assessing needs and developing programs to meet these needs. One of the strengths of this model is its emphasis on contextual factors beyond that of the individual. The model suggests that health is determined by individual, environmental, and social variables and therefore programs should assess and target these multiple variables.

PRECEDE stands for Predisposing, Reinforcing, and Enabling Constructs in Educational Diagnosis and Evaluation (Green & Kreuter, 1991). The PRECEDE model is used diagnostically to assess needs and inform program development. PROCEED stands for Policy, Regulatory, and

Organizational Constructs in Educational and Environmental Development. The PROCEED model is used to implement and evaluate a program. Because this study is focused on an assessment of needs and not the implementation of a program, only the PRECEDE model will be described here.

There are five phases of PRECEDE (Green & Kreuter, 1991). Phase one consists of determining social problems, quality of life, and needs in a target population. Phase two includes identifying health determinants of these factors. Phase three consists of analyzing behavioral and environmental determinants of the health problems. Phase four involves identifying variables that contribute to the behaviors and environmental determinants from phase three. Phase five consists of identifying which interventions would be most appropriate for promoting behavior or environmental change. In Phase 4 of PRECEDE, three factors are thought to contribute to behavioral change. *Predisposing factors* contribute to motivation to perform a behavior (e.g., knowledge, beliefs, values, attitudes, and demographic variables). *Reinforcing factors* provide rewards for the performance and maintenance of a behavior (e.g., important others, media, health providers). *Enabling factors* are those which allow a behavior to be performed (e.g., resource availability, community commitment to health, public policy).

PPM is useful in determining the level of appropriateness of specific interventions with a target population (Green & Kreuter, 1991). Further, although PPM is not explanatory (and therefore not considered to be a theory), it is frequently used in conjunction with behavioral theories as a framework for the application of the theories, including the Theory of Planned Behavior (TPB; Ajzen, 1991). Although TPB focuses primarily on individual factors, PPM helps researchers to determine what factors and conditions are necessary for health behavior change to occur.

Diet, Exercise, and Weight Control in Men

Given that men are at risk for overweight and obesity, health behavior theories can be used to help clarify men's unique attitudes and experiences related to weight changing behaviors. Additionally, other frameworks, such as the PRECEDE model can be used to assess the need for weight management interventions in this specific population.

Unfortunately, research examining behavioral contributors to male obesity is limited and the majority of studies lack theoretical structure to contextualize men's eating and exercise behavior. However, some of the research conducted has examined men's dietary preferences and behavior using gender socialization theories. In general, men are less interested in engaging in healthy dietary practices than women and they view healthy foods as unappetizing and unsatisfying (Gough & Conner, 2006; Levi et al., 2006; Sabinsky, Toft, Raben, & Holm, 2007). Men also tend to consume foods higher in fat as well as fewer fruits and vegetables than women (Sellaeg & Chapman, 2008; Sobal, 2005; Wardle, Griffith, & Johnson, 2000).

There is evidence to suggest that men's relationship with food may be influenced by gender socialization. For instance, studies show that men express a preference for consuming 'masculine foods' such as meat, alcohol, and large portions; contrarily, they have a lesser preference for 'feminine foods' such as salads, yogurt, and fruit (Bender, 1976; Sellaeg & Chapman, 2008; Sabinsky et al., 2007; Sobal, 2005). Furthermore, behaviors related to healthy eating, such as cooking and shopping are viewed by men as feminine (Caplan, Keane, Willetts, & Williams, 1998).

In contrast to healthy eating, men generally hold positive attitudes about physical activity (Wolfe & Smith, 2002). Compared with women, men are more likely to be physically active and engage in sustained, vigorous, and strength-building exercises (Casperson, Pereira, & Curran,

2001). This is not unexpected given that sport and exercise are associated with traditionally masculine characteristics, such as competitiveness, power, strength, and physical dominance (Jeong-Dae, 2011).

Despite the large numbers of men who could potentially benefit from participating in weight loss interventions, research indicates that men do not find weight management programs to be appealing (French & Jeffrey, 1994; Wolfe & Smith, 2002). Additionally, when compared with women, men are less likely to intentionally engage in independent weight loss behaviors (Lemon, Rosal, & Zapka, 2009) and they are five to seven times less likely to enroll in weight management programs (Jeffrey, Adlis, & Forster, 1991; Jeffrey, Bjorn-Benson, & Rosenthal, 1984).

Gender socialization may help to elucidate these findings. For instance, the male body ideal is to be lean and muscular, whereas the female body ideal is to be thin (Frederick, Forbes, Grigorian, & Jarcho, 2007). Thus, women may strive for the thin ideal by engaging in weight loss, whereas men may have varying goals independent of weight in their pursuit of the lean, muscular ideal. The differences in the types of weight pressures that men and women face may partially account for men's underutilization of weight management programs.

Men and Help-Seeking

In addition to different body-related pressures, the literature on men and help-seeking may provide insight into reasons that men do not enroll in weight loss interventions. In general, men are less likely to seek help for medical concerns (Banks, 2001; Department of Health and Human Services [DHHS], 1998; Husaini, Moore, & Cain, 1994; Wills & DePaulo, 1991). Men visit their medical providers less frequently and engage in fewer preventative care measures than women (Courtenay, 2000; Gast & Peak, 2011). They often wait until a disease has progressed or

physical symptoms are present prior to seeking-help (Francome, 2000). Men's healthcare underutilization remains consistent even when studies control for age, nationality, and ethnicity. There is even evidence to suggest that earlier mortality in men is largely due to late diagnosis and treatment, the direct result of delayed help-seeking for medical issues (Mansfield, Addis, & Mahalik, 2003; Smith, Braunack-Mayer, & Wittert, 2006).

Gender differences in men's help-seeking have only recently been considered a cause for concern. It was previously thought that men were utilizing healthcare services appropriately, whereas women were overutilizing services (Courtenay, 2000). Nonetheless, several theories have attempted to account for men's underutilization of health services. Gender-role socialization theory suggests that the social environment teaches individuals to behave according to sex-typed norms and stereotypes. Proponents of the theory distinguish between norms and stereotypes, such that norms represent behaviors whereas stereotypes represent personal characteristics. Masculine gender socialization theory (Pleck, 1995) has examined both norms and stereotypes through focusing on masculine ideologies and gender-role conflict (Good, Borst, & Wallace, 1994). According to this theory, masculine ideologies assert that men should be self-reliant (Pleck, Sonenstein, & Ku, 1993), which contributes to underutilization of healthcare services. In other words, men refrain from help-seeking in order to avoid being perceived as weak or vulnerable (Courtenay, 2000; Kaufman, 1994; Mahalik et al., 2003). Research supports this theory, indicating that men who endorse more traditional masculine ideologies tend to be less likely to seek out, and even decline, health care (Mahalik et al., 2003).

Men and Weight Management Programs

As previously mentioned, men tend to avoid seeking formal help for weight concerns and women comprise the majority of participants in clinical and commercial weight loss programs

(Blokstra, Burns, & Seidell, 1999; Fontaine, 1999; Jeffery, Adlis, & Forster, 1991). Men are also underrepresented in obesity and weight loss research. Two systematic reviews that examined studies published between 1997-2004 and 1999-2009 found that only 27% of participants were male (Franz, VanWormer, & Crain, 2007; Pagoto, Schneider, Oleski, Luciani, Bodenlos, & Whited, 2011). Furthermore, only three of the 80 studies had male-only groups as opposed to 19 studies which had female-only groups. Another review of web-based weight interventions revealed that only 23% of the study participants were male (Neve, Morgan, Jones, & Collins, 2010). Based on this, it can be concluded that many weight interventions available to men are informed by research studies conducted with mostly female participants.

The first published meta-analysis of male-only weight management interventions found only 23 studies, thus highlighting the paucity of research in this area (Young, Morgan, Plotnikoff, Callister, & Collins, 2011). Of these 23 studies, only three were deemed to be high-quality randomized controlled trials. Furthermore, only a few of these weight management programs were implemented in the U.S., while the rest of them were based in Western Europe, Australia, and Japan. To make matters worse, merely five of these studies utilized weight interventions tailored specifically to men, whereas the rest utilized standard interventions.

Because research on male-specific health interventions is sparse, evidence to conclude that these interventions are more effective than standard interventions is lacking (Robertson, Douglas, Ludbrook, Reid, & Teijlingen, 2008). Research demonstrates that standard weight management interventions are effective for men (Franz et al., 2007; Neve et al., 2010; Young et al., 2011). Despite this, the necessity of developing of male-friendly weight management interventions tailored to men is indicated by other research on men's help-seeking and gender socialization. As previously discussed, men are not attracted to the existing weight management

programs available to them, so regardless of their effectiveness, men may not be utilizing them due to their lack of appeal. Men also face different environmental constraints, including pressure to adhere to traditional male gender scripts which stigmatize healthy eating, weight loss, and help-seeking.

A handful of studies have attempted to better understand men's views on weight loss and weight interventions. Hankey and colleagues (2002) interviewed 91 overweight/obese male workers aged 18-55 in the U.K. They found that men identified improved health as their primary motivator for losing weight, followed by improved fitness, increased well-being, and enhanced appearance. However, when the study sample was divided into different age clusters, results revealed that cosmetic concerns were more important in motivating younger men whereas health concerns were more important in motivating older men. Egger & Mowbray (1993) also explored motivators for weight loss in 86 overweight, working class men in Australia. Participants cited increased subjective physical wellbeing ("feeling better") as the primary reason they desired weight loss. These men did not report health or appearance to be motivating factors for weight loss. Wolfe & Smith (2002) also examined reasons for attempting weight loss in 70 mostly educated overweight/obese men, aged 24-73, who were living in the Southwestern U.S. Inconsistent with Egger & Mowbray's (1993) findings, health and appearance emerged as the leading motivators for weight loss. In an additional study wherein 22 overweight working class Danish men aged 25-44 were interviewed, participants' primary motivator for weight loss was to be more effective in the workplace (Sabinsky et al., 2007). They also expressed a desire for a leaner appearance and to prevent illness, but even these desires were in the service of improving their value as a worker in the labor market. Shepherd, Rickard, MacDonald, Schultz, and Anderson (2010) also conducted a study assessing weight loss motivations. They found that a

desire to increase attractiveness, improve health, and build strength were important motivating factors for men. Overall, the results of these studies indicate that reasons for weight loss in men may differ depending on age, culture, and social class.

In addition to weight loss motivators, Sabinsky and colleagues (2007) explored barriers to weight loss. Participants cited lack of motivation as a major barrier to losing weight. Another important barrier was participants' aversion to the type of diet they believed was required in order to lose weight. Specifically, men in this study described this fictional diet as one that restricted their meat and alcohol consumption and forced them to eat more vegetables. Other weight loss barriers mentioned were extra costs, time involved with exercising and food preparation, and quality family time that was lost due to exercising.

Egger & Mowbray (1993), Wolfe & Smith (2002), Sabinsky et al. (2007), and Shepherd et al. (2010) also attempted to identify weight management program characteristics that would be appealing to men. In all three studies, men expressed a desire for a program that was individualized to their needs. Participants also communicated their wishes for programs to be convenient, flexible with dietary and exercise requirements, have a fitness-emphasis, use entertainment and humor, and allow them to exercise with friends, peers, or partners.

Several gender-sensitive weight management interventions have been developed for use with men. As a follow-up to their 1993 study, Egger, Bolton, O'Neill, and Freeman (1996) developed a six-week 'Gutbuster' weight management program in Australia that instructed men to 'lose waist, not weight', engage in moderate exercise, and consume a healthy but flexible diet (e.g., reduced alcohol intake). This program was effective in reducing waist circumference and body fat, and improving healthy eating and exercise habits after one year.

Andersson and Rossner (1997) also developed a two-year weight management program for 86 men recruited from the obesity unit of a Swedish hospital. The intervention consisted of a weekly hour-long group sessions and promoted dietary flexibility that included a day of planned 'extravagance'. Men were encouraged to participate in group exercise and physical trainings where they were allowed to invite spouses or friends. The program resulted in moderate weight loss for participants.

More recently, Gray and colleagues (2009) implemented a weight management program in sample of Scottish men that included several components to increase "male-friendliness." These included increased use of games and quizzes, an entire session devoted to the topic of alcohol, and 'masculinization' of exercise discussions. In this study, 44.3% of participants achieved 5% or greater reduction in their weight.

The most rigorous studies to date have been the work of researchers at the University of Newcastle in Australia. Collins and colleagues (2010) developed and implemented SHED-IT (Self-Help, Exercise and Diet using Internet Technology), a three month online weight loss program in a sample of 65 overweight/obese Australian men. Participants were randomized to three conditions: provision of SHED-IT materials (Weight Loss Bible for Blokes, DVD, pedometer, tape measure), SHED-IT materials plus access to the SHED-IT and calorieking.com websites, and wait-list control. SHED-IT was designed for men in that it was a 'low-dose intervention' which promoted improved diet and exercise, but was flexible and participants received individualized feedback. Unfortunately, no significant group differences were found in improved dietary behaviors (including alcohol and vegetable intake), exercise habits, or weight at the six month follow-up. However, the same group of researchers conducted a randomized controlled trial with 110 overweight/obese Australian male shift workers employed at an

aluminum production company. The intervention entitled ‘POWER’ ([Preventing Obesity Without Eating Like a Rabbit] Morgan et al., 2011) was modeled after the SHED-IT program but included additional information on the challenges of shift work. Results from this trial yielded significant between group differences at the three month followup in weight loss, waist circumference, BMI, blood pressure, resting heart rate, physical activity, sweetened beverage consumption, physical activity, and dietary beliefs. The most recent endeavor of these researchers was to examine the effectiveness of a three month weight loss intervention for 53 overweight and obese Australian fathers and their 71 children (‘Healthy Dads, Healthy Kids’; Morgan et al., 2011). The program promoted spending quality time with children through use of healthy eating and physical activity. It also attempted to help fathers create a home environment that would help to sustain these behaviors. The intervention resulted in weight loss greater than five percent in 85% of the fathers and this weight loss was maintained at the six month follow-up period.

Purpose of the Study

Overall, a review of the literature suggests that further evidence is needed to help determine the most effective means to address overweight and obesity in men in the U.S. Because research in this area is so limited, qualitative methods were selected for this study because they provide an opportunity to gather in-depth information about men’s experiences. The purpose of this study was to explore the factors that affect men’s ability to engage in healthy eating, exercise and weight management programs using a framework that integrated the theory of planned behavior (TPB) and PRECEDE model constructs. In this study, the researchers explored TPB constructs of attitudes, subjective norms, and perceived behavioral control, as well as PRECEDE model constructs of predisposing factors, reinforcing factors, and enabling factors.

By integrating the frameworks, investigators attempted to gather information that captured individual, interpersonal, and community factors. The information collected was intended to add to existing knowledge about overweight/obesity and weight management in men as well as provide a basis for future development of male-sensitive weight interventions.

Research Questions

Based on components of TPB and the PRECEDE Model, three research questions were examined in this study.

Research Question 1. What are the attitudes (TPB) and predisposing factors (PM) that contribute to men's engagement in healthy eating and regular exercise practices, as well as their [hypothetical] participation in weight management programs? Specifically, what are the advantages and disadvantages of healthy eating on a personal level, relationship level, or community level? What are the advantages and disadvantages of exercising on a personal level, relationship level, or community level? What are the advantages and disadvantages of weight management programs on a personal level, relationship level, or community level? How has the knowledge of the advantages and disadvantages influenced your actual behavior?

Research Question 2. What are the subjective norms (TPB) and reinforcing factors (PM) that contribute to men's engagement in healthy eating and regular exercise practices, as well as their [hypothetical] participation in weight management programs? Specifically, are there any people, groups, or other influences that would reinforce (approve or disapprove of) you for eating healthily (on a personal, relational, or community level)? Are there any people, groups, or other influences that would reinforce (approve or disapprove of) you for exercising (on a personal, relational, or community level)? Are there any people, groups, or other influences that would reinforce (approve or disapprove of) you for participating in a weight management

program (on a personal, relational, or community level)? How has this approval or disapproval of individuals and groups influenced your actual behavior?

Research Question 3. What is the level of perceived behavioral control (TPB) and what are the enabling factors (PM) that contribute to men's engagement in healthy eating and regular exercise practices, as well as their [hypothetical] participation in weight management program? Specifically, what factors or circumstances would enable/make it difficult for you to eat healthily (on a personal, relational, or community level)? What factors or circumstances would enable/make it difficult for you to exercise (on a personal, relational, or community level)? What factors or circumstances would enable/make it difficult for you to participate in weight management programs (on a personal, relational, or community level)? How have these factors or circumstances influenced your actual behavior?

CHAPTER 2: METHOD

Participants

Participants recruited for this study were 42 overweight or obese men living in northern Colorado. Age of participants ranged from 19 to 61 years ($M = 37.21$ years, $SD = 13.43$). Self-reported BMI ranged from 25.0 to 48.8 ($M = 30.04$, $SD = 4.62$). Eighty-three percent of the participants identified as European-American, 5% as Hispanic, 5% as Asian or Pacific Islander, 2% as African American, and 5% as Multiethnic. On average (as measured by the median), participants had a Bachelor's Degree, made \$35,001-\$50,000 annually, were in a committed relationship, and lived in household of two (including themselves). Frequencies of the education level, income, relationship status, and number of household members of participants are reported in Table 1.

Measures

Demographics, Health Behavior History, and Weight Management Program

Characteristics Survey. Participants were asked to report their history of attempts to lose weight, change their diet, and improve physical activity habits. They were also asked to select weight management program characteristics (listed in checklist format) that would be appealing to them. The weight management program characteristics section was modified from surveys used in previous studies regarding male attitudes towards weight loss programs (Rhodes & Blanchard, 2008; Shepherd et al., 2010; Wolfe & Smith, 2002).

Theory of Planned Behavior and PRECEDE Model measures. TPB and PM constructs were assessed qualitatively in the focus group interview questions. Constructs were clustered together as follows: attitudes (TPB) and predisposing factors (PM), subjective norms (TPB) and reinforcing factors (PM), and perceived behavioral control (TPB) and enabling factors (PM).

Consistent with prior research demonstrating that behavior change is more successful when individuals pursue positive behaviors as opposed to avoiding negative behaviors (Elliot, 1998), eating, exercise, and weight management were framed positively (e.g., “healthy eating” instead of “avoidance of unhealthy eating”).

Procedures

Approval for this study was obtained from the Institutional Review Board at Colorado State University. In order to maximize the breadth of experiences represented in the study, participants were recruited throughout Northern Colorado community via posted flyers (medical offices, university and community college campuses, libraries, coffee shops, telephone poles), online (university and hospital listserves and e-newsletters, www.findfocusgroups.com, www.craigslist.com), and word-of-mouth. Interested participants contacted the study investigator by phone or email and were screened to ensure that they met inclusion criteria (over age 18, male, BMI \geq 25, English literate). Participants received \$20 grocery store gift cards for their involvement in the study.

Six 90-minute focus groups (with four to eight members in each group) were conducted over the course of two months. Focus groups were discontinued when the researchers determined that data saturation had been met and no new themes were emerging from the interviews.

Focus groups. A focus group interview format was selected as the best method for gathering information on this topic. A group format was favored over individual interviews in order to allow participants to develop, discuss, and refine their opinions with one another.

The focus group structure was developed according to Kruger and Casey’s (2000) suggestions. The university conference room used for the focus groups had minimal distractions

and participants were positioned facing each other around the table. Sessions were audio-recorded using two .mp3 recording devices. Only first names were used during this process.

Groups were facilitated by one moderator and one co-moderator. The moderator led the focus group discussions, while the co-moderator set up materials and equipment, recorded the session and documented behavioral observations. The co-moderator of the group also prepared a seating diagram and documented quotes that connected participants to their voices. The co-moderator did not participate in the discussion.

Prior to completing the questionnaire, participants were provided with information about the nature of the study. They were informed that their answers would be kept anonymous, and their consent forms would be protected for privacy. After verbally agreeing to participate in the study, participants signed an informed consent form and were assured that they may had the option to discontinue their participation in the study at any point and for any reason. Men who consented to participate in the study were given a \$20 grocery store gift card as compensation. They then were asked to complete the Demographics, Health Behavior History, and Weight Management Program Characteristics survey, which took around 10 minutes. After paperwork was collected, the moderator introduced the research team, described the purpose of the interview session, and outlined group guidelines. The moderator then proceeded with the structured sequence of research questions for the focus group. Questions in the focus groups were designed to flow in a logical sequence and focus on critical issues.

Focus group moderators were two advanced doctoral students in Counseling Psychology who had completed coursework in group psychotherapy and had experience in group facilitation. Three of the focus groups were led by a female moderator, who is an investigator of this study. The other three focus groups were led by a male moderator. Moderators were familiar with focus

group moderation techniques as suggested by Krueger and Casey (2000). For example, moderators limited “why” questions, and, as needed, used “think-back” questions (questions that prompted participants to speak about prior experiences instead of how participants believe they would act future situations.) Moderators tried to pause for approximately five seconds after questions to allow participants to respond and “break the silence.” Question repetition and probing were used as necessary to elicit detailed information from different group members. Examples of probing questions that were used were as follows: “Would you explain further?”; “Would you give me an example of what you mean?”; “Would you say more?”; “Is there anything else?” The moderators utilized active listening techniques and tried to refrain from expressing an opinion or giving a biased response such as “good.” Two members of the research team alternated as the co-moderator of the study.

At the end of the session, participants were thanked for their participation. After the focus group concluded, the moderator and co-moderator debriefed and created a written summary of the group that included information on group attendees, additional behavioral observations, and problems encountered. No problems that could compromise the integrity of the study were noted in any of the focus groups.

Development of the Focus Group Questions. Focus group questions were developed according to guidelines suggested by Krueger and Casey (2000). Questions were open-ended and followed a sequence (“questioning route”), which included an easy beginning, a logical flow, and movement from general to more specific. Questions in this sequence fell into four different categories: Opening questions, Introductory questions, Transition questions, and Key questions. Opening questions were used in the beginning of the focus group to initiate discussion and build comfort level in the room. Opening questions were simple and did not emphasize differences

among group members. Introductory questions were used to encourage participants to start thinking about the topic at hand and focus on the conversation. Transition questions were used to link Introductory questions and Key questions by asking participants to go more in depth than with Introductory questions. Key questions focused on eliciting information that directly addressed the research questions.

The content of the questions was guided by the Theory of Planned Behavior and the PRECEDE Model. Questions were formulated based on guidelines developed by Francis and colleagues (2004) to assess TPB constructs for health-behaviors. PM constructs (Green & Kreuter, 1991) were integrated into the focus group questions based on their conceptual correspondence with each of the TPB constructs.

Data Interpretation Method. Focus group interviews were transcribed by members of the research team who attended the focus group session they had transcribed. Notes from the focus groups were used to link participant names to their voices. Following transcription, notes and the transcripts containing the first names of participants were de-identified and participants were assigned codes.

Transcripts from the focus groups were analyzed using Ethnographic Content Analysis (Altheide, 1987), which is a reflexive approach that allows for the emergence and extraction of themes throughout data analysis. Because themes continue to be discovered throughout the analysis process, key ideas and concepts are less likely to be overlooked than when quantitative approaches are utilized. Although Krippendorff's (2004) system for ethnographic content analysis is generally thought of as a means to analyze qualitative data through quantitative methods, he notes "quantification is not a requirement for obtaining valid answers to a research question" (2004, p. 87). Analyses followed Krippendorff's qualitative methodology for

ethnographic content analysis, which was used to capture attitudes, beliefs, emotions, and values expressed across interviews.

The coding procedures and interpretation of results was standardized in order to reduce the impact of researcher bias. Content was analyzed independently and cross matched for consistency. Ethnographic content analyses followed Krippendorff's (2004) steps of Unitizing, Coding, Reducing, Inferring, and Narrating. Unitizing involved distinguishing meaningful segments of text and categorizing these segments into common themes. The meanings of text segments were deduced based upon the context in which they appeared. Next, a coding scheme was developed, which entailed examining the text for very specific data. The coding scheme was guided by the research questions in order to ensure that the themes extracted from the text were relevant to the topic under investigation. After relevant themes were extracted from the text, these themes were Reduced to broader categories to make the data more manageable. The researchers then Inferred what the data meant within the context of the research questions. In the final step, Narration, conclusions from the research were compiled in an understandable format.

The research team began the data interpretation process by analyzing the same focus group transcript. Each researcher independently read the transcript, noted meaningful segments of text, and summarized these segments with short labels. After a coding scheme was developed, the research team discussed the segments of text and codes created for these segments. These labels were then reduced into broader categories based upon the topics addressed in the focus groups. Once the research team agreed upon the labeling and categorization of the data for the first focus group transcript, members analyzed the remaining focus group transcripts. For each transcript, every member of the research team unitized, coded, and reduced the transcript

independently, then met with another researcher in order to compare analyses. Any new codes or discrepancies that occurred between researchers were addressed and resolved.

After each transcript was categorized, sampled, coded, and reduced, data were entered and organized through computer assisted qualitative data analysis software, ATLAS.ti, version 6. Focus group transcripts were formatted and uploaded into ATLAS.ti. In the first level of coding, open codes (“labels”) and coding/analytical memos (notes on coding decisions) were indicated on the transcripts. In the second-level of coding, codes with common features were pulled together through the creation of “families” and “axial codes”. Finally, in the third level of coding, subthemes (“selective” codes) were created, which consolidated and connected the second-level codes.

Subsections of the transcripts organized by themes and subthemes were printed from ATLAS.ti. Using these print-outs, the research team began the final two steps of analysis, inferring and narrating. Members of the team elaborated on codes by creating sentences to capture the underlying themes. The research team discussed these themes and addressed discrepancies. Once the research team reached agreement about the themes, each theme was described in more detail in order to complete the process of narration. The final product of data analysis included a narration of each individual theme organized into broader categories. Findings from the study were placed within the structure of the research questions. Relevant quotes from participants were incorporated into the final narrations in order to best illustrate the themes presented. Direct citations were differentiated from the interpretations of the researchers. Finally, although TPB and PM frameworks were used to formulate the focus group questions, findings were inductive in that they were grounded in the data (and not necessarily in these frameworks).

Data trustworthiness. This study used Guba's (1981) methods of establishing trustworthiness and methodological rigor in the data. As opposed to criteria of validity, reliability, and objectivity used in quantitative research, qualitative research uses trustworthiness to determine quality of the findings. Trustworthiness consists of four constructs: Credibility (as opposed to internal validity), Transferability (as opposed to generalizability/external validity), Dependability (as opposed to reliability), and Confirmability (as opposed to objectivity). Sheldon (2004) identified various strategies to establish these four constructs. Credibility (the confidence that findings are a true representation of reality) was established in this study through corroborating data from multiple informants during theme extraction, reporting on similar themes that emerge across participants, emphasizing the voluntary nature of the study and encouraging honesty, addressing discrepancies in information in the written results, and collecting reflective commentary following each focus group. Transferability (how well findings can be transferred to other situations and populations) was established through interpreting findings with consideration of contextual factors (e.g., number of participants, geographical considerations, duration of data collection sessions, data collection methods, sites at which participants were recruited) and comparing results from prior research. Dependability (reliability) was established through detailed reporting of the study processes (research design and implementation of the design, data collection, and effectiveness of implementation). Confirmability (objectivity) was established through describing how decisions regarding methods and data interpretation were made and through recognizing study limitations.

In order to minimize researcher bias and to ensure that the findings represented the participants' beliefs and attitudes versus that of the researchers, strategies developed by Padgett (1998) were also used. Padgett outlined six strategies for enhancing the rigor of qualitative

research: Prolonged engagement, Triangulation, Peer debriefing and support, Member checking, Negative case analysis and Auditing. Although the current study design did not employ Prolonged engagement (lengthy or multiple focus groups) and Member checking (participant involvement in double checking codes and categories), the remaining strategies outlined by Padgett (1998) were used. Peer debriefing was employed, wherein researchers met to describe their process of content analysis. In addition, multiple observation strategies (Triangulation) and documentation of transcribed interviews and multiple code lists (Auditing) were used. Finally, researchers also paid attention to disconfirming evidence in the transcripts (Negative case analysis).

CHAPTER 3: RESULTS

Quantitative Results

Descriptive statistics were calculated for the Demographics, Health Behavior History, and Weight Management Program Characteristics Questionnaire. In terms of health behavior history, 76% of participants reported that they were currently trying to lose weight, 85.7% were currently engaging in healthy eating practices and 78.6% were currently exercising; 88.1% reported that they had tried to lose weight in the past, 85.7% had dieted in the past, and 92.9% had exercised in the past; 31% had participated in a weight loss program in the past. When asked if they would consider joining a weight management program, 54.8% said yes, 2.4% said no, and 42.9% said maybe. In terms of desired weight management program format, self-help package, one-on-one, and smaller group formats were most preferred by participants. With respect to desired program characteristics, participants endorsed being able to choose what they ate within provided guidelines, individual sessions with a fitness counselor, learning the basics of nutrition science, meeting at a gym, and centering the program around sports/athletics as the top five characteristics that were appealing to them. Detailed item responses and descriptive values for program formats and characteristics are presented in Table 2 and Table 3.

Research Question 1

What are the attitudes and predisposing factors that contribute to men's engagement in healthy eating and regular exercise practices, as well as their [hypothetical] participation in weight management programs? Specifically, what are the advantages and disadvantages of healthy eating on a personal level, relationship level, or community level? What are the advantages and disadvantages of exercising on a personal level, relationship level, or community level? What are the advantages and disadvantages of weight management programs on a

personal level, relationship level, or community level? How has the knowledge of the advantages and disadvantages influenced your actual behavior?

Advantages of Healthy Eating (see Figure 1). Men identified health and financial/economical benefits as advantages to engaging in healthy eating.

Health Benefits. Many participants cited health benefits as being a major advantage to engaging in healthy dietary practices. They described increased longevity as a benefit of healthy eating. One participant stated, “You are gonna live longer, statistically speaking.” Disease prevention was also cited as an advantage of eating healthily. One focus group member said, “You have less health issues” and another member stated “you can lower your blood pressure and prevent diabetes.” Men also mentioned a general sense of feeling better, both physically and psychologically. They identified benefits such as higher energy levels, improved concentration, a greater sense of well-being, and satisfaction with having made a good health decision. For example, one participant said, “A pro for me is feeling better. If I get a lot of sweets man, I feel hung over. As opposed to eating good, solid, whole foods, and I have more energy.” Another participant remarked, “One of the biggest pros for me would be a better sense of wellbeing.” An additional member stated, “I can keep going when I have healthier foods.”

Participants also reported that enhanced exercise performance is an advantage of eating healthily: “If I put garbage in my body, I am going to get garbage in my body in terms of performance, not only everyday life, but also when I exercise.”

Financial/Economical Benefits. Additionally, men indicated that improved health from consuming a nutritious diet could result in “reduced medical bills” and an improved economy due to increased worker productivity.

Role Model. Several participants mentioned that an advantage of healthy eating is being a good role model for younger generations. One group member who works with children in his job said, “I want to be a good example.” Another participant stated, “I think one of the things that actually makes it easier for me to eat healthy is having kids, because you want to feed them good stuff. As a result, it carries over to what you eat.”

Disadvantages of Healthy Eating (see Figure 2). Men identified the expense, inconvenience, and lack of enjoyment as disadvantages to engaging in healthy eating.

Expense. Many focus group members felt that the expense involved in eating healthily was a disadvantage. They described not wanting to spend money on healthy foods when they could obtain larger quantities of less healthy foods at a comparable price. One participant stated, “Eating healthy is expensive. We may disagree or agree about if organic is the way to go, but if you do think that [organic is the way to go], you spend a lot more money at the grocery store.” Another participant remarked, “It’s more expensive, on a personal level and relationship level. Buying for two, it’s really expensive to buy fruits and vegetables compared to packaged.” Focus group members also expressed negative attitudes toward shopping at health food stores because they tend to be more expensive: “\$150 at Whole Foods is not very much food. If you want to get wild caught fish or organic dairy and vegetables it just gets really expensive quickly.”

Inconvenience. Men in the study identified healthy eating practices as being inconvenient and time-consuming. Many participants felt that the process of eating a healthy meal was more complex than eating an unhealthy meal and involved “more planning and organizing.” For example, one focus group member stated,

I live by myself so to justify cooking a meal and going through the steps to do that, it is really easy to go the convenient way. And the convenient way isn’t necessarily the healthy way nine times out of ten.

Several men felt that fast-food was a convenient alternative to eating healthy. They communicated that fast-food venues tend to lack healthy meal options. One participant stated, “Do you ever try to get someone to deliver baked salmon and a nice tossed salad to your door? It doesn’t happen. Dominos doesn’t deliver that stuff. Neither do drive thrus.” Other participants said “It’s a lot easier to go to McDonald’s or Taco Bell rather than got to the store and get chicken breast or tuna. It’s just more convenient”, and “I can go to McDonald’s and get something on the dollar menu. I know it’s not good for me but it’s cheap and quick.” Additionally, many group members indicated that the time required to engage in healthy eating is a considerable disadvantage in light of their other responsibilities. This is illustrated by one participant who remarked,

Typically the bad stuff is already prepped for you and pre-packaged. You go and buy it and it’s already in a container right for you to just take and eat. Whereas the healthy stuff, you gotta go and take the time to make it. I’ve got work and kids and I just went back to school and everything, so I just don’t always have time to sit there and make food.

Less Enjoyable. Another disadvantage mentioned by participants was that a healthy diet entails consuming less appetizing foods. Some members illustrated this idea by describing their enjoyment of unhealthy foods. One participant stated, “When I make breakfast I enjoy eating the grease off of the bacon.” Another participant said, “No meal is complete, breakfast included, without a cookie afterwards.”

Many participants felt that making healthy dietary choices is less enjoyable, exciting, and satisfying than making choices that are less healthy. One group member stated that “eating healthy always seems to involve eating something that I don’t really like.” Another participant remarked, “It’s just not as exciting for me to go purchase some organic food or eat something like tofu...I want something that tastes like meat, something that feels meaty.” One member described how eating healthily would make his life less enjoyable overall,

I don't want to die a healthy person, I want to die being as old and miserable as I can be. So I want to enjoy myself. I don't want to be on my death bed saying 'I shoulda ate that' or 'I shoulda had that to eat.' I want to eat what I want and don't want to worry about what happens. Because you know, not everybody that eats healthy lives a long time, and not everybody that eats horribly dies right away.

Other focus group members mentioned that healthy eating is less enjoyable because it is restrictive. One participant expressed that healthy eating means less variety in foods options:

The selection isn't as fun. I mean, bringing a sandwich from home is better for me than what I was going to get if I went out. It's not the most exciting thing in the world but you know I do it because I have to.

Another participant indicated that "if I'm going to spend seven bucks going out to lunch I'm going to get something that I want...when I go out it's a treat, not for health."

Advantages of Exercising (see Figure 3). Men identified health/wellness and secondary benefits as advantages of exercising.

Health/Wellness. Several men stated that physical activity contributes to general wellness and feeling good. One participant said, "I feel so good afterwards" and another remarked, "You feel good when you work out. You feel good about what you just did and your body feels good." More specifically, focus group members expressed that physical activity is beneficial because it helps to offset injury, increase sleep quality, boost energy levels, prevent disease, and improve physical intimacy. For example, participants made comments such as "It makes a real difference in how I feel, how I sleep, and sex" and "If I wake up and go for a small run...it actually seems like I have a bit more energy during the day." One participant felt that exercising is necessary in order to prevent health problems that run in his family:

I have heredity problems of high blood pressure, both parents, both grandparents, all of the men in my family tend to die of cardiac problems in their 50s and 60s. So I gotta keep going if I want to be around, if I want to reach 70.

Men also reported psychological advantages associated with exercise, such an increase in confidence, sense of accomplishment, reduced stress, and good mood. Participants made statements such as “it’s a great way to release stress” and “it improves your mood and your outlook.” Many participants felt that exercise improves their physical appearance which goes along with other benefits. One focus group member stated, “My wife thinks I’m sexy as hell after I start exercising. After I started exercising for a while, she felt my muscle and screamed. I’ll never forget that.” Another member described his belief that individuals are treated differently when they exercise: “People just treat you so different by how you look. Like if you are not working out. You get a lot more looks if you’re muscular than if you are overweight.” Additionally, several members indicated that exercise motivates them to eat healthily. On the other hand, one participant mentioned that exercising helps him to justify eating unhealthier foods:

If I exercise or work out, it relieves a little bit of guilt if I have an extra beer that night. I can use it to justify. On top of the fact that if I get into better shape, I feel like I can go ahead and splurge on that ice cream because I exercised well this week. Just a little mental high five to myself for working out.

Some men indicated that the benefits of exercise are made clear to them when they contrast how they feel when they are sedentary. One participant stated, “Personally I just start to feel kind of disgusting after a while. If I don’t go out and do something, I start to feel like I’m sitting and wasting away.” Others said “If I don’t work out, I start to feel ill”, and “I think that if you start exercising regularly, then you stop for a little bit you start to feel guilty.”

Secondary Benefits. Men in the study provided many examples of how exercising has secondary benefits. Several focus group members who bicycle to work mentioned that exercise is a means of transportation. Others cited exercise as an opportunity to engage in sports and recreational activities. One participant commented that “one of the best things has been going to

play basketball at the gym.” Additionally, some participants were pleased that exercise presents them with a social opportunity. One group member said that “it just feels good to get off the couch and get away from the daily routine and go to the gym for an hour, meet up with friends.” Another stated, “Sometimes you develop bonds with the people you exercise with.” Several men also reported that exercising provided the chance to spend quality time with family. For instance, one participant commented,

In our family I get home and we’ll take a walk together. My wife and I and our daughter and I’ll notice that the 30-45 minutes we spend together even if we are outside and walking, helps our family relationship. And I notice that our daughter is much better behaved after that short 35-40 minutes.

Some participants believed that physical activity could also benefit the community. One focus group member remarked, “Say you are doing a 5K race, you are getting involved with a local fundraiser or something. You are benefitting yourself and you are benefitting the community at the same time.” Another participant mentioned that exercise could help to reduce medical costs: “Having a healthier population helps with healthcare costs and insurance costs.”

Disadvantages of Exercising (see Figure 4). Men identified time/commitment/discipline, potential for injury, and cost as disadvantages of exercising.

Time, Commitment, and Discipline. Many focus group members felt that the disadvantages of exercising are that it requires time, commitment, and discipline. One participant stated, “The time and commitment of exercising—with family and work and everything, there’s just no time to do it.” Another commented,

A con is the time management. It’s easier for me to exercise on a regular schedule, but then depending on what you’ve got going on in life with work and stuff, sometimes it’s too hectic to go at 5:00 every day. I’m more of a routine guy, so you get off late, you go home, so you just don’t do it.

One participant expressed that time pressures lead to the dilemma of having to choose between exercise and sleep:

The cons are to take time out of something else, you know for me with my schedule I have a choice some days of cutting off two hours of sleep to work out. So it's almost like what's the point, just get the sleep that your body needs to be rested but then you lose out on the workout.

A few men in the study noted that exercising requires commitment and discipline because being sedentary takes little effort. Participants illustrated this idea in statements such as, "It's much easier to be a sloth", "It's more convenient not to exercise", and "Sticking to that routine can be hard."

Potential for injury. Some participants mentioned that a disadvantage of exercising is the possibility of sustaining a physical injury. One participant said, "A con of exercise is definitely injury." Another participant spoke about the increased chance for injury and need for more recovery time associated with aging: "One of the disadvantages as I age is injury. I don't recover like I used to. It's hard to exercise on a regular basis because of that."

Cost. Focus group members also discussed cost as being a disadvantage of exercising. They described the expenses involved with paying for gym memberships and gym equipment. For example, a participant stated that "one of the cons of exercising is that you gotta pay for the gym membership and all that stuff, whereas if you have it at home, you gotta buy the equipment, too."

Advantages of Weight Management Programs (see Figure 5). Men identified support and progress toward goals as advantages of weight management programs.

Support. Men in the study shared that receiving support from peers and professionals is an advantage of participating in weight management programs. Many focus group members said that sharing common goals with peers is advantageous compared to working toward goals

independently. One participant stated, “I think the advantage of groups is obviously that you have some type of support group. There are others going through the same thing you are going through. So it might help you to reach your goal better.” Another participant commented, “You are gonna get better results in a group than you are individually.” An additional participant described the advantage of receiving peer support:

You get lots of people in the same boat, eventually you’ve been drawn together because there is something in the back or front of your mind that you want to address. And maybe until someone else puts it out on the table you are afraid to utter those words, not realizing that your behavior is normal. You are not the only person that thinks that way or acts that way.

Several men also mentioned that receiving support from professionals is a benefit of participating in weight management programs. One group member stated,

If you are trying to lose weight by yourself, you have to think that you are missing something or overlooking something...an exercise program and food diet program would help you to make sure you are not looking something between food and exercise.

Participants also commented that weight management programs provide support because they keep individuals accountable to their goals. One group member said, “It’s helpful to have somebody kind of pushing you or giving you a structure to do this today and that tomorrow.”

Progress Toward Goals. Many participants believed that weight management programs provide the benefit of helping them to achieve weight loss, fitness, and/or dietary goals. In other words, they felt that a clear advantage to participating in a weight management program is that they could obtain “better results.” For instance, an increase in knowledge was cited as being a benefit to enrolling in a weight management program. One participant commented,

I think an advantage would be, it could reveal things you are doing wrong, the things that are keeping you from losing weight and maybe you could stick with that. Even if you quit the program, you still might internalize ‘I eat too much junk food’, ‘I don’t exercise at all’, and maybe it could lead to a long term thing.

Another participant felt that he could “get to a healthy weight” if he participated in a weight management program. Improved appearance and increased self-esteem was mentioned by one participant as an advantage to joining a program: “It would help me to look better for my wife or my girlfriend, and to look better and feel better about myself.”

Disadvantages of Weight Management Programs (see Figure 6). Men identified the program emphasis on women, stigma, cost, distrust of programs, and difficulties with behavioral maintenance as disadvantages of weight management programs.

Program Emphasis on Women. Many focus group members felt that a disadvantage of weight management programs is that they are tailored to women. One participant stated,

I’ve always associated weight management programs with women and I associate men with actually going to the gym or doing things that are very, you know, getting on some regimen but not necessarily being part of a group that’s a weight management group or program. Unless you are training or something.

Several other participants made statements along these lines, which included “I see more women involved with weight loss programs”, “when it comes to weight management programs I’ve always associated women with those things”, “weight management programs are geared towards women”, and “women are much more comfortable with joining one.” Some men who had attended nutrition or weight loss groups recalled feeling uncomfortable because they were outnumbered by women. For example, one participant said, “I went to a Taking Off Pounds Sensibly (TOPS) group but there was all women so I was a little uncomfortable...it wasn’t the thing for me” and another stated, “When I was participating in seminars on nutrition science, I was the odd man out, I was the only guy there.”

Program Stigma. Many participants cited the stigma associated with weight management programs as being a disadvantage: “You are gonna get stigmatized being in a group like that.” Several men indicated that participating in a weight management program would mean admitting

that they are unable to lose weight on their own. This is complicated by the fact that “men are afraid to ask for help.” One participant stated, “I think for men there is a stigma for going to the weight watchers groups or Jenny Craig places, or having nutrisystem delivered, it’s kind of an ‘I’ve failed.’” Another participant (mentioned above) that he received ridicule from friends for attending nutrition seminars:

I told my friends what I was doing [going to nutrition science seminars], and what I was finding out, and they’d just laugh at me and say, ‘Just go buy some Weight Watchers stuff and Lean Cuisine and microwave it. What do you need to do this for?’

However, men said that there are some weight management programs they find to be socially acceptable. Several group members felt that the fitness-focused, P90x and Insanity home workout DVDs are exceptions to this stigma. One participant said, “if it’s something like P90x everybody is like ‘yeah that’s awesome let’s do it.’”

Program Cost. Some focus group members commented that a disadvantage of weight management programs is their cost. One participant stated,

I don’t like paying money for something that I should be able to do on my own. You know, if I want to exercise I’ll exercise. If I want to eat right, I’ll eat right. I don’t have to go to a [weight management] place. And they are gonna tell me the same thing I already know.

Other men in the study viewed added expenses, such as purchasing food or equipment, as a drawback to weight management programs: “You see nutrisystem or P90x, you gotta buy 8 DVDs, pull-up bar, dumbbells, food, you gotta buy all this stuff.”

Untrustworthy. Many men in the study felt that weight management programs are untrustworthy because they are motivated by profit. One participant believed that some programs are “mostly focused on generating money but not really on your results or anything.” Focus group members also reported that they were skeptical of these programs because they make “false promises” or “advertise unrealistically.” A participant commented that “a lot of them, they

promise something quick”, which lowers their credibility. Several men mentioned that they did not trust weight management programs because there are “too many of them.” One group member stated, “if all these philosophies worked then there wouldn’t be a need for the other ones.” Another participant mentioned that he was wary of the fact that “some of the weight management programs get people using drugs that are not good for them or supplements.” In addition, participants felt that the information presented across programs is inconsistent and therefore less trustworthy: “It seems like every weight management program, they contradict themselves...they vary a lot.”

Problems with Behavioral Maintenance. Many participants identified difficulties with behavioral maintenance as being a major disadvantage to weight management programs. Several men in the study believed that programs promote short-term results that set individuals up for failure in the long term. Other participants felt that while they were enrolled in a program they might make progress toward their goals, however, this did not necessarily result in lifestyle changes. One participant noted,

You can go into a weight management program for a year and lose a bunch of weight and it works. But unless there's some sort of long standing change that you make that they can force on you, which I don't really see any weight loss program that brainwashes you into eating more healthy, that makes it easier. There's no real guarantee of longevity in anything.

Some focus group members commented that weight management programs fail to equip people with skills that facilitate independent meal preparation or exercise competence. One participant believed that “they don’t teach you any skills and so it’s not sustainable.” Other participants stated that “they don’t actually show you how to cook for yourself” or “how to exercise properly on your own.” Although some men believed that program characteristics made sustaining healthy behavior difficult, other men acknowledged their own tendency to revert back to former

behaviors. One focus group member stated, “Results can be temporary, because if you don’t sustain those changed habits, you are just gonna slide back to where you were.” Similarly, other participants mentioned “I just find that after a while I just want to go back to the way I was” and “it takes a lot to be able to keep it going.”

Behavioral Impact of Advantages/Disadvantages of Healthy Eating, Exercise, and Weight Management Programs. Some men indicated that awareness of advantages and disadvantages of healthy eating, exercise, and weight management programs has led to improved diet and physical activity. Other men indicated that their awareness has led to inconsistent behavior, no behavior changes, and a lack of interest in weight management programs.

Improved Diet. Men in the study reported that knowledge of the advantages and disadvantages of healthy eating has motivated them to bring food prepared at home to work. For example, participants stated, “I never go out to eat at work anymore...I always bring something from home”, “I’ve been bagging [lunch] for a year”, and “I try to take food from home on the road.” One group member said that bringing lunch has helped him with controlling portions: “It’s hard, almost impossible to overeat when you are bringing your lunch from home.”

Several men reported that knowing the advantages/disadvantages of healthy eating has helped them to change their approach to fast food. One focus group member said that he often chooses not to accompany his co-workers to McDonald’s during their lunch break: “I say ‘No, I think I’m going to pass on McDonald’s today guys.’” Another participant commented that he makes better choices with fast food menu items, for example, “One thing I have found at McDonald’s is a dollar side salad if I’m in a hurry.” Similarly, one of the men in the study reported that when he consumes fast food, he picks healthier venues such as “Subway instead of a burger place.”

Participants stated that they have made other dietary changes as a result of being aware of the advantages and disadvantages of healthy eating. This includes modifying/restricting the types of food consumed (e.g., “I avoid pasta, I don’t eat red meat, but [I eat] chicken and beans, salad.”); taking initiative with finding out nutrition information and “pay[ing] more attention to food labels”; and looking at ingredients to see if they contain “high fructose corn syrup or partially hydrogenated oil.” A couple participants noted that they have tried to “eat more slowly” to reduce the volume of their food consumption.

Additionally, focus group members discussed avoiding situations that make healthy eating difficult. One participant stated, “I can’t be in a group situation where we buy food as a group and share it. Because everyone else is going to want the easy fast food.” Another participant said that while grocery shopping, he avoids “the middle of the store” and foods located lower on store shelves, which tend to be more unhealthy. Participants also shared that they have modified the timing of meals by “eating breakfast” and “trying not to eat really late.” Additionally, other focus group members described reducing portion sizes without restricting types of foods consumed. For example, one participant commented,

I’m not worrying about what I’m eating so much, it’s the quantity of what I’m eating. If I want a piece of cake, I have the cake, but I don’t have two pieces, I only have one. I’ve lost a few pounds in the last few weeks... nutrition, I don’t even think about nutrition.

Finally, one group member talked about collaborating with his wife to set similar dietary goals: “[My wife and I] have tried to work together so that we are at least on the same page.”

Improved Physical Activity. Participants expressed that knowledge of the advantages/disadvantages of exercising has resulted in improved exercise habits. One participant stated that “understanding the long term benefits of exercising is motivating for me.” Some focus group members said that their awareness of advantages/disadvantages of physical activity has

helped them to initiate participation in sports or other recreational activities, such as golf, scuba diving, and mixed martial arts. One participant reported that he signed up for a 10K race which “turned out to be a lot more fun than I thought it would be.” Others reported integrating more physical activity into their daily routine. For example, some men in the study said that they bike or walk places instead of driving in addition to trying to keep physically active throughout the day. One participant stated, “Even if I am going a short distance I will ride my bike or walk.” Another participant communicated that he strives to “find jobs where I’m active...I like having jobs where I can exercise.” Focus group members also discussed obtaining a gym membership and going to the gym more frequently. One participant stated, “I’m at the gym 2-3 times per week, minimum. I’m fairly consistent with that.”

Inconsistent Behavior. While knowledge of advantages/disadvantages of healthy eating, exercise, and weight management programs assisted some participants with improving their health habits, others felt that this knowledge has resulted in inconsistent behavior:

I’ve changed my behavior from time to time because of learning about nutrition or being in a personal training program, but the changes don’t really last. The thing is that I go for a number of weeks or even a few months being pretty okay about things, then I just let it go. So I would say probably this knowledge hasn’t really changed my behavior.

Another participant said that engaging in exercise and consuming healthy foods “has been off and on, even though I know all the advantages.” Similarly, an additional participant stated “My behavior hasn’t been consistent...I know about eating healthily and I know about exercising, but I just don’t put it together.” A few participants remarked that they engage in healthy behaviors when they have the time to do so. For instance, one group member said “when I have time it’s a whole lot easier, but it’s hard to have the time to do it.” Another group member commented that his dietary choices are often dependent on his mood state:

I kind of eat based off of my mood...it really just depends on how I'm feeling, like if I'm not feeling too well, if I'm not feeling too bright I sometimes just overeat. So it's like I'm always on this inconsistent schedule of eating and it has always been a struggle for me.

No behavioral changes. Other participants felt that knowledge of the advantages and disadvantages has not led to any behavior changes. In fact, one of the men in the study indicated that this knowledge makes him feel discouraged, which results in avoidance of healthy behaviors: "It's discouraging more than anything, because I realize how much everyone including me struggles to stay in shape. So I get frozen up and don't do much about it." Another group member stated,

It's hard for me to see the incentives. I know what the incentives are, and I know of course it's better to eat healthy, of course it's better to exercise. But I really don't know the difference either way. So it doesn't impact me. I almost wish it was a big priority.

Disinterest Toward Weight Management Programs. None of the men in the study communicated that knowledge of the advantages/disadvantages of healthy eating, exercise, and weight management programs has led them to join a weight management program. On the contrary, several participants noted that knowledge of the advantages/disadvantages has made them uninterested in, or avoidant of weight management programs. For example, one focus group member shared that he avoids weight management programs because they only offer short term results: "No matter how many times you are going to pick up a program, it's gonna lead you in this big circle back to where you were. I stay away from a lot of those programs." Other participants believed that weight management programs simply are not appropriate for them. One participant stated, "I know I don't work well with weight management programs so I tend to avoid those." Another participant reported,

I wouldn't even say I'm cynical [about weight management programs]. I wouldn't even say I care much about it. Apathy would be more my thing. I see fitness programs and for the most part I don't even think about it. Mostly because I think that it's not for me.

Research Question 2

What are the subjective norms and reinforcing factors that contribute to men's engagement in healthy eating and regular exercise practices, as well as their [hypothetical] participation in weight management programs? Specifically, are there any people, groups, or other influences that would reinforce (approve or disapprove of) you for eating healthily on a personal, relational, or community level? Are there any people, groups, or other influences that would reinforce (approve or disapprove of) you for exercising on a personal, relational, or community level? Are there any people, groups, or other influences that would reinforce (approve or disapprove of) you for participating in a weight management program on a personal, relational, or community level? How has this approval or disapproval of individuals and groups influenced your actual behavior?

Healthy Eating Influences (see Figure 7). Participants identified their family, friends/peers, spouse/partner, co-workers, marketing, community, and doctor as influences that approve or disapprove of them for eating healthily. Family and spouses/partners were viewed by some as sources of approval, and others as sources of disapproval. Friends/peers were viewed primarily as a source of disapproval.

Family. Participants believed that they would receive a combination of approval and disapproval for eating healthily.

Approval Due to Family Investment in Health. In terms of approval, some participants mentioned that their family would approve of them eating healthily if family members were invested in their own health or weight management. For example, one focus group member stated, "My family definitely approves of me eating healthy. My mom's side of the family is on a huge health kick and they are eating right and exercising so they are very approving of that kind

of stuff.” Another group member commented on his sister’s own investment in weight loss: “My sister has lost a bunch of weight so she approves.” An additional group member felt his family would approve of healthy eating due to their disapproval of weight gain: “I’ll go to my grandma’s house for dinner and we’ll have a cup of chicken broth for dinner and some crackers, and if you gain 5-10 lbs. they will yell at you.”

Approval Due to Investment in Participant’s Health. Family members also seemed to approve if they were invested in the health of the participant. Participants illustrated this in statements such as “You definitely get approval from family relationships. I mean, people want you to be healthy” and “My kids, they definitely want me to be healthier.”

Disapproval at Family Gatherings. In terms of disapproval, some participants reported that their family members would disapprove of them for eating healthily at family gatherings.

One participant described an example of this disapproval:

My family is like, ‘Why didn’t you try my rhubarb pie?’ I tell them I’m full and it’s just like they keep pressing it on you. ‘Oh have some more, have some more of that, you’ll really love it. I made it fresh just for you.’ And they are pissed at you if you don’t.

Another participant discussed facing similar pressures from family:

I would say there is pressure at family gatherings to have dessert or have some of grandma’s twice-baked potatoes or something you don’t really need. You know you are full but you are at this celebration where it’s Thanksgiving or Christmas and you are expected to eat a lot and you try to explain to them, ‘I don’t want this other potato’, and they are offended almost. And you don’t want them to take it that way, so a lot of times you break down and have that potato.

An additional participant mentioned feeling as though he has no choice but to eat unhealthily at family gatherings:

When you get together at a family get-together, and you got many different dishes from all the women in the family that like to cook, it might be packed with calories but what else are you gonna do? It’s kind of hard.

Friends/Peers. Participants believed that they would receive mostly disapproval from friends and peers for eating healthily.

Disapproval Due To Pressure to Eat Unhealthily. Many participants felt that eating large portions of unhealthy food is the social norm with their friends.

One focus group member described experiencing this peer pressure from friends: “My friends are like, come on you know...you gotta drink, you gotta eat, or ‘Why are you hanging back’ kind-of-thing.” Another group member stated,

Even though my friends, they are a lot more fit than me, they are like, let’s go to eat this 20,000 calorie burger and I’m sitting there like there’s a salad place across the street, but it’s not the social norm to eat healthy in front of everyone eating a nice juicy burger.

In addition to experiencing pressure to eat unhealthy foods, participants described pressure to eat large portions. One participant said, “If you are driving with your friends and they want to go to McDonald’s and do the supersize me, if you end up getting just one little burger they go, ‘What’s your problem?’” Another participant commented, “As far as volume goes, my friends see you not eating something or they are like ‘That’s all you are eating? That’s all you are having?’”

Several participants recalled past situations where they received disapproval from friends for eating healthily. For example, “I’ve gotten grief for buying organic food before. I’ve got friends that think I’m a sucker for paying a lot more for something that’s the same thing.” Two other participants shared occasions when they ate healthily in front of friends and were “referred to as a fruit or nut” or “labeled as a hippie.”

In addition to pressures to eat unhealthily, some men in the study indicated that they receive disapproval from friends for trying to limit alcohol use. This was illustrated in statements such as, “If you don’t want to go out and have the five or six drinks with your friends you might get judged” and,

If you say ‘I’m not drinking tonight, your friends are like ‘What’s up?’ After awhile it goes away but there’s always a ‘What are you doing?’ kind of look when you decide not to drink or only have one beer and call it quits.

Disapproval Due to Gender Norms. Several participants attributed the disapproval of healthy eating to gender norms. For example, one participant stated, “Men might eat a salad when they get home, but they are not gonna tell you that to your face.” Another remarked,

Guys always want to look macho even if you aren’t that type of guy. Most of the time around the guys you got to macho up a little bit. Of course, give me the big burger. You don’t want to wimp out on them.

Approval Due to Friend/Peer Investment in Healthy Eating. Although most men in the study felt that their friends/peers would disapprove of them for eating healthily, one participant believed that his friends would approve of healthy habits: “I have a small circle of friends, but we all approve of eating better. It’s nice to think of that, there’s no disapproval to eating healthy in my small circle of friends.”

Spouse/Partner. Participants communicated that they receive both approval and disapproval from their spouse/partner for eating healthily.

Approval Due to Partner Investment in Health. Participants also believed that their partner would approve because their partner is invested in their own health and engages in healthy dietary practices. One participant said, “My wife is a very healthy eater so she would approve of my eating healthily.”

Approval Due to Investment in Participant’s Health. In terms of approval, participants stated that their partner would approve because they are invested in the participant’s health. For example, one participant said, “My wife has concerns. She wants me to eat healthier because she keeps telling me she wants me around for a long time.” Another participant expressed, “My wife

would approve of me eating healthily because she mentions it quite often. She sees my bad eating habits. She definitely encourages me to eat more healthily.”

Disapproval Due to Partner Engagement in Unhealthy Eating. In terms of disapproval, several focus group members stated that their partner would disapprove of healthy eating because their partner consumes an unhealthy diet. For example, one member commented, “My girlfriend doesn’t like it when I eat healthy because she’s addicted to food”, while another remarked, “My wife doesn’t eat healthy so it’s hard to stay healthy.”

Approval/Disapproval is Situation-Dependent. A few men in the study reported that their partners’ approval/disapproval depends on the situation. One participant said,

Depending on what her emotional state is, if she feels like eating healthy, or if she wants to order Dominos. And the same goes with me. If we are on the same page, we can eat quite good, but when one of the other of us is in a bad mood, we easily lead each other astray. So it goes both ways. Sometimes we both agree, ‘Yeah let’s be bad.’

Another participant mentioned that if his wife is having cravings she will pressure him to eat more unhealthily.

Other Influences.

Influence of Co-Workers. Several men in the study reported that they receive both approval and disapproval from co-workers for engaging in healthy eating. One participant said that his co-workers are “fitness fanatics and nutrition fanatics” who would approve of him eating healthily. Another participant mentioned that the norm in his workplace was to keep unhealthy foods like “cakes and doughnuts” in the break-room. An additional participant described experiencing pressure from co-workers to accompany them on fast-food runs during lunchtime.

Influence of Fast Food Industry and Marketing. Participants mentioned marketing/fast food industries as disapproving of healthy dietary practices. For instance, men in the study made comments such as “Fast food places want us to buy their products” and “The fast food industries

probably have little concern over you eating healthier.” Participants believed that this is driven by profit. One participant stated, “There’s more money to be made with unhealthy choices.” Another remarked, “The junk food people would disapprove of me eating healthy.”

Physician Approval. A few participants mentioned that their physicians approve of them eating more healthily.

Community Approval. One participant believed that the local community also approves of healthy eating: “The community would be generally supportive. There is a lot of information out there and agencies that encourage people to eat healthy.”

Exercise Influences (see Figure 8). Participants identified their family, spouse, friends/peers, co-workers, and medical providers as influences that approve or disapprove of them engaging in physical activity. Family and spouses/partners were viewed by some as sources of approval, and others as sources of disapproval. Friends/peers were viewed primarily as a source of approval.

Family. Participants expressed that they receive both approval and disapproval from family members for exercising.

Family Approval Due to Investment in Participant’s Health and Appearance. Most participants believed that family members approve of them engaging in physical activity. One participant commented, “My relatives on my mom’s side, there are a lot of people with Type 2 diabetes. I mean they just don’t do anything and so they do encourage you to exercise.” Another stated, “My family will always tell me to work out.” A few participants recalled receiving approval to exercise from family members after they had gained weight. For example,

Last Thanksgiving I went home to visit my family and all my relatives were looking at me, ‘You put on weight?’ And I was like ‘Ugh, why?’ and they were like ‘Well you need to work out’ and I was like ‘I know’, and they were like, ‘Well why aren’t you?’ It does

encourage you but it doesn't help your self-esteem when your family is telling you that you are fat.

Family Disapproval Due to Time Demands and Appearance. On the contrary, two participants mentioned that family members disapprove of them exercising. One participant described his mother's disapproval after he lost weight:

When I went home for Christmas I was doing Tae Kwon Do just because I wanted to be exercising. I was in pretty good shape and my mom thought I looked unhealthy because I was skinny. I felt great, it was the best I had felt in a long time, and my mom says 'You look so unhealthy' cause I was 10 lbs. lighter.

Another participant expressed his difficulty with exercising consistently due to his children's disapproval:

My kids are 4 and 5, so me going to work out means I lose time with them...that definitely prevents me from going some days. If I've been working 7-8 days in a row and I haven't really been around and then it makes it hard and they kind of disapprove because they don't really understand about being healthy.

Friends/Peers. Participants uniformly reported that they receive approval from friends/peers for exercising. One focus group member said,

I think a lot of friends would be glad if I got up off of my fat ass and started moving around and getting in shape. And I mean that in a good way, there would be a lot of positive support I think.

Approval Due to Friend/Peer Engagement in Exercise. Participants believed that their friends approve of them engaging in physical activity because their friends are physically active. For example, one group member said "A lot of my friends are exercise junkies, so the pressure from them to exercise is pretty intense." Another member stated, "I have a good friend who is the exact opposite of me. Vegetarian, great shape, way into sports. He would definitely approve of me changing my lifestyle."

Approval Due to Social Opportunities. Other men commented that their friends would approve of them exercising because it is an opportunity to socialize. For example, participants

stated, “My friends say ‘Let’s go play Frisbee or go hang out.’ So they’d approve of me working out”, and “My friends will always call me and ask me to work out.”

Spouse/Partner. Participants communicated that they receive both approval and disapproval from their spouse or partner for exercising.

Approval Due To Investment in Participant’s Health. In terms of approval, participants stated that their partner would approve of them exercising because they are invested in the participant’s health. For example, focus group members said, “My wife would like to see me get into better shape, exercising regularly”, “My wife approves of [exercising]”, “My wife wants me to be active”, and “My wife would say, ‘Oh great, you’re staying healthier, you look better, I’m more attracted to you.’”

Approval Due to Shared Exercise. Several men in the study indicated that their partner would approve because their partner exercises with them. One participant said, “My girlfriend and I exercise together, tends to go very well so there’s a lot of support there.” Another participant described running with his girlfriend on a regular basis.

Disapproval Due to Time Demands. In terms of disapproval, participants stated that their partner would disapprove of them exercising because of the time investment. A few participants said that their wives would want them to share in home responsibilities or spend more time at home instead of exercising. One participant stated,

If I came home and said I am going to the gym or bike for an hour and a half, that could potentially be an issue for my wife. If she’s been home with the kids all day I am gonna go home and not do something that’s beneficial for me.

Others shared stories about their partner preferring them to spend time at home: “I come home and my wife has been home all day now it’s my turn to watch or play with the kids. And I don’t want to go off or something, that doesn’t sit well with her or me”; “I like to be active but my

wife's like 'You're never home with the family'; and 'If I'm exercising and there is something that needs to be done, I'm going to hear it from my wife.' An additional participant discussed his difficulty deciding between quality time with his partner or exercising: "They wanna spend time with you, so what are you gonna give up? You give up the exercising."

Disapproval Due to Personal Exercise Habits. Some men in the study also mentioned that their partner would be opposed to them exercising because their partner does not exercise. For example, one focus group member reported, "My girlfriend disapproves of me exercising regularly. I asked her to go hiking with me six times this summer and every time it's a 'No, I don't want to walk up a mountain.'" Another member said,

The disapproval I get is if my wife catches me on the elliptical machine, it will be like 'Ride your bike to work every day. Why do you need to do that?' It makes her feel bad because she's not doing what she knows she needs to do and is not motivated and feels bad. I'm not doing it to guilt her.

Disapproval Due to Concern About Participant Being Attracted to Other Women. Two other participants described disapproval from wives who felt that participants were going to the gym to look at other women. One participant commented,

I've gotten grief from the wife before. She'll come to the gym with me sometimes, but definitely not frequently. I guess from a relationship standpoint, there's a concern of 'Oh, you looking at other women who are super fit?' There's some of that, and 'Are you going to work out or are you going to stare at people?'

Another participant described a similar reaction from his wife:

Today after work I went to the gym and I told my wife I am gonna go in between work and this focus group, so she's all 'Oh you wanna see girls and stuff.' And I usually go at like 5:00 in the morning because there is nobody there, just to make her happy, because me going in the afternoon I get hassled. So it's like, do I go to the gym and get hassled, or not go and not hear anything? That plays an effect too.

Other Influences.

Co-Worker/Employer Approval and Disapproval. Focus group members felt that co-workers and their employers would mostly approve of them exercising. One group member indicated that he used to walk with his former co-workers during breaks. Another member stated that “I already talked about the exercise competition at work. Everybody wants to be involved, everybody wants to do the same thing, so I think that’s approval.” However, one participant felt that his employers would both approve and disapprove of his engagement in physical activity:

Employers know their employees need to be active and eating well, but don’t want to mess with the time to be active. So they approve of it, but their policies don’t support it, actions don’t support it. They approve and disapprove at the same time of folks exercising, at least on the job.

Medical Provider Approval. Participants mentioned that their medical providers would approve of them exercising. They made statements such as “My doctor would really approve of me getting a little exercise”, “Doctors always want you to exercise, they always ask, so they would approve”, and “Healthcare providers would certainly be approving of that.”

Weight Management Program Influences (see Figure 9). Participants identified their family, spouse/partner, and friends/peers as influences that would approve or disapprove of their enrollment in a weight management program. Family, spouse/partner, and friends/peers were viewed by the majority of participants as sources of disapproval.

Family.

Disapproval Due to Belief that Participant Should Lose Weight Independently.

Participants reported that they would receive mostly disapproval from family members for joining a weight management program. Some participants believed that their family members would disapprove of them joining a weight management program because they should be able to lose weight on their own. For example, one participant stated,

If I told my parents I was gonna join Jenny Craig or something like that they would assume that I'm being lazy or trying to find an easy way out, when I can just exercise or do what everyone else is doing.

Another participant remarked, "My family doesn't see programs like that as a valuable resource, like if you want to lose weight get up off your ass and do something."

Disapproval Due to Belief that Programs are a Waste of Money. An additional participant believed that his mother would disapprove of him participating in a weight management program because it would be a waste of money: "I'd get told immediately that I was being gypped by my mother. 'You know better than that, you spent how much money on that crapola? You know better than that' is what I'd hear, and she'd be right."

Approval if Program is Effective. On the other hand, one participant felt that his family would approve of him joining a weight management program if it was effective: "I think I would get approval from family obviously. Especially if I was being diligent about it and getting results."

Friends/Peers. Participants reported that they would receive mostly disapproval from their friends/peers for enrolling in a weight management program. One focus group member said, "My best friend would definitely give me a lot of *** if I participated in a weight management program."

Disapproval Due to Belief that Participant Should Lose Weight Independently. Participants believed that they would receive disapproval from their friends/peers because they should be able to lose weight on their own. One participant envisioned how his friends would react if he joined a program:

I personally would receive a lot of grief from my friends for that. I guess there's probably an attitude of superiority of 'Well, we figure out how to eat, how to work out, and if you can't figure it out, you're not very bright.' So if you need to go to one of those, you've kind of failed. I can definitely see me getting a lot of grief for that.

Other participants also felt that their friends would ridicule them for not being able to lose weight by themselves. One participant stated, “My friends would just view it as kind of a failure or something, if you really need to go to that third party for support.” Another participant said, “[My friends would say], ‘Why can’t you do this yourself? Can you not, do you have no willpower? Can you not watch what you eat, go to the gym, make the time for it?’”

Disapproval Due to Program Costs. Men in the study also anticipated that their friends would disapprove of their participation in a weight management program because of the expense. One participant commented, “My friends would say, ‘If you’re paying half your rent for a weight management program you have other issues to talk about.’” Other focus group members believed their friends would disapprove because they should not have to pay for something they should be able to do on their own. One member said,

Yeah I think friends and peers and co-workers especially if we are going back to these fad diets and stuff would probably disapprove. Like what he’s saying, ‘Why are you gonna waste your money on that, when you can just go out and run. Go work out, you don’t need to buy into the fad stuff.’ I think there’d be some peer pressure from friends if they found out that I’d signed up for a program rather than just going and doing it myself.

Another member stated,

My best friend would probably disapprove because he knows that I know everything. He would probably ride me a little bit and be like, ‘You know the stuff, why the hell do you need to go and pay money to have somebody tell you what you already know.’

Disapproval Due to Program Stigma. Some participants anticipated receiving disapproval from their friends/peers for utilizing a weight management program because of the stigma attached to the programs. Several participants mentioned that programs are stigmatized for men because they target women. One participant said, “It seems like such a feminine activity to deal with your weight, my friends would laugh at me. If you are a man, you should go out and join a flag football team, or go to the gym.” Others felt that friends would disapprove because of

the stigma that weight management programs are untrustworthy and commercialized. For example, one focus group member said,

Most people would probably say it is a bad idea. In my friend group at least it has a very negative connotation. It's one of those things where if everyone thinks they're a bad idea you know like it's a scam.

Approval if Program is Fitness-Focused. While most men in the study thought that their friends would disapprove of them for joining a weight management program, a few participants thought that they would receive approval if the programs were fitness-focused. For instance, one focus group member stated,

I think if I went to my buddies and was like, hey I just joined a gym and I got a personal trainer and I'm gonna be working out to lose weight, I think I'd get thumbs up. I think if I had said, 'I signed up for Dan Marino's weight watchers for men' I would get a very different reaction. I think there is a stumbling block for men for the diet program. We are all into working out, guys are cool with it. If it's eating little trays of food that they send you in the mail, I think we look at that in a much different light. So I guess it depends on what the weight management program. If it's dieting, exercising, if it's both.

Spouse/Partner. Men in the study uniformly reported that they would receive disapproval from their spouse or partner for enrolling in a weight management program.

Disapproval Due to Program Costs. Participants felt that they would receive disapproval from their partners because of the expense. For example, one focus group member stated, "My wife would probably be very disappointed in me spending \$200 on a weight management program when we can't even afford to make mortgage." Another commented,

It falls back on the wife; if she sees how much it is for that management program or the weight loss, if it's like \$100 a month, of course she'll disapprove because it's money lost, when it could go toward something else that she sees as more beneficial.

Disapproval to Program Time Demands. A few participants also anticipated disapproval from their partners due to the time involved. For instance, one participant stated, "She would disapprove because of the time. My wife wants me home, and I'm glad she wants me around."

Behavioral Impact of the Approval/Disapproval of Influences. Many participants believed that the approval/disapproval from people and other influences has helped them to make dietary, exercise, and weight loss behavioral changes. Other participants felt that the approval/disapproval has resulted in no behavioral changes, inconsistent behavior, or unhealthy behaviors.

Improved Diet. With respect to dietary changes, some participants stated that the approval/disapproval from others has helped them to increase consumption of healthy foods and decrease consumption of unhealthy foods. Participants described engaging in healthy eating around others who approved of this: “I eat better because I know [our family] is eating together” and,

I probably ate more vegetables in the last three months than I have in the last fifteen years. You know happy wife, happy home kind of thing so it’s like if she puts it down, okay I’ll at least try it and we’ll go from there.

Improved Physical Activity. With respect to physical activity changes, participants felt that approval/disapproval from various influences has helped them to exercise more. For example, one participant described how his parents’ approval of him working out had motivated him to start exercising:

The approval of others around me got me going to be the person I am now. I used to be a pretty big guy, like 220, and my parents looked at me, and said, you need to work out, they just approved of me working out. So I’d be going golfing, just playing sports and not being home as much. The approval got me feeling better about myself. Got my weight down a lot more.

Another participant discussed how receiving approval from others has motivated him to increase his physical activity:

I don’t care if people look at me when I eat, I eat a lot. But I guess it’s how they view me when I exercise. It’s like, when I exercise I feel better about myself and it’s more approval, and so I’d actually want to go out and do more of it.

In addition to behavior change, one participant mentioned that “it’s approval that’s helped me to be consistent [with exercising].”

Weight Loss Behaviors. With respect to general weight loss changes, participants reported that the approval/disapproval from others has helped them to engage in behaviors leading to weight loss. For instance, a focus group member described being influenced by his wife’s approval of weight changing behaviors: “My wife was worried about my health when I was quite a bit larger than I am now and it sparked me to lose some weight...so that was the catalyst. “ Another group member discussed an incident with his wife that influenced him to try to lose weight:

I don’t know if it was approval or disapproval necessarily but what’s hard for me was there’s a picture that one of my mom’s sisters sent to me when it was at Thanksgiving and I was riding a motorcycle and I had this big double chin. And my wife looked at it and said, “Is that you?” And so it wasn’t direct disapproval, but kind of a questioning like “Oh my God” that sparked it, I mean I lost 40-50 lbs. But that motivation of someone else inspired me to look better.

One participant said that approval from peers led him to make changes that resulted in weight loss: “It has been encouraging. People will see you lose weight, they’ll say something about it, say I look thinner. So overall it’s approval from groups when you change your behavior that way.”

No Behavioral Changes. Some men in the study felt that the approval/disapproval from others has had little to no influence on their behavior. One focus group member remarked, “I don’t think anybody’s approval or disapproval has really influenced my behavior.” Another group member stated, “A lot of people tend to disapprove of my habits and I reinforce them despite people.”

Inconsistent Behavior. Some participants believed that the approval and disapproval from influences has led to inconsistent behavior. For example, one participant expressed how his

inconsistent behavior is the result of the inconsistent approval/disapproval from others: “People push me, and then for that day I feel like ‘Oh, I’m going to do this’ and then I hang out with someone else and I feel ‘Ah, I’m not going to do that’ so it kind of goes in spurts with the eating and exercise.”

Several participants described how their attempts to eat healthily are made difficult by social influences. For instance, one focus group member stated,

What makes it more difficult are the curveballs thrown in. Like you could have your whole week planned out, but on Thursday night your friends could be like, do you want to go get some wings. You’re not gonna stay home...you are gonna go out.

Another focus group member discussed how approval/disapproval from others has contributed to inconsistent eating and exercise practices:

For me the approval and disapproval, as far as eating healthy I tend to do that at home. I’ll have a salad at home, I’ll have a grapefruit at home, but when I am out with friends that’s when I am getting the burger with the mushrooms and swiss cheese and bacon and so I kind of find myself, with eating healthy, doing it in one area but not in others. And it’s kind of the flip side with exercise, I’ll go out with my friends and play hockey. We’ll all go out together and exercise as a group, as men, and then at home I’m tending to do less of that. So kind of a dichotomy where I’m eating healthy at home but not with my friends, but I’m exercising with my friends but not at home.

Additionally, one participant described being inconsistent with exercise due to disapproval from his children wanting to spend time with him: “I’ve probably skipped some gym days with you know wanting to stick around with the kids. So I mean both of them have kind of affected me you know.”

Engagement in Unhealthy Behaviors. Some participants believed that the approval/disapproval from others has influenced them to engage in unhealthy behaviors, including consuming unhealthy foods/alcohol or exercising less.

Participants reported that they were more likely to engage in unhealthy behaviors if they received approval from others to do so. For example, one focus group member provided a recent

example of a friend encouraging him eat more food: “I was at my friend’s house last night, they made two huge things of lasagna, ‘Here you go. Do you want more? Go get more! Go get more!’ So I said ‘Okay...’” Another focus group member discussed his difficulty refusing food prepared by family members: “Sometimes my family makes me feel guilty if I don’t eat it ‘cause they sit there and go ‘What, you don’t like it? I spent all day cooking this meal.’”

One participant commented that his friends’ approval of unhealthy eating and occasional disapproval has influenced his engagement in healthy behaviors:

Me and my friends hang out and it’s like, ‘Do you want to go for a hike?’ ‘Nah.’ ‘Do you want to go for a bike ride?’ ‘Nah.’ ‘Do you want to drink a round of beer.’ ‘Yeah let’s drink beer.’ And if you go out of your way to suggest ‘Hey do you want to go to the gym?’, sometimes it goes over but a lot of times people are just like “Nah that doesn’t sound like fun’, so you generally go back to resorting to beer and chicken wings.

Similarly, a participant recalled how his wife’s disapproval of him exercising led him to decrease his physical activity:

I got influenced because my wife and all that stuff, wanting me to stay home more. She depended on me more. So I stopped doing exercises and stuff. And, until I went into cardiac arrest, I said ‘Okay forget it. It’s me, I have to take care of myself first.’ And then ever since after that I’ve been trying to push myself more and more. But it took that to switch it over back to the other lifestyle.

Another participant described exercising less as a result of his wife’s disapproval:

My first wife I did have huge problems. Every time I’d go into the gym, I would get nothing but grief when I came back, ‘You’ve been gone two hours.’ So I would sometimes not go. And it wouldn’t matter, ‘cause even if I was there, she would just sit there on the computer anyway. So, it’s not like we’d interact, so I might as well have gone.

Research Question 3

What is the level of perceived behavioral control and what are the enabling factors that contribute to men’s engagement in healthy eating and regular exercise practices, as well as their [hypothetical] participation in weight management programs? Specifically, what factors or

circumstances would enable/make it difficult for you to eat healthily (on a personal, relational, or community level)? What factors or circumstances would enable/make it difficult for you to exercise (on a personal, relational, or community level)? What factors or circumstances would enable/make it difficult for you to participate in a weight management program (on a personal, relational, or community level)? How have these factors or circumstances influenced your actual behavior?

Healthy Eating Enabling Factors (see Figure 10). Participants identified a number of factors related to food (affordability, availability, preplanned, modified portions), the social environment (support), and personal characteristics (knowledge, lifestyle-focus) that enable/make it easier to eat healthily.

Affordable Healthy Food. Many focus group members believed that if healthy food was more affordable, they would make healthier dietary choices. One participant discussed how “it’s easier to buy the more processed stuff ““cause it’s cheaper” but that if “fresh foods” were more affordable he would eat more healthily. Participants felt that more affordable resources, such as a free healthy cooking class in the community would provide them with knowledge to improve their diet.

Available Healthy Food. In addition, men expressed that if healthier food choices were more available and accessible, then they would be more likely to eat healthily. One participant commented, “I think the key is having access to food that’s healthy.” Focus group members also reported that they would make healthier dietary choices if health food options were convenient and in close proximity to their workplaces. For example, one participant said that it would be easier for him to engage in positive dietary habits “if there were more restaurants near my office that offered healthier fast options.” A few participants mentioned that it would be ideal to have

healthy food “set right in front of me” or “put in front of me”, again highlighting a desire for healthy food to be more convenient. One focus group member suggested the need for societal changes: “The public mindset has to change too, in order to make healthy choices available to us.”

Preplanned Healthy Food. Many participants believed that preplanned or prepared foods would make it easier for them to make healthier food choices. One participant noted, “If something is planned out and ready, it makes it easier to eat healthy. If the healthy stuff is there ahead of time, I’m gonna grab it.” Another participant also felt that planning meals beforehand makes healthy eating easier:

In my life, if I have preplanned my meals, I am going to eat them every day. That allows me to take the thought out of it. There’s no instant decision making, ‘Oh I’m super hungry right now so I am going to eat whatever’s in front of me.’ If I just have it planned and have the meal with me, and know what time I am going to eat it that helps. It’s kind of a paradox because it takes a little bit more thought and more work, but as far as eating it makes it easier for me to eat healthily than just being in the moment.

An additional participant added that if meals were preplanned but also “easy to fix, quick”, he would be inclined to make better dietary decisions.

Portion Modifications. Men reported that smaller portions while dining out would facilitate healthier eating. For example,

The standard portions that they serve up for a meal are way too much in my opinion. And I always ask for a doggie bag to take it home but I usually end up eating it on the way home.

On the other hand, a few participants expressed a desire for larger, satiating portions of healthy foods. One focus group member said, “If I could find healthy food that actually made me feel full after eating it, I’d be more likely to eat healthily.” Another member stated, “When I eat healthy, like if it’s a salad, it has to be a giant salad or I don’t feel full.”

Support from Social Environment. Several participants identified changes to their social environment as facilitative of a healthy diet. A few focus group members said that a change in “community consciousness” or “living in a community that’s healthy-centered” would enable healthy eating. Some participants also communicated that assistance from their spouses with meal preparation helps them to eat more healthily. One focus group member stated,

Sometimes my wife will pack food for me. But lately she hasn’t had the energy to do that for me. That’s where the support comes from, that’s where it gets easy, when lunch is packed.

Personal Increase in Knowledge. Many participants cited knowledge as a factor that facilitates healthy eating. One focus group member stated that “Every little bit of education I get helps me to know the right direction.” Another participant reported that “getting the information out there, finding the information” would help him to eat healthily. Furthermore, one member stated that it would be helpful he acquired knowledge that was consistent:

I think it would make it easier if there wasn’t so much conflicting information out there. I mean, you can get on the internet and Google anything and find lots of wrong answers. And then you’ve got television throwing a million different things at you. Everywhere you go, it’s conflicting. What you should be doing, what you shouldn’t be doing. And everyone’s a doctor these days or has a white coat on. So it makes it difficult to understand exactly what I should be doing.

Personal Shift Toward Lifestyle Orientation. In addition to increasing knowledge, several participants mentioned that changing their perspectives about healthy eating helps them to make better dietary choices. Participants specifically described taking a lifestyle approach to healthy eating. For instance, “The thing that makes it easier is when I have the perspective of, it’s a lifestyle.” Another participant noted, “It’s a lifestyle choice, so there is a little bit of a mindset that needs to change.”

Healthy Eating Barriers (see Figure 11). Participants identified a number of factors related to food (cost, lack of availability of healthy foods, time/inconvenience, poorer taste, over-

availability of unhealthy foods), the social environment (situational challenges), and personal characteristics (lack of knowledge, habits) that make it difficult to eat healthily.

Cost of Healthy Food. Participants reported that the cost of healthy foods makes it more difficult to eat a nutritious diet. They commented that “Money’s probably the biggest thing that restricts” and “Cost always comes with eating healthy.” Several men stated that they often choose to eat fast food due to its affordability. For example, one participant said, “If I am hungry and I have \$3, I can go to McDonald’s and get some cheeseburgers and not be hungry anymore.”

Lack of Availability of Healthy Food. Focus group members also identified the availability of unhealthy food as a barrier to healthy eating. They talked about the challenge of being surrounded by unhealthy food at work, grocery stores, home, restaurants, on the road, and advertised in media. One participant illustrated this by saying,

There’s a lot of opportunities in our society to not eat health food. There’s Arby’s, McDonald’s on every corner. It’s so easy and inexpensive to go pick up half a gallon of ice cream, I love cookies...it’s just so easy to eat unhealthily.

Another participant acknowledged that he eats unhealthily because junk food is readily available: “I eat what I see. I get tempted and I eat whatever I want.” Other focus group members discussed challenges with dining out: “When I am eating out I have a hard time finding a good healthy meal at a lot of places.” Finding healthy food at the grocery store is also a challenge: “Like any grocery store you walk into, I look at what’s on the end of that aisle. It’s always the chips, it’s always the bad stuff, like maybe they put the healthier foods out of the way.”

Time Constraints and Inconvenience of Healthy Eating. Men identified time and inconvenience as barriers to healthy eating. One focus group member described his difficulty with taking the time to prepare food: “If I have to fix two meals, breakfast and lunch the night before I have to get up and drive to work, that’s a pain. So is going to the grocery store and

buying food and all that.” Another commented that “it’s easier for me to go through a drive thru.” A long and hectic work schedule also makes it difficult to find the time to eat. One participant stated,

It’s more of a time constraint for me. I know what I should be eating and when I should be eating it, but I usually put in a 10-12 hour day...and I’ll work and not eat a single thing. Then I’ll come home and I’ll be starving and I’ll sit there and pig out and go straight to bed. So for me, it’s trying to make myself, time-wise, sit down and have a small breakfast, something for lunch, and something for dinner. For me it’s the time deal.

Another commented,

I find it difficult to eat healthy on the job. A lot of that is not having the time, ‘cause you look up and it’s 1:30 and you realize you haven’t eaten. McDonald’s is down the street and it’s easy.

Poorer Taste of Healthy Food. Participants also noted that their preference for the taste of unhealthy foods makes it difficult to eat healthy foods. One participant stated, “In general the healthier stuff doesn’t always taste so good.” Likewise, other participants said, “The good food doesn’t taste as good as the bad stuff”, “[Healthy food] tastes awful”, and “It’s hard to deny yourself something that you know is enjoyable.”

Overabundance of Unhealthy Foods. Several participants mentioned that one barrier to practicing a healthy diet is the wide availability of unhealthy foods. One participant provided an example of this:

I had this one job where we had staff meetings every other day and we would always rotate. Okay today it’s your turn to bring donuts, ok and now it’s your turn to bring donuts, and we’d all try to outdo each other by bringing the best donuts.

Situational Challenges. Other men commented that their ability to eat healthily is heavily dependent on the situation they are in. Restaurants were cited as an especially challenging environment because of the meal portion sizes: “I love pasta so you go to Olive Garden or Carraba’s and they load you up on that stuff. It’s hard not eating all of it, it’s all you

can eat so it's hard." Social situations with male peers also make it difficult to order healthy food. One participant described how ordering a salad would be considered "unmacho" in his peer group. A few participants said that they were more likely to eat unhealthily when they go travel to their hometowns in the Midwest or South. One participant reported, "When I go back home, I eat Southern food, I eat fried food. That's just the norm. That's what people do. It depends a lot where you live." Another participant described situational unpredictability and not wanting to offend others by rejecting their food: "You never know where you are gonna be or what you are gonna be doing. Somebody offers you a beer or something unhealthy, and I take it sometimes because I feel like I'd be offending them if I didn't." An additional participant expressed his struggle with eating healthily during special occasions:

Every time you turn around somebody's got a special occasion for you, or you go out for a meal, or go to a barbecue. Somebody has a big old slice of birthday cake for you, there's always something else. It's tough to get around that, it's hard to turn people down sometimes, especially when it's a special occasion or something that means something to somebody else.

Finally, several focus group members said healthy eating is challenging in situations where they consume alcohol. For example, one member stated, "Once you start having alcohol it's hard to care about what you are eating."

Personal Lack of Knowledge. Participants felt that their lack of knowledge is a barrier to healthy eating. Several participants discussed difficulty with understanding food labels. For example, one focus group member said, "Admittedly I don't know the numbers of the back of the boxes mean. So I recently started trying to learn about it, but I just don't have that much knowledge as far as that goes." Another commented, "You look at a box and it says, 'One serving size', well what's a serving size?" In addition, several participants struggled with the

definition of healthy eating. For example, “Sometimes I get so confused about ‘What is healthy eating?’ There’s so much information out there.”

Personal Habits. Men also felt that their current behaviors make it difficult to engage in healthy dietary practices. One focus group member indicated that various factors make healthy eating difficult for him, but the biggest barrier is his current “paradigm”:

It’s the change, it’s the paradigm shift. You can make excuses like it takes so much time to go out and buy stuff, but the hardest part is making that shift. And the reality that if I want to do this, these are the steps I am going to have to take in order to do it.

Another member discussed challenges with shifting his behavior:

It’s hard to break some of those habits. And that’s the problem is that a lot of it is habitual and I have been eating this way for 30 years, and those are hard habits to get out of. For three to four days I can eat healthy but I kind of meander back to the way I’ve been eating for forever. So that’s the disadvantage, it takes effort to change your overall habits.

Exercise Enabling Factors (see Figure 12). Participants cited social factors (support, accountability, competition), personal factors (knowledge), and exercise factors (convenience, geographical location) enabling them to more easily engage in physical activity.

Social Support. Many focus group members felt that social support facilitates exercise. Support from the home environment was cited as being particularly important. One participant stated, “the main support comes from home.” Another participant recalled that living in a fraternity home made exercising easier:

When I was in college I was in a fraternity. When I lived in that house, that was when it was easiest for me to go to the gym. ‘Cause literally, any time of the day you could find someone who wants to go, or if someone else wants to go they would find you first. And you’d always have that kind of support, it’s convenient. And if you don’t go, you’d get crap when they’d get back. Once I left the house I didn’t go nearly as much because the support just wasn’t there. And at that point it’s all on you. Personal motivation, it can take you far, I still go to the gym but it’s much harder now.

Men reported that engaging in physical activity is easier with the support of exercise companions. Friends, family, dogs, co-workers, and peers with similar interests were identified

as exercise companions that facilitate exercise behavior. One participant stated, “For me, it would help to find someone to go hiking with.” Another participant shared that he is more likely to exercise if he has companions:

I’ve tried running and lifting. I’ve never been able to be motivated to exercise just based on exercise. The only things that work for me are something secondary, like a dog. I got a dog just so I have a reason to go out. I have to run the dog and I’m getting exercise too. I play hockey because I enjoy hockey. I know I’m getting exercise, but that’s kind of a secondary benefit because I’m out with my friend having a good time. And that’s what makes it easier for me is when I’m doing it as a side benefit as opposed to ‘I have to exercise today because that’s what I need to do.’ I’ve never been able to motivate myself to exercise and I need that secondary thing. And the thing that makes it more difficult is when I don’t have that. When I just go out to run for 30 minutes, I can’t get the motivation. I don’t have the extra kick to go do that. I’d rather not. The dog needs to go out so I take the dog.

Social Accountability. Some men in the study believed being held accountable by others enables them to exercise. For example, one participant mentioned that routinely exercising with his family has been helpful for him:

What makes it easiest for me is the social support from my wife and daughter. It’s expected that when I get home at 5:30 we are going to go out and take a walk. So that expectation that there’s no way out of it. I get home and literally, my daughter says, ‘Let’s go daddy’ and that kind of expectation and social support makes it really easy to be more active.

Social Competition. Focus group members also believed that competition makes exercising easier. A participant stated, “A little lighthearted competition really gets me going.” Several members recalled having enjoyed participating in exercise competitions. For example, “We had a weight loss competition at work, and I’m really competitive, so you feel that competition, that need to be first place. I hate to lose.” An additional participant also expressed that competitions have and would make exercising easier: “At the work place I am at they do a competition every year, so everybody starts eating healthier and starts exercising. So when it’s placed in front of me what to do, I’ll absolutely do it.” A few men in the study reported that

training to compete in an event has helped them to engage in physical activity. Additionally, one focus group member said that training for an event helps him to set goals that promote exercise: “If I want to sign up for a half marathon that would be my goal to train for it. Goals are what make it easier to exercise.”

Increased Personal Knowledge. Some participants believed that having increased knowledge would enable them to engage in more physical activity. Several men expressed a desire to learn about a greater range of physical activities as well as how to properly exercise. For example, one focus group member stated “I’d like to get more information on different types of exercises. Like going to lift weights, what to do to bulk up vs. just becoming leaner.” Another commented,

I’d like to learn more about the correct way to lift weights. I’m starting to learn how to correctly do things and that’s got me to go to the gym, and you can actually feel the difference between the correct way of doing a bench press vs. the incorrect way.

More Convenience. Participants expressed that they are more likely to exercise if it is convenient and accessible. Some men noted that “having a gym membership” or “living closer to the gym” would help them to engage in physical activity. One focus group member said that he made negotiations to be able to use his gym at times most convenient to him. Others recalled positive experiences where they were able to exercise at work. Participants felt that having fitness competitions at work and access to employee exercise facilities helps to enable physical activity. Several participants discussed the convenience of having exercise built into their work schedules. For example, one participant said, “I used to work at a place where we’d have a 15-20 minute stretch break. Everybody in the team would get together and we’d stretch together.”

Geographical Location. Many participants felt that the community they live in is more conducive to physical activity than other geographical locations. Some focus group members

mentioned that the landscape of Colorado makes it easier to exercise. Men commented that “it’s kind of like the physical surroundings that determine what your behavior is” and “since moving out here it’s definitely been a lot easier to do things outside...it’s an easier place to be active and live a healthier lifestyle.” In addition to natural surroundings, focus group members reported that man-made features designed to promote active lifestyles also facilitate exercise behavior. For example, several participants appreciated the bike/walking paths that are accessible in the local community. Furthermore, focus group members noted that community norms make it easier to exercise. They stated that “I think our community in general is very positive about eating healthy” and “I think we are very fortunate as far as where we live.”

Exercise Barriers (see Figure 13). Participants identified personal factors (self-consciousness, poor physical condition, lack of motivation), work demands, and weather as barriers to engaging in exercise.

Personal Self-Consciousness. Many participants described avoiding exercise due to feeling self-conscious. Some participants expressed a belief that they need to be more physically fit prior to exercising. One focus group member described his reservations about going to the gym: “That guy is gonna think I’m a fat slob. I shouldn’t go there because I’m not worthy of going there. One of the most difficult things is body image.” Another member said, “I can’t go to the gym I’m not in shape enough to go to the gym. You’ve got to go to the B gym to get in shape enough before you can go the A gym.” For some men in the study, self-consciousness was related to concerns that other men judge them. One participant illustrated this in the following statement:

I don’t think it’s unfounded that you believe that other people are watching you. Even me, when I was in better shape, guys would look in the mirror like they are all that and it’s intimidating for one. Second, I usually don’t find people in the gym who are out of

shape, you usually find people in the gym who are in shape. So if people go who aren't so much that way, it's like, 'Stay at home.'

Another participant noted that "at some of the gyms, if you aren't totally ripped it's like 'What are you doing here?'" Several others reported that feeling self-conscious prevents them from exercising. For example,

As soon as I walk into the weight room all these thoughts go through my head. Like, does this guy think I'm lifting enough weight, how do my quads look. And there is a certain aspect where I like to seek approval with the weights. I don't want to be judged during the workout.

An additional participant described his self-consciousness with lifting weights:

One thing that makes exercising hard is, you know I'm not the most built guy. But you go to the gym and there's all these guys that are pretty ripped. And you are only bench pressing 50, 70 lbs., however much. It's intimidating.

Men also talked about feeling self-conscious while engaging in cardiovascular forms of exercise in public. For example, one focus group member said,

For me personally, I used to try to run but I can't run more than a block because I'm really out of shape. It's always like that embarrassment, like when you run someone may be watching through their window and see you run. And then you have to walk and they are like, 'Look at that loser.'

Current Physical Condition. In addition to feeling self-conscious, participants identified their current physical condition as a barrier to exercising. In particular, they expressed difficulties with physical changes due to aging. Men described how they are more prone to exercise injury as they age. One focus group member said,

My body limit, I can't do stuff like what I used to do several years ago. Now if I get hurt, I gotta take 3-4 weeks off just to heal. Then [exercise] again and get hurt again. Cause we are not young no more.

Others stated that medical factors or years of not exercising are barriers to exercising. A few men in the study stated that they underwent medical procedures that limited their ability to be active.

For example, "I just had a hip replacement about four months ago and with the pain of the hip, I

was limited. I'd try to go to the gym, get on the treadmill or elliptical but the pain was so bad and I just couldn't do anything." An additional participant noted that the physical consequences of being sedentary for years makes it difficult to be active: "All the damage I've done to my body, it takes much time to reverse that."

Personal Lack of Motivation. Participants commented that a general lack of motivation prevents them from exercising more. They made statements such as "I don't have the motivation", "Lack of motivation is a big factor", and "The motivation, sometimes it's hard for me." For some participants, this lack of motivation is associated with not having exercise companions. One participant stated that "in the past I had somebody pushing me or walking on the same path it was a lot easier because it's really hard for me to get personally motivated."

Another said,

I moved here three years ago and I've met a lot of people. But the people in my neighborhood don't really exercise and my wife isn't a big exerciser. One of the difficult things for me is finding people to exercise with.

An additional participant expressed similar struggles:

The difficulty lies in the fact that my schedule doesn't sync with the people who I want to go the gym with. It's a lot easier and more fun to go with somebody else. Even if you can sit and chit chat while you are lifting weights or while you are on a bike ride or run. It's not really fun or mentally pleasing to go by yourself.

Other participants discussed having a lack of motivation because they do not find exercise to be enjoyable. One focus group member remarked, "I enjoy being sedentary." Another remarked, "You don't usually get up and say 'oh I can't wait to get in there and wear myself to a frazzle'."

Work Demands. Several participants believed that work demands are a barrier to exercising. In particular, they mentioned that their work schedule makes it difficult to find time to exercise. For example, one participant described difficulty with exercising during his short work breaks: "I had 30 minutes off for lunch and 15 minutes in the afternoon. There's no time to

exercise.” Another stated, “Fitting it into my work routine is hard.” Several focus group members indicated that work demands lead to fatigue, which make exercising difficult. Members commented that “When I’ve worked a long day already I just want to relax” and “I’m tired after 13 hours of working.” In addition, a few men in the study indicated that they would be open to riding a bike to work their jobs didn’t require them to look professional or provided shower facilities on site.

Cold Weather. Participants identified cold weather as a barrier to engaging in physical activity.

The time of year makes a big difference to me. Spring and summer, I’m outside all the time, walking the dog. Once it gets cold, there are enough excuses to stay inside and I always gain weight in the winter. It’s just a lot easier not to exercise.

Another participant said,

Seasonally, you can mow the lawn, go outside, go running. But then in the wintertime you can sit inside and that creates bad habits. Then once you get to spring again, you are not really feeling it, it takes a lot to get back into the swing of things.

In addition to making outdoor activity difficult, cold weather was viewed as a barrier to exercise because of poor driving conditions. One focus group member stated, “The gym is fifteen miles away. In the winter when there are icy roads I am not going to drive the fifteen miles.”

Weight Management Program Enabling Factors (see Figure 14). Participants identified various program factors (affordable, trustworthy, involvement of experts, emphasis on lifestyle, individualized, emphasis on fitness), personal factors (significant circumstances, willingness to seek help), and social factors (support) that would make it easier for them to participate in a weight management program.

Affordable Programs. Participants mentioned that they would be more likely to join a weight management program if it was affordable. Several men suggested that they would be

more interested in enrolling in “community-based programs” that are affordable or free. For instance, one focus group member stated, “One thing I’ve seen and liked is people getting together themselves and doing their own weight management thing and there’s no coast associated with it aside from changing grocery shopping habits.”

Trustworthy Programs. In addition to being affordable, participants felt that it would be easier to join a weight management program if it was more trustworthy. One participant said that he would be more likely to participate in a program if it “there is a better public opinion of them.” Another participant communicated that he would want to see that the program is different than other programs: “They all kind of seem a bit generic...it there was a way to get the message out that what they do is different than others.” An additional participant commented that hearing that the program was credible via word-of-mouth would make it easier for him evaluate a program: “But if you hear about it from someone you trusted, or in trusted circles, I think that you would be able to tell whether it’s good or bad.”

Involvement of Experts in Program. Focus group members also expressed that having experts involved would enable them to be more likely to participate in a program. For example, one participant said,

An idea of a good weight management program is where you are working with someone who has experience in personal training, also speaking to a nutritionist and learning what to eat. There’s not a lot out there like that.

Another group member noted that he would be more interested in joining a weight management programs if it offers “expertise in physical activity and nutrition”, as his perception was that most programs offered one but not both.

Lifestyle Emphasis in Programs. Participants commented that participating in a weight management program would be easier if it focused on lifestyle. One participant stated,

To me, healthy eating, exercise, and weight management are one thing. Lifestyle. And I don't see that in programs out there. There are programs that want to set you up with food, there are programs that want to set you up with exercise and weight management instead of something that's teaching you, that wants to get you into a healthy lifestyle.

Another participant reported,

For me, a healthy weight management program would be defined as something that pushes you into an energetic, happy type of lifestyle that can be maintained throughout your life. That would make it easier.

An additional participant said,

A lot of these weight management programs are targeted on losing weight. I suppose it would be easier if the program actually took a holistic view of your health instead of just 'Oh you just lost 5lbs. Yay.'

Individualized Programs. Many participants also expressed that a weight management program that is individualized would be more appealing to them than a program that takes a "one size fits all" approach. Focus group members described wanting a program to be individualized in terms of meeting their personal goals. They felt that "a type of program that selects what appeals to you, sees what your objectives are and meets your needs" would make it easier to join a program. Several participants indicated that the weight loss objectives of weight management programs are not matched well to their individual goals. For example,

The weight management programs like Weight Watchers, those are generally targeted at lowering you weight. Not managing. So I'd love to be 20lbs. heavier, as long as it was the right 20lbs. So those types of programs are of no appeal to me because I have different goals in mind.

Another group member expressed a similar opinion:

So if someone wants to grow muscle mass and say the weight management program is geared toward losing fat. So it wouldn't be fitted for you and you would have to find something more appropriate for what you are looking for."

Likewise, an additional participant reported,

It would make it easier if it was geared toward my goals. Like say if it was like, 'Hey were are gonna help you add 5lbs of lean body mass in this time frame, and here's the

program for you because these are your goals.’ Then it would be of some appeal. But if they want to tell me to lose weight or get down to a certain measurement because they think I need to, I wouldn’t agree.

Other participants indicated that they would want a program to be individualized in terms of time commitment as well as dietary flexibility.

Fitness Emphasis in Programs. Focus group members felt that if a program emphasized fitness they would be more interested in participating. One participant said, “It it’s a fitness program, I’d think about joining it.” Others stated that a fitness emphasis is more appealing because it is more masculine. For example,

Weight loss is pretty much, you get the image of aerobics, yoga, and all that stuff. And then fitness is lifting weights, gaining mass. Like P90x vs. Jenny Craig. Jenny Craig would be like the weight loss, P90x would be like muscle gain...so they try to gain everybody’s appeal, like male and female.

Another group member reported that “when you say weight management program it’s directed toward women whereas fitness programs would be more geared toward men, even though they could both do the same thing.” Participants also discussed how programs involving sports or other types of fitness would be appealing to them. One participant stated, “I think sports are good for guys” and another stated,

When I think about weight management program, I think ‘something’s wrong with me, I gotta fix this’, but if I am participating in a sport activity and a side effect of it is weight management then that’s good. That’s one thing I really liked about jiu jitsu. I wasn’t going really to get into shape, I was going to learn moves, as a side-effect of that is that I was losing weight.

Significant Personal Circumstances. Several participants indicated that it would take special circumstances to get them to join a weight management program. One stated,

I’d have to be in a desperate place to join Jenny Craig or something. I’d have to be like ‘Oh my God, I’m completely out of control of my life to do that.’ That would be the only thing that would make it easier is if I was in that state.

Another mentioned,

I think to join a Jenny Craig or Weight Watchers thing, it would have to be my doctor saying 'You need to do this.' There's a big wall for me with something like that. Exercise programs and things like that, there's not that interference."

Personal Willingness to Ask For Help. Others stated that being willing to ask for help would make it easier for them to participate in a program. For example,

I think men in general, we don't ask for directions, we rarely ask for help. We want to do things on our own. Even though it's clear that there's a benefit to doing this, you have to first admit that you've tried to lose weight on your own and you can't do it. Just to have to come to a position where you realize that you need a program. And I think a lot of men just don't want to admit that because it means they are asking for help and they can't solve the problem on their own.

Similarly, another participant reported, "For me I want to believe I have the skills to allow myself to lose weight. But my track record would say that's not the case. So I think it would be easier if I became aware of that."

Social Support. Participants also discussed how social support would make it easier for them to join a weight management program. One focus group member expressed that "having someone else to be in it with" would motivate him to consider participating in a program. Other members said that "if my wife was to join one at the same time" or if they received "peer pressure" it would be easier for them to participate in a program. A participant expressed a desire to join a program with others who share common interests or goals: "I want to join a weight management group with people who are likeminded or same body type. Maybe together as a group we can get past what we need to get past."

Weight Management Program Barriers (see Figure 15). Participants identified various program factors (cost, inflexibility, emphasis on weight loss, stigma) and personal factors (resistance to help-seeking, lack of knowledge) that would make it more difficult for them to participate in a weight management program.

Program Cost. Focus group members identified the cost of weight management programs as a barrier to participating in a weight management program. Members stated, “I automatically associate those programs with money” and “The money would make it difficult.” They also expressed a preference to spend their money elsewhere. One participant said “I would have a hard time spending \$50-\$100 a month on that when I need to pay other bills.” Another indicated that he does not see the value in spending money on a program that didn’t guarantee long term results: “You’re dropping money on something that may or may not necessarily work. You are dropping money on something that has no concept of longevity.” Other participants noted that they can make progress toward health goals by spending their money on improving their diet instead. They commented, “With the cost, you could eat and buy the same food at the grocery store” and “Instead of giving Jenny Craig \$200/month take that \$200 and buy better foods.”

Program Inflexibility. Participants cited lack of program flexibility as an obstacle to utilizing weight management programs. One participant stated, “I think some of these programs are too regimented. It’s hard to follow that.” Another participant commented that the requirements for participating in a weight management program are inappropriate for his lifestyle: “Most of the programs I’ve been involved with, they don’t really fit my lifestyle because you have to change a lot of things with the program.”

One of the men in the study described his experience dealing with the regimented aspects of Weight Watchers:

Some of these programs are more work than they are worth. My wife and I tried Weight Watchers and you got to sit there and every time you go somewhere you are counting points. It kind of takes the fun of going out to eat. You sit there and you grab your little book and go ‘Okay can I have this? I have 10 more points left.’ So some of that is more work than I wanted to do.

A few participants also believed that the inflexible nature of programs make them less effective because “what works for me doesn’t necessarily work for someone else.”

Other men talked about difficulty with structure and expectations from authority. One focus group member said,

If I had someone in front of me telling me what foods I would need to eat, or to ‘Do this on a regular basis,’ or certain types of hours where I have to do particular types of exercise, I’d probably avoid it. Because I just don’t like structure. I’d do it on my own time, my own.

Another expressed his struggle with having to be monitored by someone else:

Just the idea of having to meet someone else’s expectations. It’s like, I don’t want to do it. And that’s the way I kind of look at it. If it is a program, there is somebody who is overseeing you and that just kind of turns me off because there’s a chance for failure.

Program Emphasis on Weight Loss. Finally, focus group members felt that the emphasis on weight loss would make it more difficult for them to enroll in a weight management program.

One group member said,

The focus is too much on weight management. If you actually make me feel as though I’m having a lifestyle change or have a goal that’s outside of me just losing weight and I would be more interested in that.

An additional member expressed a similar preference to shift the focus away from weight and towards health: “I know the charts say I’m overweight, I’m 195, I know I don’t look that but I’m supposed to be 170, and I just don’t like to concentrate on my weight at all. Just being healthy.”

Another group member communicated that a weight loss emphasis would be contrary to his goal of gaining weight: “My view is that most of those programs are geared towards lowering your weight through diet or whatever, and that’s why they have no appeal to me because that’s the opposite way of what I want to go, personally.” An additional group member expressed his lack of interest in weight management programs due to their emphasis on weight loss and de-emphasis on building muscle mass:

I think we're talking about two different things here. Weight loss, which is one thing, and building muscle mass and making yourself look better. If I wanted to do something like that then I would go to build myself up, not go to a place for weight loss.

Program Stigma. Many men identified stigma as a barrier to joining a weight management program. For example one focus group member stated, "When I see the words 'weight management program' it kind of just rubs me the wrong way." Another participant said,

I guess it would be easier if there wasn't a social stigma that we seem to agree upon. We look down upon people who are in those, for whatever reason. If that wasn't there, I assume that would make it easier to join a program.

Some members felt that weight management programs are stigmatized for men because they target women. For instance, "Every time you see the commercials for Weight Watchers and Jenny Craig, you always see a female. You don't see guys or anything that join. Maybe 'cause we're all in AA?" Another focus group member remarked, "For men there is a stigma of going to Weight Watchers or something. For women, I don't think there's any stigma at all." One member envisioned what his friends would say to him if he joined Jenny Craig: "[My friends would say] 'Oh, why are you fofo? Why do you have to go to Jenny Craig man, come on now, Jenny Craig? It's not Lenny Craig it's Jenny Craig.'" Similarly, another member stated,

I think it depends how masculine the program appears to be. Like if I went out and bought Shape Up shoes to work my calves all day, I'm sure it would be met with a lot of criticism, and people would delete me off of Facebook.

An additional member expressed that he would not be interested in joining a program if the participants are predominantly women:

Even if I wanted, even if I was interested, I probably would not go in a room with 50 women doing kicks and stuff and try to join that and make myself look like a fool. So that makes it difficult.

Several men believed that a barrier to participating in a program is that weight management programs are more feminine, whereas working out is more masculine. They

suggested that this is because women want to lose weight whereas men want to increase their fitness. For instance, one participant stated, “There would be too much stigma involved to go to a program. If I tried to work out and build myself up instead, that would be a different thing.”

Another remarked, “I associate weight loss groups with women, and men with actually going to the gym or doing things that are regimented. Not necessarily being part of a group that’s a weight management program unless you are training or something.” An additional participant said,

As a man, I don’t think I would want to go to some Jenny Craig place or something like that. I’d rather go to the gym or play hockey a couple nights a week, you know, just hang out with my friends and even get exercise that way.

Other participants believed that most weight management programs target women because of gender differences in weight pressures. For example, one focus group member felt that a barrier to joining a weight management program would be that women participants’ prefer to be in women-only programs: “Women care about their figure, that’s why you have places like Curves that are women only. Women don’t like to be around men when they are trying to improve themselves. I’d say it’s a sensitive issue.”

Personal Resistance to Help-Seeking. Some focus group members believed that men’s resistance to help-seeking is a barrier to joining a weight management program. One participant stated,

Guys are kind of predisposed to the macho way of thinking. I guess a good analogy of that would be that we can do this on our own, you know we can go to the gym and we don’t need to watch what we eat...women are much more comfortable with going to talk to a doctor, join a support group.

Other participant described how their difficulty with seeking help would make it difficult to join a weight management program: “My difficulty is, you don’t want to admit that you are out of control. You don’t want to admit that you can’t deal with it easily.” An additional participant

commented, “I’d be embarrassed to tell somebody I was going to Weight Watchers. That I have to stoop to such a level, that I couldn’t do it myself.”

Personal Lack of Knowledge. Some focus group members felt that their lack of knowledge makes it more difficult to consider participating in a weight management program. One member stated, “That might be the difficult part though, is looking for it. Just where to start. Do you go to the phonebook, do you go online?” Another said,

Well the problem is that it seems you have to work to find that information. The information is not there, you gotta join a club to find out about this, or join a program to find out about that. That information ought to be right out there. It ought to be something that is encouraged. Something you don’t have to find out about.

Behavioral Impact of Enabling Factors/Barriers. Men in the study described how the enabling factors/barriers to healthy eating, exercise, and weight management program participation have actually impacted their behavior. Some reported that these factors have led to improved diet and physical activity, whereas others reported inconsistent behavior. A few participants reported that they participated in a weight management program.

Improved Diet. Some participants indicated that they have made positive dietary changes. For example, several focus group members reported that they have sought out more knowledge about nutrition. One participant stated,

A lot of it comes down to knowledge. If I know what I have to do in order to be more healthy with eating, then I can hold myself accountable...If I have the knowledge to back up what I’m doing I’ll be more apt to do it. And that’s just something that holds true to just about every aspect of my life is that knowledge is power when it comes to doing things, and doing it the right way.

Another participant reported that he continues to seek knowledge because it helped him to make positive changes:

If I don’t know about it, I’ll learn about it. If it seems like something I can do, that I can hold myself to, I’ll do it. So being aware and knowing what you’re doing has definitely

helped me stick to positive behaviors. At the same time it's helped me to shy away from more negative behaviors.

In addition to gaining knowledge, participants spoke generally about intentionally making behavior changes with their diets. One focus group member stated that he has been "just consciously trying to reshape my habits...I have had to coach myself to do it." Another group member discussed his approach of making small dietary changes:

I think it's a culmination of little things that makes a difference instead of trying to look at one big goal and follow that. Sometimes I'll be be tired, don't want to do anything, don't want to eat, and making a salad even though I have all the stuff seems like the most arduous task in the world. But I gotta get up, I gotta cut that tomato, I gotta do all this other stuff. And before I know it, the salad's made and I'm eating it. It's just that mental hurdle. You do it day in and day out and before you know it you've achieved your goals.

Many participants mentioned that knowing what makes healthy eating easier and more difficult has helped them to make sure that healthy foods are more available, convenient, and accessible. One participant reported,

I am more careful of what I buy at the grocery store. I try to make sure I have fruits and vegetables at home. Light no the dairy, no breads, good proteins. I want to make sure that what I know is good for me to eat, I have in the house to eat.

Another participant mentioned that he started having organic produce delivered to his home:

Where we live, it's a little bit difficult to get to grocery stores, especially some of the healthier ones like Whole Foods. So we signed up for a program that delivers a box of fresh produce to our door once a week, so we don't have to worry about getting access to those kinds of things. It's right on our doorstep once a week. So we sought that out because we knew that was a place where we were having trouble. But that's the kind of thing we've done to try to improve options at home. 'Cause if it's there, when you go for a snack you've got carrots instead of chips or something.

In addition to having healthy foods available in the home environment, some focus group members mentioned that they make effort to prepare nutritious meals in advance. One group member discussed preparing a large salad ahead of time so that he can eat it when he comes

home from work. Another group member described being “proactive” by grilling bulk chicken for the upcoming week.

Participants reported making other dietary changes, including “not snacking as much”, eating five to six smaller meals as oppose to three large meals, drinking “at least a gallon of water per day”, and paying more attention to food labels. Additionally, some participants described setting goals, for example “lowering my cholesterol” and “not losing weight, but not gaining weight.”

Improved Physical Activity. Some participants expressed that they have made positive changes with their physical activity. Several men described increasing the frequency and intensity of their exercise. They made statements such as “I definitely exercise more”, “I go the gym a lot”, “I’m trying to increase my exercise”, “I started bike riding three times per week”, and “I do a lot of walking now.” Others communicated that although they are not currently engaging in exercise, they have considered starting an exercise routine. For example, a participant commented, “Hopefully once I get into the habit of a little exercise, more strenuous exercise will follow.” Another mentioned that he has considered recording his physical activity:

If I just write it down every day, it can be anything like if I was going to walk. They say if you write a goal down you are so much more likely to accomplish it. So I think I am going to start doing some written action plan.

One focus group member even reported that he “quit a job at a call center because I wasn’t being active enough.” Another group member stated that knowing about the things that make exercising easier and more difficult has helped him to maintain behaviors: “It’s influenced me to stick to things.”

Inconsistent Behavior. Some focus group members reported that the barriers and enabling factors of healthy eating, exercise, and joining a weight management program have led

to inconsistent behavior. For example, one participant stated that his eating/exercise behavior is situation dependent:

I've yo-yoed up and down. In the last six months, I have probably gained 50 lbs, which is horrible. But it's like that, up and down, depending on what my work schedule is like. And there have been times when I've been closer to the gym, times when I've been further away; made more money, made less money—that depends on what I'm buying and what I'm eating. Then also, it was easier when I was in college and focusing on school. I had a lot of free time so it was easier to go to the gym. Then you get out and you start working and it's time management. It's just a matter of, do I want to sleep less or do I wanna sleep more. So all those things have influenced me.

Another participant indicated that his eating/exercise behavior changes as his priorities shift:

“It's all about priorities. If my health and my exercise is a priority in my life, I have made sacrifices. But if it's not, then I'm not going to do it.” An additional participant commented that his behavior has been influenced the most by time, support at home, and expenses: “The influences of my behavior go back to the three we've touched upon...time would be the first, then support, then expense.”

Other participants felt that the barriers/enabling factors have not influenced them to make any behavioral changes. For example, one participant stated,

To be honest I'm not really influenced either way at this point in time to either lose weight or gain weight. I've pretty much been stuck at this weight for a few months now and I'm eating what I want and I'm not doing a whole lot of physical activity, which sounds awful and is kind of lazy but it works for me right now.

Another participant believed that these factors have had minimal impact:

I'm overweight but I'm not a 400/500 pound man, but it has not really influenced me enough to make me want to be super skinny or be in shape. I really don't have an interest in that. Nothing has pushed me to want to do that. It's just easier to do exactly what I have been doing. So it hasn't influenced me too much.

A few men in the study felt that the barriers/enabling factors have influenced them to engage in unhealthy dietary behaviors. For example, one participant stated, “I've noticed in the last few weeks all I do is munch.”

Weight Management Program Participation. Only two focus group members mentioned that the barriers/enabling factors have influenced them to participate in a weight management program. One of the men in the study stated that he joined Weight Watchers after his wife decided to enroll in the program. Another participant commented that he tried the “more guy friendly ones, the Insanity/P90x kinds of things.” In contrast, one member said that he has intentionally avoided joining weight management programs: “I’ve always stayed completely away from any of the weight management programs, just due to my perception of them. I’ve avoided them completely.”

CHAPTER 4: DISCUSSION

This study provided an exploratory overview of the factors that impact overweight and obese men's engagement in behaviors related to weight management. Results of this study suggest that men's participation in healthy eating, exercise, and weight management programs is affected by a complexity of individual and sociocultural factors. In this discussion, findings will be contextualized within the Theory of Planned Behavior (TPB)/PRECEDE Model (PM) and Gender Socialization Theory. Implications of these results, study limitations, contributions to the literature, and future directions will also be discussed.

Understanding Men's Health Behavior Through the Lens of TPB and PM

Attitudes (TBP) and Predisposing Factors (PM). TPB defines attitudes as beliefs about performing a behavior and beliefs about positive outcomes of the behavior. PM defines predisposing factors as knowledge, beliefs, values, attitudes, and demographic variables that motivate a behavior. These constructs were assessed by exploring men's perceptions of the advantages and disadvantages of healthy eating, exercise, and weight management programs. Men in this study held both positive and negative attitudes about healthy eating. In terms of positive attitudes, they believed that healthy eating improves health and prevents disease, which subsequently reduces personal healthcare costs and improves the economy. Similar to findings in previous studies (Courtenay, 2000), these men viewed healthy eating as a way to augment their subjective psychological and physical well-being. They also felt that eating healthily would allow them to be a positive role model for younger generations. In terms of negative attitudes, they believed that engaging in a healthy diet is costly, inconvenient and time-consuming. These men often opted for fast food, which was viewed as a cheap and convenient alternative. Consistent with prior research, men believed that eating healthily requires them to consume food

that is unappetizing and less enjoyable (Gough & Conner, 2006; Levi et al., 2006; Sabinsky et al., 2007).

Participants in this study also held both positive and negative attitudes about exercising. In terms of positive attitudes, they believed that exercising improves physical and psychological health, physical appearance, and subjective well-being. This is consistent with prior research (Wolfe & Smith, 2002). They also felt that exercising could provide secondary benefits, such as a means of transportation, as well as opportunities to socialize, spend time with family, and help the community. In terms of negative attitudes, the men in this study believed that exercising requires time, commitment, and discipline. Participants felt that when faced with the demands of their family and work, exercising takes a lot of effort and commitment; therefore it is much easier to be sedentary. These men also viewed engaging in exercise as placing them at increased risk for injury. Additionally, between gym memberships and exercise equipment, exercising can be costly.

Although the attitudes mentioned pertain specifically to healthy eating and exercise, these findings are similar to those from other research that examines motivators for weight loss. In these studies, men cited improved health, subjective well-being, and appearance as reasons to lose weight (Egger & Mowbray, 1993; Hankey et al., 2002; Morgan et al., 2011; Shepherd et al., 2010; Wolfe & Smith, 2002). However, in contrast to a study conducted with working class men (Sabinsky et al, 2007), men in the current study did not express a desire to engage in healthy eating and exercise as a means to improve effectiveness in the workplace.

Men in the study held some positive attitudes about weight management programs, however, their attitudes were mostly negative. In terms of positive attitudes, men believed that weight management programs provide peer and professional support as well as accountability.

These men also felt that weight management programs could help them to reach their dietary, physical activity, or weight goals. In terms of negative attitudes, men believed that weight management programs are tailored to and primarily utilized by women. They felt that their participation in a weight management program would lead to being stigmatized, although home-based fitness programs are an exception to this. Participants in the study viewed weight management programs as costly, untrustworthy, and devoid of long-term solutions.

Subjective Norms (TPB) and Reinforcing Factors (PM). TPB defines subjective norms as beliefs about what important others expect from an individual and the degree to which an individual wants to comply with these expectations. PM defines reinforcing factors as important others, media, and health providers that reward the performance and maintenance of a behavior. These constructs were assessed by exploring men's perceptions of people and influences that reinforce (approve or disapprove of) healthy eating, exercise, and weight management programs. Men the study reported that their family members and romantic partners reinforce both healthy and unhealthy eating. Healthy eating is positively reinforced by family members and partners who engage in healthy eating themselves. It is also reinforced by family members and partners are invested in the health of the men. On the contrary, unhealthy eating is reinforced by family members at family gatherings as well as by partners who engage in unhealthy eating themselves. Participants in the study communicated that their friends would reinforce only unhealthy eating due to gender norms that masculinize this behavior.

Participants in the study indicated that their family members and romantic partners tend to reinforce both active and sedentary lifestyles. Physical activity is reinforced by family members and partners who are invested in the men's health or appearance. It is also reinforced when partners engage in shared exercise with the men. Men in the study communicated that their

friends would reinforce exercising when the norm in their social group is to be active. According to participants, friends also positively reinforce physical activity because it provides them with an opportunity to socialize. On the other hand, sedentary behavior is reinforced when there is pressure to spend time with family members or partners instead of going to the gym. Inactivity is also reinforced by partners who are inactive themselves. Additionally, sedentary behavior is reinforced by partners who are concerned that men will be attracted to other people at exercise facilities.

Men in the study reported that their family members, friends/peers, and romantic partners reinforce avoidance of weight management programs. According to these men, avoidance of programs is reinforced by family and friends who believe that participants should be able to lose weight on their own. Avoidance is also reinforced when family and friends hold negative attitudes about programs, such as programs being too costly, a scam, for women only, or untrustworthy. Additionally, partners reinforce avoidance of weight management programs because it would take away from quality time that they could spend with the men. As an exception, participation in weight management programs would be positively reinforced by some friends/peers if it was fitness-focused.

Perceived Behavioral Control (TPB) and Enabling Factors (PM). TPB defines perceived behavioral control as variables that facilitate or inhibit the behavior. PM defines enabling factors as factors which allow a behavior to be performed. These constructs were assessed by exploring men's perceptions of the factors that make it easier and more difficult to engage in healthy eating, exercise, and weight management programs. Participants in the study reported that they are likely to eat healthily if healthy foods are available, affordable, and meals are preplanned. Healthy eating is also facilitated when restaurant portion sizes are smaller and

healthy food portion sizes are larger and filling. These men indicated that when their community or others around them promote healthy eating, they are more likely to engage in positive dietary behaviors. Increases in knowledge and changes in their attitude would also enable them to eat healthily. Conversely, eating healthily is inhibited when it is costly, inconvenient, time-consuming, or unappetizing (Gough & Conner, 2006; Levi et al., 2006; Sabinsky et al., 2007). An additional barrier to healthy eating is the wide accessibility of unhealthy foods and lack of accessibility to healthy foods. Various situations can also inhibit healthy eating (eating out, when social norms promote unhealthy eating, and while consuming alcohol). Men in the study indicated that lack of knowledge about healthy eating and unhealthy eating patterns are barriers to engaging in positive dietary practices.

Men in the study reported that they are likely to exercise if they have support at home, are able to exercise with others, and are held accountable to their behavior, which has been shown in previous studies (Morgan et al., 2011). They also indicated that a sense of lighthearted competition and increased knowledge about different types of exercise and proper exercise methods enable them to engage in physical activity. Furthermore, these men communicated that convenient access to workout equipment or the integration of exercise into their work routines helps to facilitate exercise. A geographical location and community that promotes exercise also enables active lifestyles. On the contrary, men expressed that self-consciousness regarding fitness levels, appearance, and competence using exercise equipment inhibit exercise. Poor physical health, demanding work schedules, and cold weather are also barriers to exercising. Consistent with prior research, lack of motivation was identified as an additional factor that makes exercising difficult (Sabinsky, 2007).

Participants reported that they would be more likely to participate in a weight management program if it was looked upon favorably by the public and important others, involved exercise and nutrition experts, took a lifestyle approach, was affordable, could be individualized to their needs, and emphasized fitness. The desire for flexibility in weight management programs was previously endorsed by participants in other studies (Egger & Mowbray, 1993; Sabinsky et al., 2007; Shepherd et al., 2010). In addition, prior research suggests that convenience, affordability, and a fitness emphasis are considered to be appealing program characteristics to men (Wolfe & Smith; Morgan et al., 2011; Sabinsky et al., 2007; Shepherd et al., 2010). However, men in this study did not mention humor as being a desirable program characteristic, which was found to be the case in other studies (Egger & Mowbray, 1993; Morgan et al. 2011). Further, men indicated that it would take special circumstances for them to join a weight management program, such as feeling they were out of control or a recommendation from their physician. It would also require willingness to seek help for weight loss, others joining the program with them, or increased social support. In contrast, men in the study reported that their participation in a weight management program would be inhibited if the program was expensive, strict, looked down upon, or emphasized weight loss. This finding is similar to research conducted by Sabinsky (2007), which demonstrated that men desire dietary flexibility and access to cheap, convenient foods that are healthy. Personal barriers to enrolling in a weight management program include an unwillingness to seek help and lack of knowledge about the programs available to them.

Intentions and Behavior (TPB). Given the variability in expressed attitudes/predisposing factors, subjective norms/reinforcing factors, and perceived behavioral control/enabling factors, men in the study differed in their level of actual and intended

engagement of eating and exercise behavior. Some men in the study reported that these factors have either increased their intention to engage in health behaviors or actually influenced them to improve their diets and physical activity levels. Others reported not being influenced by these factors and inconsistent or unhealthy behaviors. However, very few participants spoke to how these factors have influenced their intentions and actual behavior with respect to participating in a weight management programs. A few men in the study mentioned that these factors led them to enroll in a weight management program, while others communicated that these factors led them to avoid these programs.

Understanding Men's Health Behavior Through the Lens of Gender Socialization

Findings of this study provide support for the impact of gender socialization on men's eating and exercise behavior. A theme that emerged from the focus groups was that eating healthily is unacceptable among male peers. Men in the study described being encouraged to eat large portions of unhealthy food and to drink alcohol. They also discussed being subjected to ridicule from friends for making healthier dietary choices or limiting food portion sizes. Some participants specifically mentioned that healthy eating is viewed by male friends as "unmacho" or abnormal. These findings are consistent with previous research suggesting that masculine eating behavior entails consuming large portions of food, including more meat and alcohol, whereas feminine eating behavior entails eating healthy and preparing meals (Caplan, Keane, Willetts, & Williams, 1998; Sellaeg & Chapman, 2008; Sabinsky et al., 2007; Sobal, 2005). The pervasive disapproval of healthy eating described by participants that was associated only with male peers (and not with family members or partners) suggests that gender socialization is a factor that may negatively influence eating behavior.

In contrast to the unacceptability of healthy eating, men in the study reported that they are encouraged by male peers to exercise. Participants reported that fitness is encouraged in their social circles and some of their male peers already engage in exercise. They also noted that exercise is an opportunity to socialize with other men. Participants illustrated this by describing situations where friends invited them to the gym or other sporting/recreational activities. The acceptability of physical activity found in this study is consistent with prior research that suggests men hold positive attitudes about exercise, in part because it is associated with masculinity (Jeong-Dae, 2011; Wolfe & Smith, 2002).

Masculinity may have also influenced how participants viewed weight management programs. Participants believed that weight management programs are unappealing because they are marketed for and primarily utilized by women. Participants indicated that emphases on weight loss and dieting, female representation in the media, and high participation of women in programs made these programs feminine and unattractive to men. Furthermore, participants reported that they would receive mostly disapproval from their family members, peers, and partners for joining a weight management program. Some of this disapproval was related to a belief that men should lose weight independently. This may reflect masculine gender socialization which proposes that men are taught to value self-reliance and self-sufficiency (Pleck, Sonenstein, & Ku, 1993). Participants described being expected by others to lose weight on their own and “figure it out”; otherwise others would see them as a “failure.” However, they also held this view themselves. Specifically, men discussed that participating in a weight management program would be “embarrassing” and would mean that they are “out of control” or “can’t deal with it easily.” Moreover, participants explicitly communicated that joining a weight management program would require them to develop willingness to seek help. These findings

support the notion that ascription to traditional masculine gender roles is associated with decreased help-seeking (Galdas, Cheater, & Marshall, 2005). They may also help to explain why men underutilize weight management programs (Blokstra, Burns, & Seidell, 1999; Fontaine, 1999; Jeffery, Adlis, & Forster, 1991).

Men identified self-consciousness as a barrier to physical activity, which may also be related to gender role socialization. Research indicates that physical activity is associated with traditionally masculine traits, including competitiveness, strength, and physical dominance (Jeong-Dae, 2011). Given these findings, it is not surprising that the overweight and obese men in this study report self-consciousness due to feeling inferior to other men in physical appearance, physical strength, and self-sufficiency with operating exercise equipment. Thus, as suggested by Jeong-Dae (2011), male competitiveness associated with physical activity can be motivating but also discouraging for men.

Implications and Weight Management Program Recommendations

The narratives of the 42 participants in this study highlight the multitude of dimensions that influence overweight and obese men's engagement in healthy eating, exercise, and weight management. The researchers used qualitative methods to gather a deeper understanding of attitudes and experiences. At the same time, an additional objective was to try to capture the complexity and range of experiences in this population by employing multiple recruitment methods.

In this study, several themes appeared to be important across eating, exercise, and weight management behaviors. Participants acknowledged the health benefits of healthy eating and exercise and felt that others in their lives would be supportive of these behaviors if they were invested in the men's health or invested in their own health. Men in this study also described

difficulty allocating the time required to pursue healthy food options, prepare nutritious meals, and exercise. Participants viewed healthy eating and exercising as especially inconvenient when they are faced with work demands and pressures to spend time with family or romantic partners. Men in the study identified cost as another factor that influences their decision to buy healthy foods, purchase gym memberships and equipment, and enroll in weight management programs. These men communicated that knowledge about nutrition, different types of exercises, proper methods of exercising, and trustworthy weight management programs available to them would increase their engagement in health behaviors. Participants also expressed that social support in the form of endorsement from important others, exercise companionship, assistance from professionals, and accountability helped them to engage in healthy eating and physical activity. Finally, as was previously discussed, pressure to adhere to traditional gender roles promotes unhealthy eating practices around male peers and avoidance of weight management programs. In addition, masculine ideals such as physical strength and competitiveness may influence some men to strive for increased fitness and other men to avoid exercising due to self-consciousness.

The results of this study provide support for the development of non-traditional weight interventions. Results from this and other studies indicate that men do not find traditional weight management programs to be appealing (French & Jeffery, 1994; Shepherd et al., 2010). The stigmatization of weight loss programs highlights the need for new interventions that differentiate themselves from existing programs. Given that men are skeptical of weight management interventions, it is important that programs are rooted in research so that they can establish a reputation as being credible and effective. Male-friendly programs should not market themselves as weight loss interventions, nor should they be housed in commercial weight loss centers. Rather, they should emphasize physical fitness (Shepherd et al, 2010; Wolfe & Smith,

2002). Dietary modifications have been shown to be more important for weight loss, whereas physical activity is helpful in preventing weight gain (Jakicic, 2009). Despite this, a review conducted by Lovejoy and Sainsbury (2008) indicated that fitness-focused interventions are more effective for weight loss in men than in women. Moreover, in men, exercise is associated with reductions in abdominal obesity, is easier to maintain than dietary behavior, and is suggested for long-term weight management (King et al., 1989; Pasma, 1999). Thus, a program emphasis on physical activity may be beneficial in terms of its appeal and also its long-term effectiveness for men.

Although it is recommended that interventions emphasize exercise, resources on nutrition should be also provided for men. Research does show that men do, in fact, view healthy eating as important (Wardle et al., 2004). The majority of men in the current study also acknowledged that proper nutrition has health benefits. However, given that male peers may not view healthy eating as socially acceptable, nutrition information could be presented within the context of improving physical fitness, which would be more socially acceptable to male peers (Shepherd et al., 2010; Wolfe & Smith, 2002). Although not found in the current study, the use of humor and comical language may be also helpful in recruiting men for weight management programs (Morgan et al., 2011).

Ideally, these interventions should be affordable and convenient to men (Sabinsky et al., 2007). Appealing programs should promote long-term lifestyle changes and offer a flexible approach that is tailored to men's individual dietary, physical activity, and weight goals (Morgan et al., 2011). Opportunities to exercise with friends, family, romantic partners, or peers that share health goals would provide social support and accountability, which is associated with success in weight loss interventions (Maitland & Chalmers, 2011; Wing & Jeffery, 1999). Additionally,

interventions could potentially attract men by promoting characteristics associated with masculinity (Pleck, Sonenstein, & Ku, 1993). For example, programs may want to advertise themselves as providing men with the necessary tools to develop long-term self-sufficiency with health behaviors. This could include equipping men with knowledge about weight lifting as well as information on nutrition required to optimally fuel their bodies and maximize fitness potential.

In terms of practical suggestions, the development of an evidence-based, self-help program protocol for weight management may be implicated by research. Studies show that self-help groups can be an effective vehicle for behavior change. More individuals use self-help programs than professional programs in the U.S. (Gould & Clum, 1993). Although men are generally resistant to help-seeking, research shows that men utilize self-help more than women do (3.6% vs. 2.4%; Kessler, Mickelson, & Zhao, 1997), which suggests that this type of intervention format may appeal more to men than professional or commercial weight loss programs. Furthermore, the most widely utilized self-help groups are for illnesses that are highly stigmatized such as alcoholism and HIV (Davison, Pennebaker, & Dickerson, 2000). Thus, self-help interventions may be a promising alternative for overweight or obese men due to the stigma associated with male participation in standard weight loss programs,

Mutual aid programs are one type of self-help program, defined as individuals with a common concern meeting to share information and provide support to each other (Levy, 2000). Affordability and support were consistently cited by men in the study as factors that would promote healthy behaviors. Therefore, mutual aid groups could be a suitable intervention format because they tend to be inexpensive or free and they offer peer support. Mutual aid programs tailored to men could be marketed as fitness programs designed to promote physical strength and self-sufficiency. They could also emphasize a lifestyle-based philosophy for behavior change.

Basic but adaptable recommendations could be provided, such as suggestions for shared exercise activities, as well as use of websites for peer communication, tracking goals, and monitoring eating and exercise behavior. Furthermore, these programs could have an online resource library of research-based, self-help materials that men could access to learn about various topics, such as how to understand food labels, proper exercise techniques that build muscle and prevent injury, grocery lists of affordable healthy foods, risks and benefits of supplements, tips for eating out and alcohol consumption, and recipes for male-friendly foods.

Another option would be for interventions to be developed for the workplace, using some of the ideas mentioned above. Men in this study voiced a strong desire for healthy eating and exercise opportunities to be conveniently located and fit with their work schedules. In previous studies, men have mentioned that work-based programs are appealing to them (Aoun, Donovan, Johnson, & Egger, 2002; Sabinsky, 2007; White, Conrad, & Branney, 2008). Thus, work sites may provide an ideal setting for weight interventions (Henrikus & Jeffery, 1996). Morgan and colleagues (2011) developed a work-based intervention specifically for Australian male shift workers and found their intervention to be effective at reducing weight and improving health outcomes.

Given the rising popularity of online interventions, the use of websites is another option that may increase convenience and accessibility to health services. Research shows that online interventions may be effective for populations resistant to help-seeking, such as men (White & Dorman, 2001). For example, Shepherd (2012) developed a male-sensitive website to educate men about body image and maladaptive weight control strategies. Results from this study showed that online interventions can increase men's intentions to seek-help for conditions that are highly stigmatized.

Online interventions for weight loss in particular have been shown to be effective, with results comparable to in-person interventions (Neve et al., 2009). Although research on web-based weight programs for men is sparse, a few studies have been conducted in this area. Morgan et al. (2010) incorporated online dietary monitoring as part of his weight loss intervention with overweight and obese Australian men. Tanaka, Adachi, Adachi, and Sato (2010) implemented a computer-based approach to weight loss in overweight Japanese men and found that their intervention resulted in weight loss and increased physical activity.

Limitations

There are a number of research limitations to this study. One limitation is the possibility of bias. The researchers of this study attempted to address research bias often found in qualitative studies by employing strategies to increase the methodological rigor (Padgett, 1998). Some of these strategies included making sure that multiple members of the research team were in agreement about how the data were interpreted and moderating the focus groups in as objective a manner as possible. However, it is possible that researcher bias may have had some degree of influence on the type of information elicited as well as how information was interpreted. Sampling bias may have also been introduced in the sample given that participation was voluntary. For instance, it is likely that the men who volunteered for the study may have been more comfortable discussing health behaviors and weight than men who elected not to participate.

Although it was the intent of the researchers to obtain a heterogeneous sample by using multiple recruitment methods, it is possible that the sample may not accurately represent the experiences of overweight and obese men in the U.S. or abroad. There are several reasons for this. First, men recruited in this study were residents of Larimer County. According to a

Colorado Department of Public Health and Environment report (2010), 54.1% of males in Larimer County were overweight or obese in 2009. This is significantly lower than the national average, which cites that 72.3% of males in the U.S. are overweight or obese (Flegal et al., 2010). Therefore, although the men did report height and weight values that classified them as overweight or obese, it is possible that factors unique to Larimer County (e.g., geographical location, community features, etc.) have influenced the views of men in this sample. In fact, as multiple participants commented that their community seemed to promote health in contrast to other places they have lived or visited. Another reason why this sample may not be representative of the general population is that the majority (83%) of study participants were of European-American ancestry. Research shows that special consideration should be given to ethnic minority men who struggle with obesity (James, Folen, & Noce, 1998). Additionally, the role of SES in men's experiences in this study is also unclear. Prior research suggests that men's views on eating, physical activity may differ depending on SES. In the studies conducted by University of Newcastle researchers with Australian men, appearance and health were primary motivators for weight loss with higher SES participants, whereas effectiveness in the workplace and feeling good were the primary motivators for working class male participants (Collins et al., 2010; Morgan et al., 2011).

Despite researchers' decision to use focus groups as a way for participants to discuss and develop their ideas together, it is possible that some 'groupthink' occurred; that is, men in the focus groups may have provided responses that catered to the general consensus (Janis, 1982). However, that there were a number of instances where participants voiced different opinions than the majority of the focus group members. For example, one participant disagreed with the dominant viewpoint that male peers disapprove of healthy eating. In addition, although a

sweeping majority of participants expressed negative attitudes toward weight management programs, there were a few participants who voiced positive regard for these interventions. However, notwithstanding the breadth of experiences expressed by men in this study, it is unknown if participants would have expressed different viewpoints had they been interviewed individually rather than as part of a group.

Study Contributions

The findings of this study corroborate and build upon prior investigations of diet, exercise, and weight management in men. Men are currently underrepresented in the obesity literature (Young et al., 2011) despite extensive documentation that they suffer from weight-related health concerns and higher mortality rates than women (Flegal et al., 2010; Sadovsky, 1999). Men clearly stand to benefit from resources that aid weight management.

Health risks in men significantly decrease even through small percentages of weight reduction (Blackburn, 1995; WHO, 2000). Behavioral weight management programs have demonstrated some effectiveness with weight loss in men (Kirk et al., 2012). However, men who are overweight and obese do not seek help for their weight concerns, perhaps due to stigma associated with help-seeking and weight management programs (French & Jeffery, 1994; Shepherd et al., 2010). Therefore, results of this research contribute to an area of the literature that has been overlooked. Findings from this study can be used to help inform the development of interventions that treat overweight and obesity in men.

Given that knowledge on men's health behavior is limited, using a qualitative method permitted researchers to gather a breadth of information on individual and contextual factors that affect men's diet, exercise, and weight management. Although several qualitative studies have explored this topic (Eggers & Mowbray, 1993; Morgan et al., 2011; Sabinsky, 2007) this appears

to be the first study conducted with men living in the U.S. Despite differences in participant nationality, many of the themes that emerged in the current study overlapped with those found in previous studies.

Besides providing additional support for previous findings, results of this study also extend beyond prior research. The majority of studies conducted with men on this topic have considered social factors such as masculinity pressures and social support. However, the focus of these studies has been primarily on individual and not interpersonal factors. Evidence suggests that beliefs about others' expectations can influence health behavior (Ajzen, 1991). With this in mind, the current study captured men's views on the impact of social relationships on eating, exercise, and pursuit of weight interventions. An interesting finding was that some participants subscribed to traditionally masculine beliefs but felt that important others also subscribed to these same beliefs. For example, some men in the study communicated that they should be self-sufficient and lose weight without the help of a program. However, they also reported that family members, friends, and romantic partners would see them as a failure or look down on them for not losing weight independently. This finding indicates that attempts to reduce weight intervention stigma by targeting individuals may be insufficient if important others have also internalized this stigma. It also supports the development of weight management programs that differentiate themselves from existing programs, so that both men and others important to them view men's pursuit of these options as acceptable.

Another unique but notable finding of this study is that men's self-consciousness about their appearance, physical strength, and lack of competence with exercise equipment is a barrier to engaging in physical activity. Although this theme did not emerge in previous studies, it continues to highlight the need for weight interventions that men would actually utilize. In

contrast to gym centers, where overweight and obese men may feel self-conscious as a result of comparing themselves to other men, male-friendly weight management programs may address this barrier through the attendance of other men who have similar weight struggles. These programs could also empower men by imparting knowledge about exercise techniques that increases their sense of competence and self-sufficiency. Additionally, programs could provide an opportunity for men to augment their fitness levels so that they feel more positively about exercising in other settings. As one participant stated, “You’ve got to go to the B gym to get in shape enough before you can go the A gym.”

Finally, this is the first known study that has examined men’s participation in healthy eating, exercise, and weight management programs as three separate components. Research shows that the most effective weight management programs include behavioral, dietary, and exercise components (Kirk et al., 2012). However, studies with men have focused on only diet, exercise, or weight management (and the role of diet and exercise within this specific context). Through a separate examination of these behaviors, this research elucidated factors that men perceive to be important across diet, exercise, and the pursuit of weight interventions. For example, men in the study seemed to place similar importance on convenience with respect to eating and exercise behavior. Exploring these behaviors as separate research constructs also illuminated factors that differ between behaviors. For example, stigma appeared to be most salient with weight management programs and important to healthy eating, but less relevant to exercise behavior. These findings provide direction for designing specific components of weight management programs such as dietary or exercise interventions.

Future Research Directions

Findings from this study add to current knowledge about the complex experiences of overweight and obese men. This is an essential first step toward developing effective weight loss interventions that attract men. However, given that this represents one of the first qualitative studies on this topic that was conducted with men in the U.S., additional research is needed to corroborate and expand upon the conclusions drawn.

The broad research questions of this study were appropriate considering the paucity of scientific knowledge in this area. Although a broad inquiry of different factors impacting health behavior is a good starting place, the variability in men's experiences call for research examinations that highlight nuances in our understanding of this topic. Therefore, more focused assessment is needed to clarify the specific impact of factors that influence eating, exercise, and help-seeking for weight management. For example, future qualitative studies may want to focus on exploring the specific factors that men perceive to have the most impact on their health behavior. Quantitative studies could help to determine the degree to which men place importance on specific factors. Moreover, studies should determine the predictive significance of these factors on actual health behaviors.

One factor that warrants further investigation is gender role socialization. Prior research has demonstrated that adherence to traditional masculine roles is a significant predictor of health behavior even when sociodemographic factors are held constant (Mahalik, Burns, & Syzdek, 2007). In this study, pressures to conform to traditional masculine scripts appeared to exert some influence on eating, exercise, and use of weight management programs. Examples of this include men's report of giving in to pressures by male peers to eat large portions of 'masculine' foods, not going the gym due to fears that other men will judge their inability to lift heavy weights, and

avoiding weight management programs because they are ‘for women only’. Thus, future research should measure adherence to traditional gender roles, as men will vary significantly in this regard. Further examination of the specific influence of masculinity on weight-related behaviors can help to pinpoint weight management program characteristics that may be appealing or aversive to men.

Along these lines, studies that examine stigma in men with overweight and obesity are greatly needed. Research suggests individuals with obesity are subject to profound stigmatization, even more than other targets of bias, such as Muslims or sexual minorities (Latner, O’Brien, Durso, Brinkman, & MacDonald, 2008). Studies show that overweight and obese men are recipients and proponents of weight bias (Hebl & Turchin, 2005). It has been hypothesized that weight bias is related to an underlying belief that individuals with obesity are responsible for their condition and are therefore unintelligent, lazy, weak, out of control, and unsuccessful (Puhl & Heuer, 2010). These characteristics represent the opposite of traditionally masculine ideals, which assert that men should be strong, self-reliant, self-sufficient, and successful (Pleck, 2005). Thus, it is likely that gender differences in the experience of weight stigma exist. On the one hand, obese women may experience greater stigma related to pressure to be thin (Frederick, Forbes, Grigorian, & Jarcho, 2007). On the other hand, obese men may experience stigma related to being assigned characteristics that are viewed negatively from a gender socialization perspective. This could create an additional barrier to participating in weight management programs, as obese men who have internalized weight stigma and traditionally masculine beliefs may not want to further compromise their masculinity by seeking-help. Future studies should investigate men’s experiences of weight stigma as well as the impact of weight stigma on men’s help-seeking and engagement in health behaviors. Additionally, in order to

increase men's utilization of weight management programs that are currently available, studies should determine the effectiveness of interventions designed to reduce men's biases against these programs.

The within group heterogeneity of male samples also warrants additional research using subsamples of men. In addition to accounting for men's adherence to traditional gender roles, future studies may want to examine differences between men who have sought help for weight problems versus those who have not sought help. Furthermore, prior research suggests that SES may impact men's weight loss experiences (Morgan et al., 2011). Therefore, future studies should investigate the role of SES on men's engagement in healthy eating, exercise, and weight management. Examination of other sociodemographic factors, such as ethnicity, may offer additional insight into contextual factors that affect men's health behavior.

Upcoming research efforts should also focus on the development of interventions that facilitate weight reduction in men. For example, although results from this study provide suggestions for attributes of 'male-friendly' weight interventions, studies should explore men's actual experiences with participating in these programs. So far, only one study has elicited men's feedback after their participation in a gender-sensitive weight management program. This study offers a model for future research (Morgan et al., 2011). Researchers of this study developed a weight management program designed to be appealing for men based on prior research findings. They then implemented this program using a randomized controlled trial design, utilized qualitative interviews to explore men's experiences with the program, and revised and redeveloped the program accordingly.

In addition to examining outcomes related to weight interventions designed for men, future studies should compare gender-sensitive weight management programs to standard

programs. It would be particularly interesting to determine if men who elect to enroll in gender-sensitive programs differ from those who participate in standard programs. If differences are found, this may provide a convincing argument for the existence of male-sensitive weight interventions because it would imply that overweight and obese men who would not ordinarily utilize standard weight interventions are motivated to seek help through alternative means.

Table 1

Demographic Information for Entire Sample

Characteristic Type	<i>n</i>	%
Education		
High School	5	12
Some College	10	24
Associate's Degree	8	19
Bachelor's Degree	9	21
Graduate Degree	10	24
Income		
Less than \$10,000	3	7
\$10,000 to \$20,000	7	17
\$20,001 to \$35,000	7	19
\$35,001 to \$50,000	9	21
\$50,001 to \$60,000	7	17
\$65,001 to \$80,000	4	10
\$80,001 to \$95,000	2	5
More than \$95,001	2	5
Relationship Status		
Married	17	41
Committed Relationship	7	17
Divorced	3	7
Single/Not Dating	15	44
Number of persons in household		
1	13	31
2	9	52
3	10	24
4	4	14
5	5	7
6	6	2

Note. *N* = 42.

Table 2

<i>Desired Program Format</i>		
Format Type	<i>n</i>	%
Self-help package	29	69
One-on-one	27	64
Smaller group program	27	64
Website	24	57
Seminar/lecture series/classroom-type instruction	12	29
Larger group program	8	19

Note. $N = 42$.

Table 3

Desired Program Characteristics

Characteristic Type	<i>n</i>	%
Choosing what you eat within provided guidelines	28	67
Individual sessions with a fitness counselor	28	67
Learning the basics of nutrition science	27	64
Meeting at a gym	27	64
Centering the program around sports/athletics	26	62
Working privately with a personal trainer	25	60
All male group	23	55
Learning to manage emotional eating	23	55
Exercising with the group	21	50
Instruction in exercise physiology	21	50
Counselor who really pushes you to comply with the program	19	45
Learning to order healthy restaurant meals	19	45
Healthy cooking instruction	18	43
Learning to plan your menus	17	40
Mixed male and female group	17	40
Having a counselor who had been overweight or out of shape	15	36
Having a male counselor	15	36
Having your weight or fitness progress announced to the group	13	31
Having packaged food provided	11	26
Focusing on accepting your body	9	21
Having a male and female co-lead the weight loss sessions	9	21
Knowing your weight and fitness progress would be confidential	9	21
Having a female counselor	8	19
Meeting at a psychology clinic	7	17
Meeting at a medical clinic	6	14
Counselor who takes a relaxed attitude about the whole thing	4	10
Meeting at a commercial center (e.g., Jenny Craig, Nutrisystem)	1	2

Note. $N = 42$.



Figure 1. Theme structure of Advantages of Healthy Eating

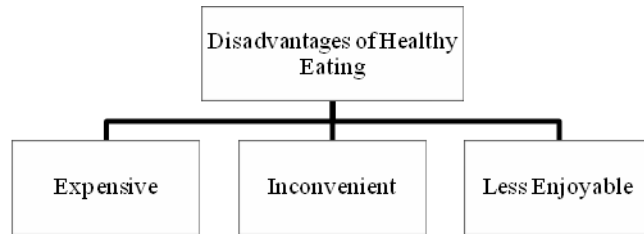


Figure 2. Theme structure of Disadvantages of Healthy Eating

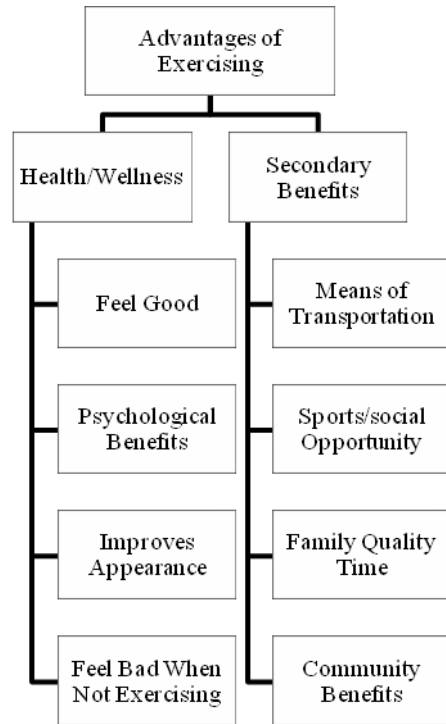


Figure 3. Theme structure of Advantages of Exercising

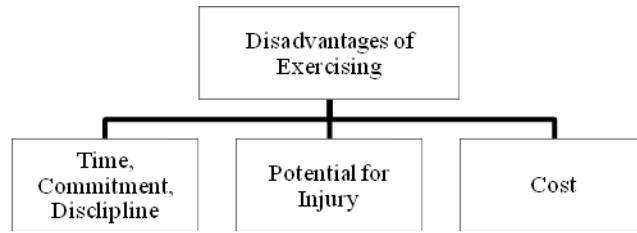


Figure 4. Theme structure of Disadvantages of Exercising



Figure 5. Theme structure of Advantages of Weight Management Programs

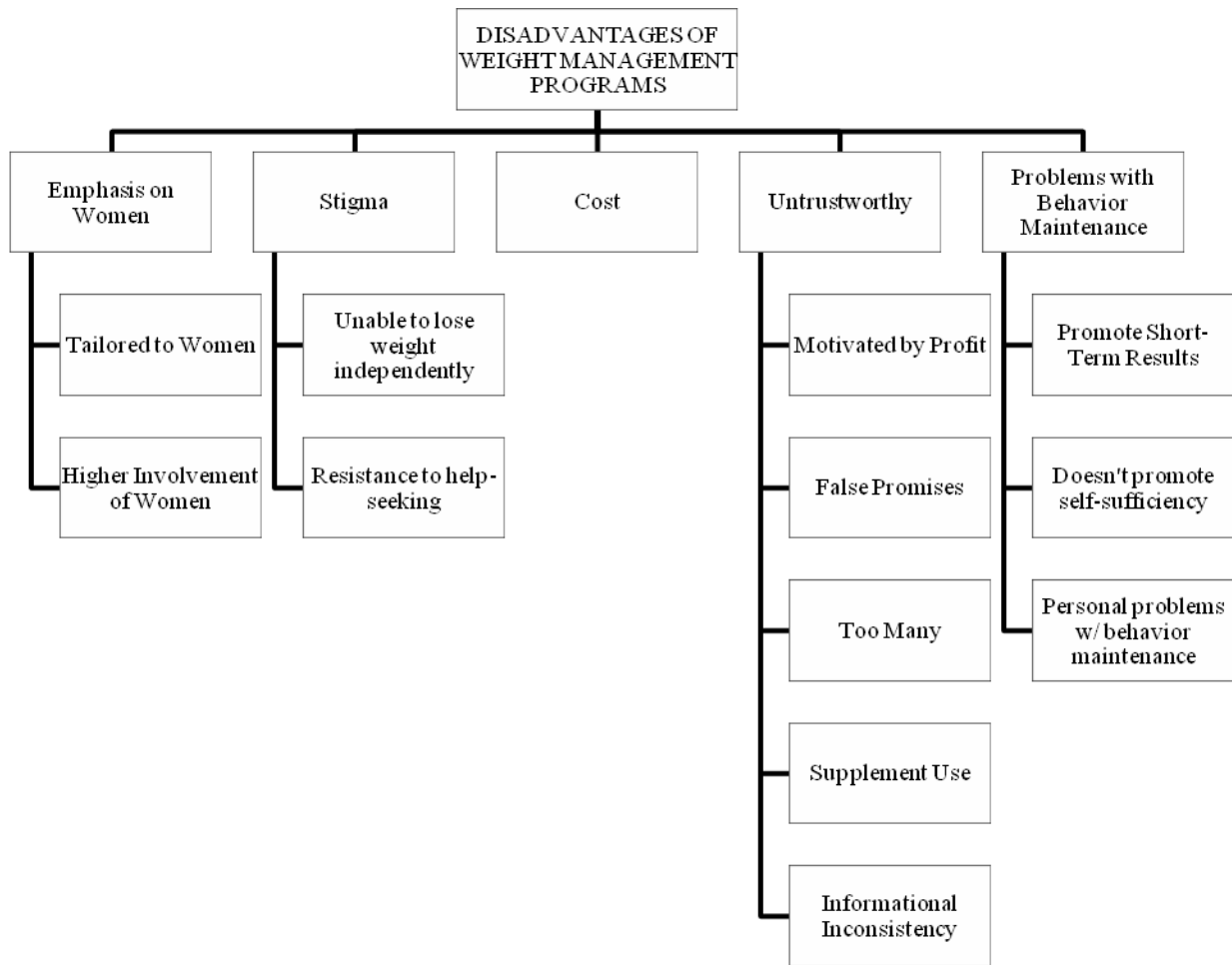


Figure 6. Theme structure of Disadvantages of Weight Management Programs

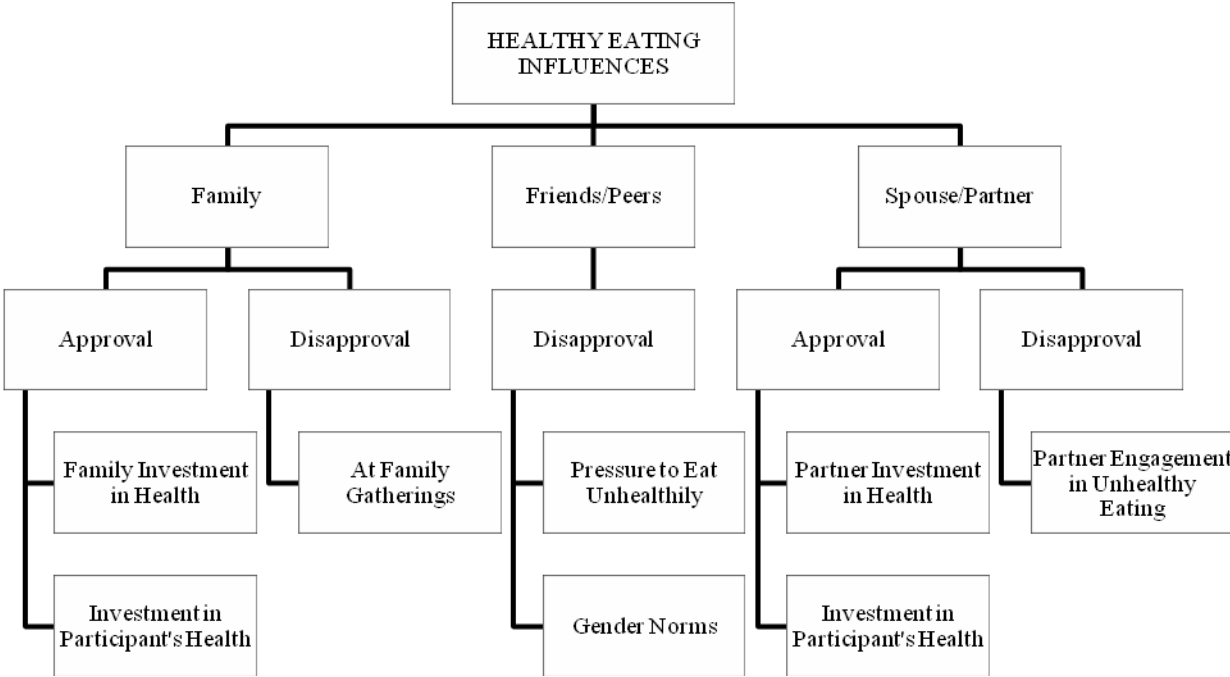


Figure 7. Theme structure of Healthy Eating Influences

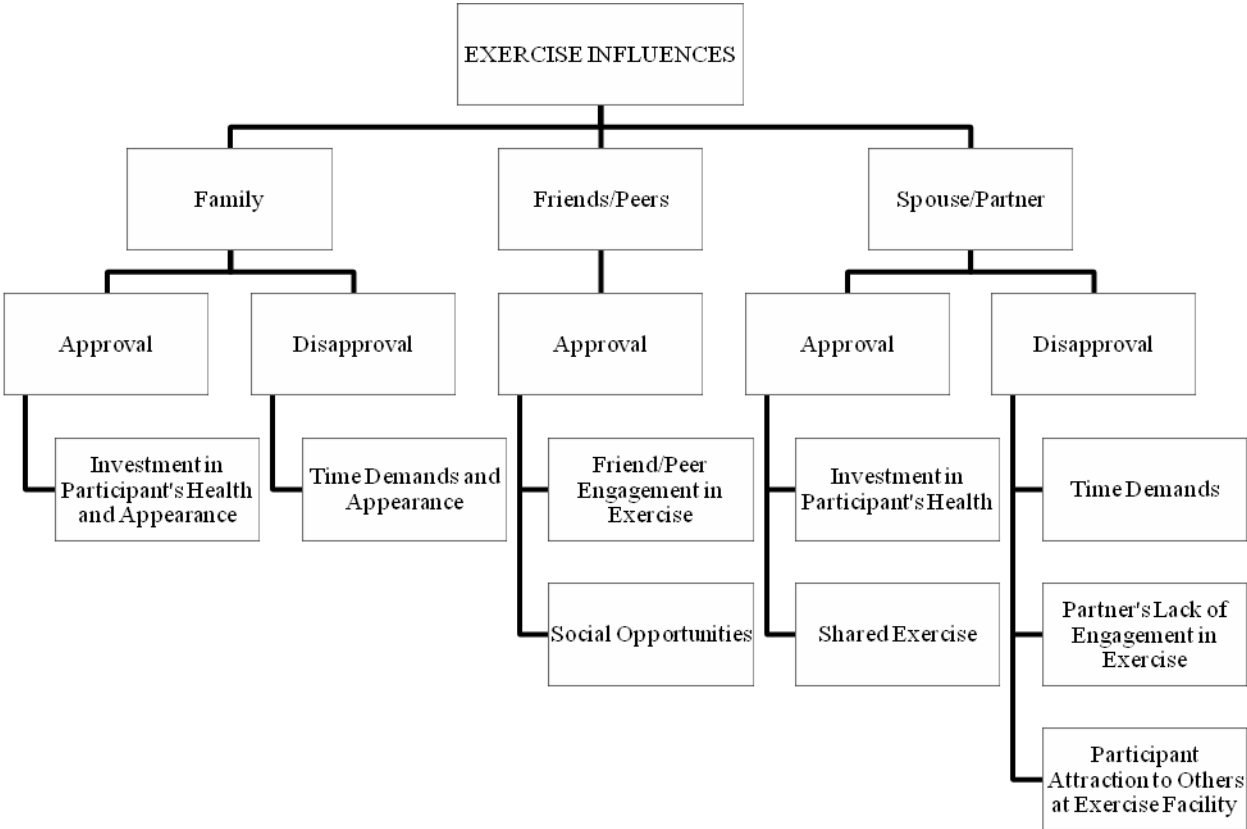


Figure 8. Theme structure of Exercise Influences

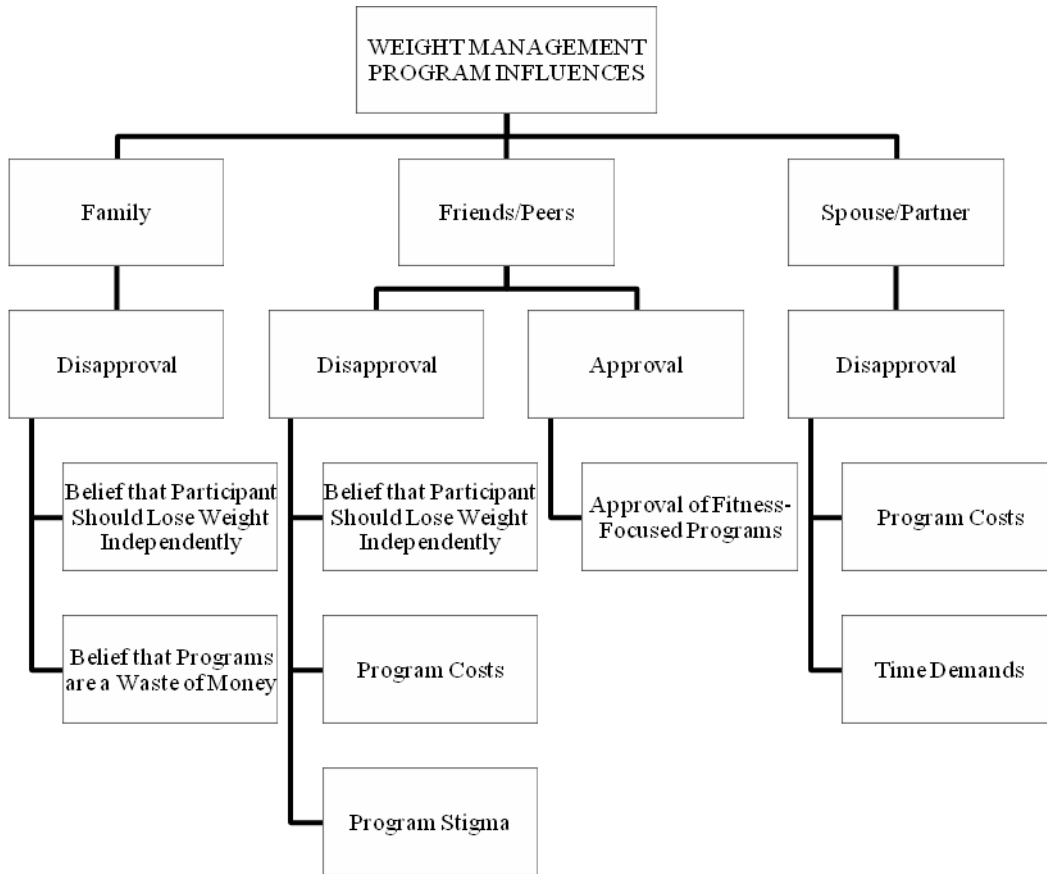


Figure 9. Theme structure of Weight Management Program Influences

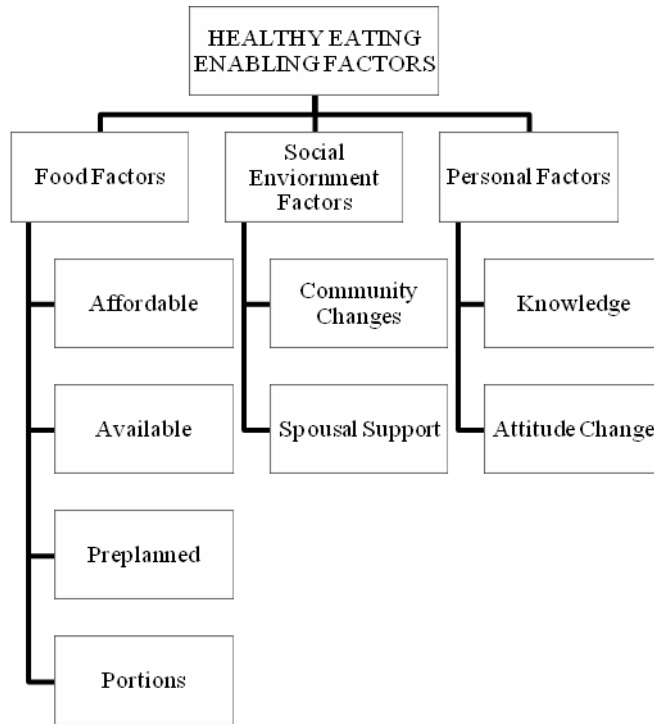


Figure 10. Theme structure of Healthy Eating Enabling Factors

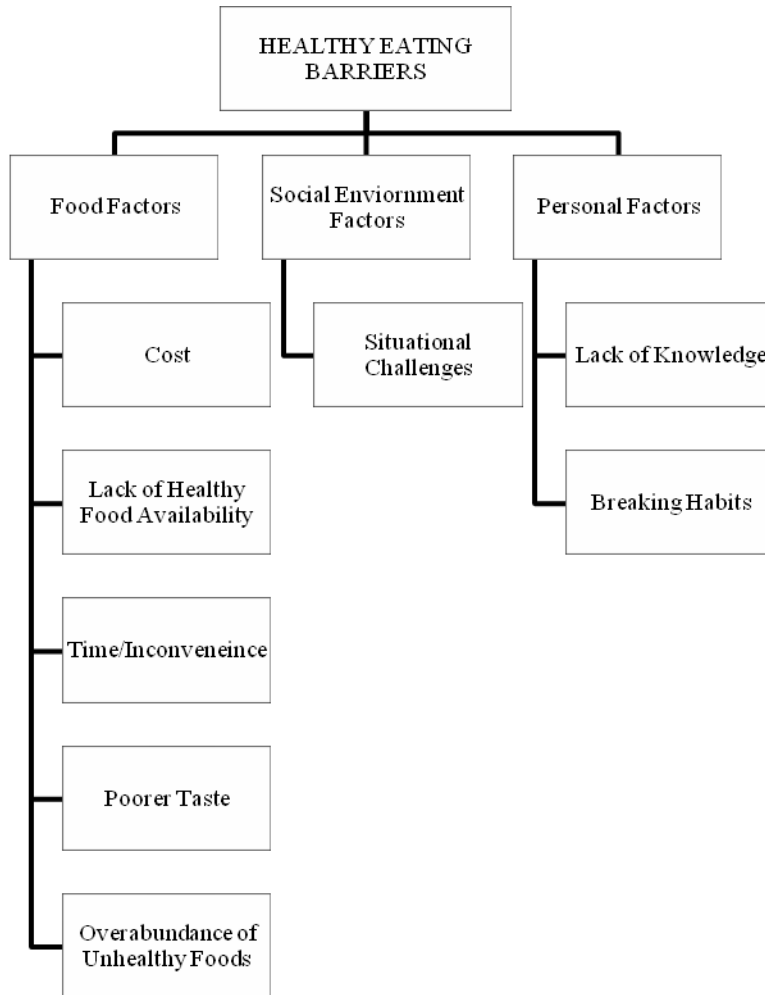


Figure 11. Theme structure of Healthy Eating Barriers

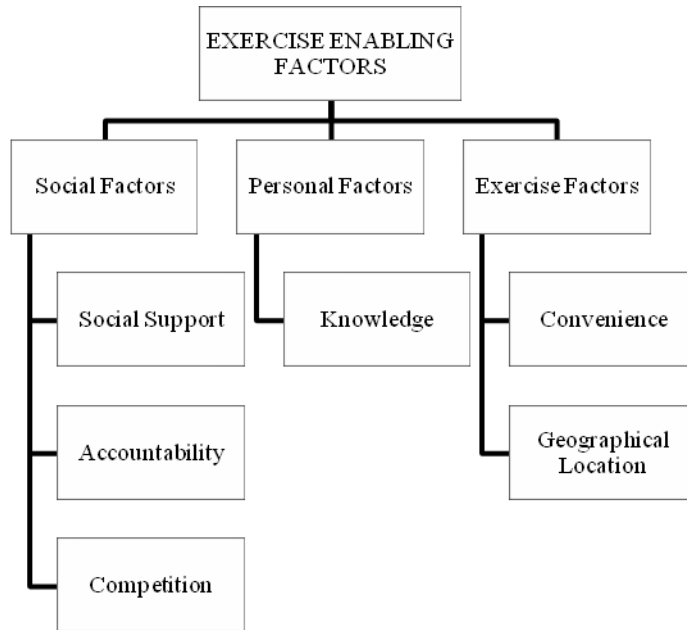


Figure 12. Theme structure of Exercise Enabling Factors

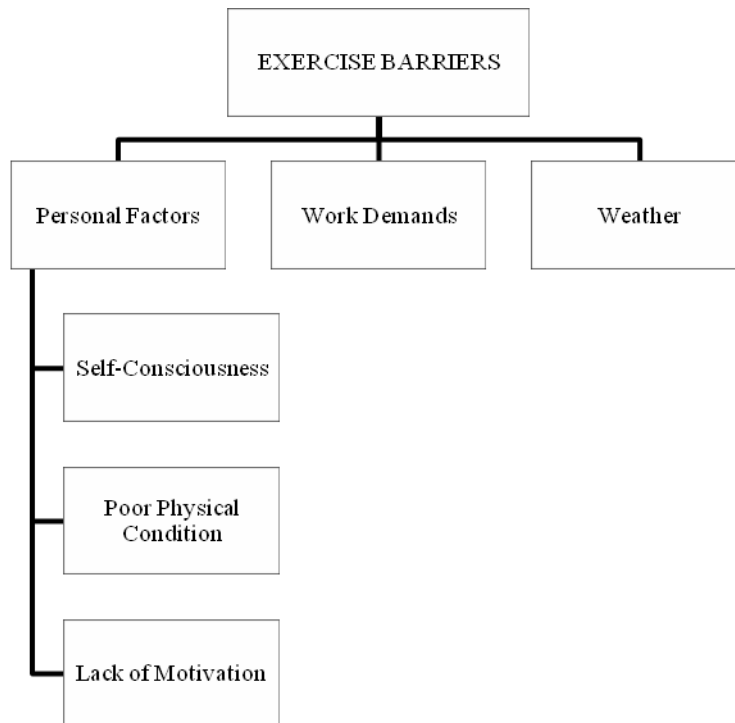


Figure 13. Theme structure of Exercise Barriers

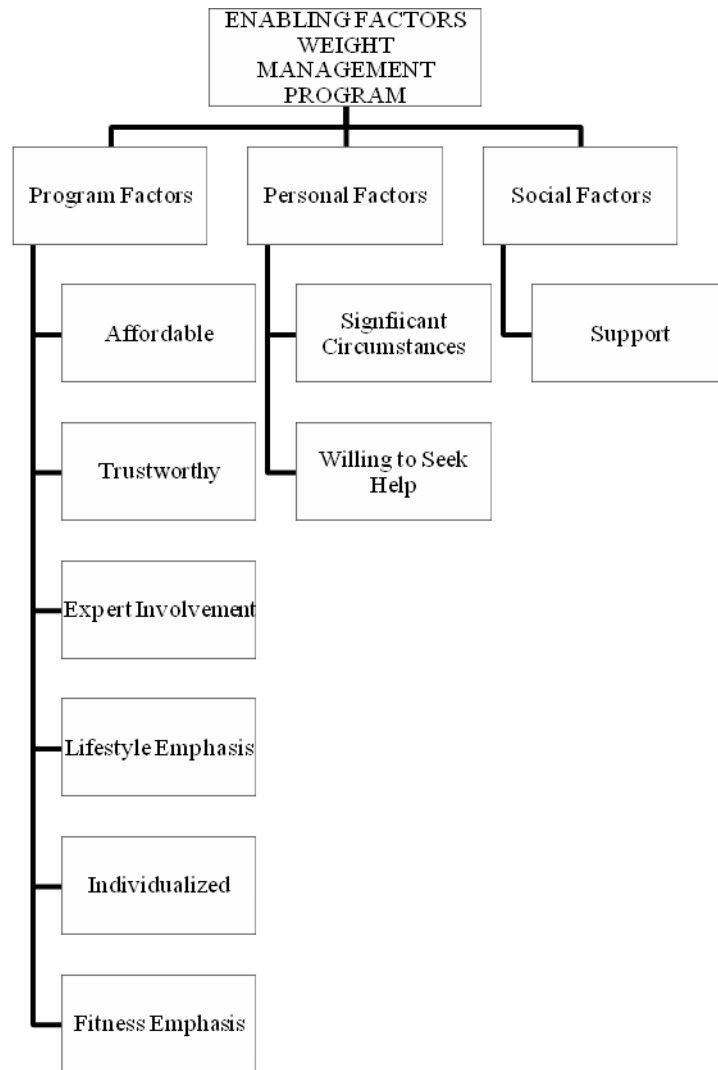


Figure 14. Theme structure of Enabling Factors for Weight Management Programs

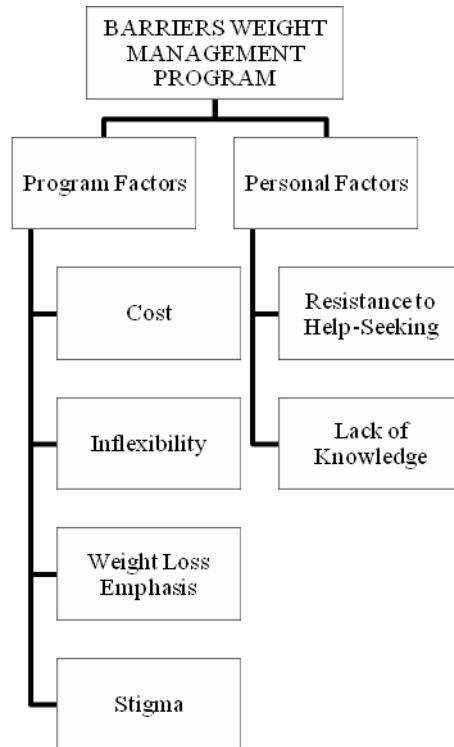


Figure 15. Theme structure of Barriers to Weight Management Programs

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Appendix A

Demographics, Health Behavior History, and Program Characteristics Survey

1. Age _____
2. Ethnicity
 - a. American Indian or Alaska Native
 - b. Asian or Pacific Islander
 - c. European-American
 - d. Hispanic
 - e. African-American
 - f. Multiethnic (Please specify) _____
3. Education
 - a. Less than high school
 - b. High school or GED
 - c. Some college
 - d. Associate's degree
 - e. Bachelor's degree
 - f. Graduate degree
4. Annual Income
 - a. Less than \$10,000
 - b. \$10,000 – \$20,000
 - c. \$20,001 – \$35,000
 - d. \$35,001 – \$50,000
 - e. \$50,001 – \$65,000
 - f. \$65,001 - \$80,000
 - g. \$80,001 to \$95,000
 - h. More than \$95,001
5. Number of Household Members _____
6. Relationship Status
 - a. Married
 - b. Partnered/In a Serious Relationship
 - c. Divorced
 - d. Separated
 - e. Single
7. Occupation _____
8. Height (inches) _____
9. Weight (lbs) _____

10. Are you currently trying to lose weight? Yes _____ No _____
11. Are you currently trying to improve your eating habits? Yes _____ No _____
12. Are you currently trying to improve your physical activity levels? Yes _____ No _____
13. Have you tried to lose weight in the past? Yes _____ No _____
- If YES, how many times have you attempted to lose weight? _____
 - If YES, how much weight did you lose each time? _____
 - If YES, how long did you maintain the weight each time? _____
14. Have you tried to improve your eating habits in the past? Yes _____ No _____
15. Have you tried to improve your physical activity levels in the past? Yes _____ No _____
16. Have you ever participated in an organized physical activity, healthy eating, or weight management program? Yes _____ No _____
- If YES, which type of program? _____
17. Would you consider participating in an organized physical activity, healthy eating, or weight management program if it was offered? Yes _____ No _____ Maybe _____
18. Below are various physical activity, healthy eating, and weight management program formats. Read down the list and place an X beside each type of program format that would appeal to you.
- _____ Self-help package/information packet
 - _____ One-on-one (counseling, personal training, nutrition training)
 - _____ Seminar/lecture series/classroom-type instruction
 - _____ Website
 - _____ Smaller group program (under 10 members)
 - _____ Larger group program (over 10 members)
 - _____ Other (specify): _____

19. Below are various physical activity, healthy eating, and weight management program characteristics. Read down the list and place an X beside each item that would appeal to you.

- All male group
- Centering the program around sports/athletic activities
- Choosing what you eat within provided guidelines
- Counselor who really pushes you to comply with the program
- Counselor who takes a relaxed attitude about the whole thing
- Exercising with the group
- Focus on accepting your body
- Having a counselor who had been overweight or out of shape
- Having a female counselor
- Having a male and female co-lead the weight loss sessions
- Having a male counselor
- Having packaged food provided
- Having your individual weight or fitness progress announced to the group
- Individual sessions with fitness counselor
- Instruction in exercise physiology
- Knowing your weight and fitness progress will be confidential
- Learning about exercise physiology and exercise planning
- Learning the basics of nutrition science
- Learning to manage emotional eating
- Learning to order healthy restaurant meals
- Learning to plan your menus
- Healthy cooking instruction
- Meeting at a commercial center such as Jenny Craig, Nutri-System, etc.
- Meeting at a gym
- Meeting at a medical clinic
- Meeting at a psychology clinic
- Mixed male and female group
- Working privately with a personal trainer
- Working privately with a nutritionist/dietitian

Appendix B

Focus Group Interview Script

Begin introduction after consent forms have been signed and background questionnaire is completed.

Introduction (Based on Krueger & Casey, 2000)

Good evening and welcome. Thank you for taking the time to join our discussion about men's views on weight loss and weight management programs. My name is [Moderator's Name], and I will serve as the moderator for today's focus group discussion. Assisting me is our co-moderator, [Co-Moderator's Name]. The purpose of today's discussion is to obtain information from you about your beliefs on eating, exercise, weight loss, and needs for a weight loss program. You were invited because you all are men living in this community.

There are no right or wrong answers to the questions I am about to ask. We expect that you will have differing points of view. Please feel free to share your point of view even if it differs from what others have said. If you want to follow up on something that someone has said, you want to agree, disagree, or give an example, feel free to do that. Don't feel like you have to respond to me all the time. Feel free to have a conversation with one another about these questions. I am here to ask questions, listen, and make sure everyone has a chance to share. We're interested in hearing from each of you. So if you're talking a lot, I may ask you to give others a chance. And if you aren't saying much, I may call on you. We just want to make sure we hear from all of you. We ask that you all refrain from advice giving. We want you to really focus on yourself and your experiences.

Before we begin, let me remind you of some ground rules. This is a research project. We will be taking notes to help us remember what is said. We are also audio recording the session because we don't want to miss any of your comments. Please speak up—only one person at a time, so we don't miss your comments. Remember, we are just as interested in negative comments as positive comments, and at times the negative comments are the most helpful. You all have name tags, but no names will be included in any final reports. Researchers of this study will do everything possible to keep your comments and data from this study confidential. In order for this to be a safe place, we do ask that all group members keep others' comments confidential. However, we have no way of guaranteeing that all participants will comply with this request. We also want to remind you that your participation in this study is voluntary. If you feel uncomfortable at any point and want to discontinue your participation, you are welcome to do so. Finally, please make sure your cell phones are turned off or on silent. Our session will last about an hour and a half and we will not be taking a formal break. Please remember to collect your \$20 gift cards at the end of this session.

Are there any questions before we get started?

Opening question

Let's begin by going around the room, saying your name and where you heard about the study.

Introductory question

What comes to mind when you hear the word weight loss?

Transition question

How do you relate the terms weight loss, eating healthily, and exercising to one another?

Key questions

Attitude Measures (TPB) and Predisposing factors (PPM)

1. What do you believe are the *advantages and disadvantages* of healthy eating? This can be on a personal level, relationship level, or community level.
2. What do you believe are the *advantages and disadvantages* of exercising regularly?
3. What do you believe are the *advantages and disadvantages* of weight management programs?
4. How has this knowledge influenced your actual behavior?

Subjective Norms (TPB) and Reinforcing factors (PPM)

5. Are there any people, groups, or other influences that would reinforce, meaning *approve or disapprove of* you for eating healthily? This can be on a personal level, relationship level, or community level.
6. Are there any people, groups, or other influences that would reinforce, meaning *approve or disapprove of* you for exercising regularly?
7. Are there any people, groups, or other influences that would reinforce, meaning *approve or disapprove of* you for participating weight management program?
8. How has the approval or disapproval of individuals and groups influenced your actual behavior in the past?

Perceived Behavioral Control (TPB) and Enabling factors in the (PPM)

9. What factors or circumstances would *enable you or make it difficult/impossible* for you to eat healthily? This can be on a personal level, relationship level, or community level.
10. What factors or circumstances would *enable you or make it difficult/impossible* you to exercise regularly?
11. What factors or circumstances would *enable you or make it difficult/impossible* you to join a weight management program?
12. How have these factors influenced your actual behavior?

CLOSING

Is there anything that anyone would like to add before we end the group?

Thank you for your participation in the group. If you have any questions after you leave here, please feel free to contact us.

Appendix C

Research Study Consent Form
Consent to Participate in a Research Study
Colorado State University

TITLE OF STUDY: Factors that influence overweight and obese men's participation in healthy eating, exercise, and weight management programs

PRINCIPAL INVESTIGATOR: Contact Tiare MacDonald, M.S., with questions (Tiare.MacDonald@colostate.edu), Dept of Psychology, 1876 Campus Delivery, Colorado State University, Fort Collins, CO 80523-1876. Kathryn Rickard, Ph.D., (Kathryn.Rickard@colostate.edu) Dept of Psychology, 1876 Campus Delivery, Colorado State University, Fort Collins, CO 80523-1876.

CO-PRINCIPAL INVESTIGATOR: Tiare MacDonald, M.S. (Tiare.MacDonald@colostate.edu), Dept of Psychology, 1876 Campus Delivery, Colorado State University, Fort Collins, CO 80523-1876.

WHY AM I BEING INVITED TO TAKE PART IN THIS RESEARCH? Knowing more about healthy eating and exercise behaviors in men is important since most research has focused on females. We want to know if developing a program promoting healthy eating and exercise that is tailored to men would be useful above and beyond what is currently offered in the community. We felt that your opinions and viewpoints would be valuable to our research.

WHO IS DOING THE STUDY? The PI for this study is a member of the CSU Counseling Psychology faculty. The Co-PI is a Counseling Psychology doctoral student who is conducting this study as part of a Dissertation project.

WHAT IS THE PURPOSE OF THIS STUDY? The purpose of this study is to learn more about attitudes about weight and weight management programs. Results from this study will hopefully be used to tailor a weight intervention to the specific needs of men.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The focus groups will take place in the afternoon or evening. Groups will last 90 minutes and include the completion of a background questionnaire.

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WHAT WILL I BE ASKED TO DO? If you decide to participate in the study, you will take part in a focus group. At the beginning of the focus group session, you will complete a background and demographic questionnaire. The focus group will ask you to share your beliefs about and behaviors related to exercise and diet (attitudes about exercise/healthy eating, how people important to you influence exercise/healthy eating, how much control you think you have over exercise/healthy eating, and intention to engage in exercise/healthy eating).

ARE THERE REASONS WHY I SHOULD NOT TAKE PART IN THIS STUDY?

Participants will be excluded if they are female or under the age of eighteen. If for any reason, however, the study makes you feel uncomfortable at any point, you are welcome to stop participating.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

- One potential risk is a breach of confidentiality. This is extremely unlikely due to efforts to maintain confidentiality. In addition, it is possible that some of the topics in the questionnaire might trigger feelings of discomfort if you have had personal experiences related to the subject matter.
- It is not possible to identify all potential risks in research procedures, but the researchers have taken reasonable safeguards to minimize any known and potential, but unknown, risks.

ARE THERE ANY BENEFITS FROM TAKING PART IN THIS STUDY? Although there are no direct benefits that result from taking part in this study, it is our hope that you will gain insight into your attitudes and the attitudes of other men about healthy eating and exercise.

DO I HAVE TO TAKE PART IN THE STUDY? Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participating at any time without penalty or loss of benefits to which you are otherwise entitled.

WHAT WILL IT COST ME TO PARTICIPATE? Cost of participating in this study will be free.

WHO WILL SEE THE INFORMATION THAT I GIVE?

We will keep private all research records that identify you, to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

This study is anonymous. That means that no one, not even members of the research team, will know that the information you give comes from you. You will be identified only by an ID number.

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CAN MY TAKING PART IN THE STUDY END EARLY? No, unless you decide to withdraw early from the study.

WILL I RECEIVE ANY COMPENSATION FOR TAKING PART IN THIS STUDY? As a result of participating in this study, you will be receiving a gift card from a retailer.

WHAT HAPPENS IF I AM INJURED BECAUSE OF THE RESEARCH? The Colorado Governmental Immunity Act determines and may limit Colorado State University's legal responsibility if an injury happens because of this study. Claims against the University must be filed within 180 days of the injury.

WHAT IF I HAVE QUESTIONS? Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions about the study, you can contact the Co-PI, Tiare MacDonald at (970) 633-0709 or Tiare.MacDoanld@colostate.edu. If you have any questions about your rights as a volunteer in this research, contact Janell Barker, Human Research Administrator at 970-491-1655. We will give you a copy of this consent form to take with you.

WHAT ELSE DO I NEED TO KNOW? This consent form was approved by the CSU IRB on [Approval Date].

Your signature acknowledges that you have read the information stated and willingly sign this consent form. Your signature also acknowledges that you have received, on the date signed, a copy of this document containing 3 pages.

I agree _____ (print name) to become a participant for the described research. The nature and general purpose of the project have been satisfactorily explained to me by _____ and I am satisfied that proper precautions will be observed.

Participant signature

Date