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# A Qualitative Examination of Adoption, Maintenance, and Motivation Issues and Weight-Related Concerns for Active and Sedentary Individuals

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A Qualitative Examination of Adoption, Maintenance, and Motivation Issues  
and Weight-related Concerns for Active and Sedentary Individuals

by

Debra Boyd

Presented to the Graduate and Research Committee  
of Lehigh University

In Candidacy for the Degree of

Doctor of Philosophy

in

Counseling Psychology

Lehigh University

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Approval Page

Approved and recommended for acceptance as a dissertation in partial fulfillment of the requirements for the degree of Doctor of Philosophy

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## Abstract

This study examined the adoption, motivation, maintenance, and concerns regarding weight and body image among individuals who have been sedentary but are intending to engage in physical activity (Intenders) and individuals who maintain active lifestyles (Active). In-depth interviews were conducted with twenty adult participant volunteers. Volunteers intending to start engaging in physical activity and volunteers that already maintain active lifestyles were recruited. Participants were recruited via select YMCA facilities, Lehigh University listserv, and word-of-mouth referrals. Interviewees discussed their previous, current, and desired future lifestyle choices, goals, and attendant planned behaviors. Issues related to motivation, attitudes, thoughts, feelings, and behavior were also explored in relation to participants' physical health. A grounded theory approach was used to analyze the interview data. The analyses resulted in the development of a core category: Fitness Philosophy and Lifestyle with four related clusters that were subsumed within the core category. The four clusters were: 1. Workout Details 2. Physical Environment 3. Cultural, Social, and Familial issues and 4. Intrapersonal/Self. Results indicated that Intenders were more likely to skip workouts or cease working out entirely if their schedule changed, if the weather interfered, or if family responsibilities prevented their scheduled workouts whereas Active participants were more likely to reschedule their workouts for a different time or day or to engage in another type of physical activity. Diversity based differences were noted between men and women wherein women strongly preferred to workout with someone whereas half of the males preferred to workout alone. Additionally, women were more likely to report economic constraints compared to the males in this study of whom none reported

economic difficulty. Older participants reported engaging in low or moderate intensity exercise compared to younger participants who tended to engage in moderate or higher intensity activity. Additionally older participants were more likely to report concern that their age in some way limits their ability to engage in certain activities. Overall, Active participants were more flexible with their exercise plans and proactively addressed barriers ahead of time instead of stopping exercise engagement compared to Intenders. Additionally, Active participants were more likely to describe the importance of a balanced lifestyle that included exercise as a mandatory part of their lifestyle. Limitations of this study and suggestions for future research are discussed.

## CHAPTER I

### Introduction

Differences in exercise engagement and maintenance between sedentary and active individuals greatly influence individual lifestyles, behavior choices, and mental health, and can have a significant impact on our country's health and behavior (Callaghan, 2004; Kirchoff, Elliott, Schlichting, & Chin, 2008; United States Department of Health and Human Services, 2000). These lifestyle issues and attendant weight-related concerns affect women, men and children of different ages, ethnicities, and social status in complex ways. Active lifestyle maintenance and healthy weight are associated with overall better health, whereas sedentary lifestyles have been linked to various health disparities such as Type 2 Diabetes Mellitus (T2DM), cardiovascular disease (CVD), and Metabolic Syndrome (MetS); i.e., a cascade of multiple metabolic abnormalities associated with cardiovascular disease ([Ford, Kohl, Mokdad, & Ajani, 2005; Roche, Phillips, & Gibney, 2005; Tudor-Locke, Bell, Myers, Harris, Ecclestone, Lauzon, & Rodger, 2004]). Overweight and obesity are also associated with an increased number of doctor visits and increased medication usage compared to non-overweight and non-obese individuals (Caperchione, Duncan, Mummery, Steele, & Schofield, 2008). Excess weight has a significant impact on quality of life, is directly related to increased health-care costs, and may hinder motivation toward engaging in health-enhancement behaviors (Caperchione et al, 2008). Further, physical activity is decreasing across several industrialized nations (Caperchione, et al., 2008; Sallis & Owen, 1999).

Overall, across adults and children in the United States (U.S.), obesity rates have increased over the past three decades and continue to rise (Bean, Stewart, & Olbrisch,

2008; Wang & Beydoun, 2007). Weight-related problems and sedentary lifestyles in our country have, in part, become associated with changes in American culture. The variety of food choices and portion sizes in America have increased while automobile-reliant neighborhood and community designs reduce utilitarian activity (Sallis & Glanz, 2009; Rovniak, Sallis, Saelens, Frank, Marshall, Norman, Conway, Cain, & Hovell, 2010). Additionally, the availability of healthy food choices and recreational facilities that promote better health differ based on economic status, as these health-related resources are less prevalent in low income communities (Sallis & Glanz, 2006).

In America, obesity is currently the second leading cause of premature death that is preventable (Bean et al., 2008). The projected rates of obesity in the U.S. suggest that 40.8% of all adults will be obese and 74.7% of all adults and 25% of all children will be overweight (defined by a Body Mass Index (BMI>25) or obese (BMI>30) (BMI = Weight (kg)/Height (m) <sup>2</sup>) by 2015. Additionally, obesity rates are increasing at a faster pace for women when compared with men (Bookwala & Boyar, 2008) and sexual minority women are more likely to be overweight or obese (Bowen, Balsam, & Ender, 2008). Longitudinal data tracking BMI and obesity from childhood to adulthood indicates that one third of children who were obese in preschool and one half of obese school aged children continue to be obese as adults (Wang & Beydoun, 2007). This relationship between age and obesity has implications for the proportion of the population that will suffer from weight-related health problems as the population ages (Anderson & Butcher, 2006). Part of addressing the obesity epidemic in American adults and children involves obtaining a better understanding of the factors involved in our country's increasing weight gain and sedentary behavior.

A strong research base exists which examines environmental factors and social change issues related to overweight and obesity in America and is intended to inform environmental, social, and policy change (e.g. Sallis & Glanz, 2009; Rovniak, et al., 2010; Baruth, Wilcox, Dunn, King, Marcus, Rejeski, Sallis, & Blair, 2010). Although extremely valuable, exploration of physical activity issues of Americans on an in-depth, individual level is needed in addition to larger-scale community and population-based research. Maintenance of interventions targeting individual and small group behavior change continues to be a prominent concern for Americans (Bean et al., 2008). This problem may be related to an insufficient understanding of the mediating mechanisms and other factors regarding adoption and maintenance of, and motivation for healthy levels of physical activity and the link between exercise interventions and sustained behavior change (Baruth, et al., 2010). Interventions which have efficacy when consistently maintained are not effective for individuals who do not continue to execute the related healthful behaviors on a regular basis. The limited success in maintaining healthy lifestyle changes recommended and/or implemented by professionals and researchers underscores the need for further study that examines the unique complexities of this phenomenon from participants' worldviews.

#### *Social Consequences of Unhealthy Weight*

Weight-related issues not only cause physical health problems, they also affect social relations and psychological well-being (Bookwala & Boyar, 2008; Maclean, Edwards, Garrard, Sims-Jones, Clinton, & Ashley, 2009). The stigma of overweight and obesity (Maclean et al., 2009; Allon, 1982; Friedman et al., 2005; Sarilo-Lahteenkorva, Stunkard, & Rissanen, 1995) and social misconception that overweight and obese people

are lazy (Crandall & Schiffhauer, 1998; Tiggemann & Rothblum, 1998) challenges efforts to understand and effectively intervene with these individuals (Bookwala & Boyar, 2008; Connors & Melcher, 1993). Further, the stigma of obesity can be associated with other forms of prejudice and discrimination such as poverty and gender, sexual, and racial minorities (Bowen et al., 2008; Maclean et al., 2009). Since a person's weight is visibility identified, just as skin color is identified (Crocker, Cornwell, & Major, 1993), others can see and make judgments about overweight and obese people without actually knowing them.

Obese and very obese individuals tend to have lower self-acceptance (Carr & Friedman, 2005) and increased risk for mood disorders including anxiety (Simon, Von Korff, Saunders, Miglioretti, Crane, & Van Belle, 2006) and depression among women (Bean et al., 2008; Heo, Pietrobelli, Fontaine, Sirey, & Faith, 2006). Additionally, obese and overweight individuals report increased social stressors and limited familial support (Carr & Friedman, 2006). Furthermore, the social pressure for overweight and obese people to lose weight and maintain a slender figure is particularly striking for girls and women (Bookwala & Boyar, 2008; Crocker, Cornwell, & Major, 1993) as females are held to more stringent standards of thinness than males. Additionally, overweight women report greater mistreatment related to their weight by strangers compared to overweight men (Faulkner, French, Jeffery, Neumark-Sztainer, Sherwood, & Morton, 1999).

Both women and men with weight-related concerns face oppression and judgment in many situations such as applying for work, eating at a restaurant, seeking medical and mental health care, and in dating and romantic relationships (Maclean et al., 2009). Too often, these people are seen as individuals without the discipline to exercise and who lack

the willpower to resist unhealthy food temptations (Bookwala & Boyar, 2008). Society often holds these individuals responsible for being overweight or obese (Weiner, Perry, & Magnusson, 1988) and the locus of change for losing excess weight is often presumed to be solely the responsibility of the obese person (Maclean et al., 2009) and not a result of the environment. These stereotypes, however, are oppressive and do not help address the alarming weight-related health concerns in our country (Connors & Melcher, 1993). Moreover, research strongly suggests that our environment plays a crucial role in influencing and determining our exercise-related behavior (Rovniak et al., 2010).

Consistent, regular engagement in physical activity has been shown to assist in maintaining healthy weight, losing excess weight, and lessening the symptoms of related health disparities such as MetS (Grundy, 2006) and T2DM (Tudor-Locke et al., 2004). Although a universal definition of MetS has not been agreed upon among researchers and clinicians, MetS, in general is defined as “the concurrence in an individual of multiple metabolic abnormalities associated with cardiovascular disease” (Gami, Witt, Howard, Erwin, Gami, Somers & Montori, 2007, p. 403). Five key features of MetS include: insulin resistance, hyperglycemia, dislipidemia, central obesity, and hypertension (Shaw, Hall, & Williams, 2005). Individuals diagnosed with MetS are at an increased risk for developing T2DM and cardiovascular disease (CVD); (Roche et al., 2005) and evidence indicates that preventative strategies including exercise and proper nutrition lessen the severity of these health concerns more effectively than medication (Shaw et al., 2005). Despite the known benefits of participating in exercise of moderate or higher intensity and its contribution toward the prevention or management of chronic diseases, many

individuals diagnosed with these health disparities continue to maintain sedentary lifestyles (Caperchione et al., 2008).

Our country has become increasingly more educated regarding health issues and effective prevention strategies over recent years; however increases in weight-related problems and decreases in activity continue to occur. Despite this increased knowledge and understanding of which behaviors help maintain good health; many individuals who are informed still do not maintain physically active lifestyles. This may be in part because behavior change is suggested to be more influenced by a person's motivation to change rather than the person's knowledge and understanding of the health-related benefits of maintaining an active lifestyle (Bean et al., 2008). An important unanswered question therefore is not so much *what* people need to do to maintain good health but instead, *how* to get people to engage in and maintain behaviors we already know to be effective and healthy. Research examining the differences between active individuals and intenders (individuals who have been sedentary but intend to become active within the next 30 days) in their approach to initiating and maintaining exercise is therefore needed and was a main focus of this study.

Although a comprehensive understanding of maintenance and motivation issues related to physical activity has not been achieved, supports and barriers that encourage or inhibit engagement in physical activity have been examined from the perspectives of those who struggle with weight related issues and maintaining active lifestyles (e.g. Gordon-Larsen, Griffiths, Bentley, Ward, Kelsey, Shields, & Ammerman, 2004; Setse, Grogan, Cooper, Strobino, Powe, & Nicholson, 2008). One barrier that has been suggested is the presence of overweight or obesity itself (Ball, Crawford, & Owen, 2000;

Jones, 2003). In fact, obese and overweight individuals have reported that their excess weight is a barrier to being active (Ball et al, 2000) especially in public environments (Jones, 2003).

A preference for sedentary activities such as watching television and using the computer over engaging in outdoor activities has been noted among overweight and obese individuals (Gordon-Larsen et al., 2004). Other barriers reported include the cost of membership to recreational facilities, and unsafe pedestrian accessibility in neighborhoods (e.g. heavy traffic, crime, absence of sidewalks (Gordon-Larsen, et al., 2004). Sedentary individuals have also reported that, despite knowing the benefits of an active lifestyle, they lack motivation to become more active (Gordon-Larsen et al., 2004). An important collateral question, therefore, is: What are the factors related to motivational differences in active individuals versus intenders?

Based on the status of overweight, obesity, and sedentary behavior patterns in the U.S., it seems that we lack a comprehensive understanding of the needs and differences in maintenance and motivation of physical activity between sedentary and active individuals. Existing interventions that target sedentary individuals often fail to be maintained; therefore examining this issue from the perspective of individuals who want to but ultimately do not maintain active lifestyles may help inform the development of more effective interventions for Americans. Since previous literature has focused on implementing interventions formulated by researchers, it is believed that a better understanding from the perspective of sedentary individuals will better direct future interventions. Valuable and informative research examining exercise interventions (e.g. Carels, Darby, Cacciapaglia, Konrad, Coit, Harper, Kaplar, Young, Baylen, & Versland,

2007), change processes related to exercise behavior and weight management (e.g. Johnson et al, 2008; Baruth et al., 2010), psychological issues (e.g. Craft & Landers, 1998; Bean et al., 2008) social and familial variables (e.g. Setse et al., 2008; Teran, Belkie, & Johnson, 2002) and barriers to exercise induction and maintenance (e.g. Gordon-Larsen et al., 2004; Vartanian & Shaprow, 2008) have been conducted, yet exercise-related adherence issues and attendant weight-related issues remain prominent health concerns for our country (Wang and Beydoun, 2007; Bean et al., 2008). This may be, in part, due to the fact that previous research has involved examining interventions designed *for* as opposed to *in collaboration with* those who struggle with weight-related concerns and sedentary behavior patterns.

A majority of the quantitative and qualitative literature has been conducted from a positivist or post-positivist research perspective (e.g., verification of a priori hypotheses, standardized interview questions and/or questionnaires). Preconceived researcher hypotheses (Gordon-Larsen et al., 2004) can hamper in-depth examination and may result in only a superficial understanding of participants' perspectives. Additionally, methodological issues have hindered a thorough understanding of motivational phenomena. Methodology such as semi-structured interviews using pre-developed instruments (e.g. questionnaires) may inadvertently lead participants into answering only the questions asked, but not exploring and disclosing other more relevant information. Additionally, research utilizing focus groups (e.g. Seste et al., 2008) may limit the information obtained from certain individuals who would feel more comfortable discussing their personal feelings and thoughts in a more private, one-on-one interview format. Telephone interventions (e.g. King, Friedman, Marcus, Castro, Forsyth,

Napolitano, & Pinto, 2002) or internet-based interventions (e.g. Carter-Edwards et al., 2009) make it challenging to establish the kind of rapport necessary for dynamic and personal contact. Studies involving mail-in questionnaires (e.g. Sallis, Hovell, & Hofstetter, 1992) omit the personal contact as well as prevent participants from asking questions or seeking clarification when needed.

A qualitative approach using Grounded Theory (GT) was chosen for this study based on a need for a better understanding or what Clifford Geertz (1973) called a “thick description” of the processes involved in maintaining or discontinuing exercise plans and related health behaviors from participants themselves. Qualitative research has been defined by Ponterotto (2005) as a “broad class of empirical procedures designed to describe and interpret the experiences of research participants in a context-specific setting” (p. 128). Quantitative research is defined as “focus[ing] on the strict quantification of observations (data) and on careful control of empirical variables...[which] stress the measurement and analysis of causal or correlational relationships between variables” (Pontorotto, 2005, 128). GT (described in detail in chapter 2) was developed by Glaser and Strauss in 1967, for the purpose of examining certain social processes not easily studied via quantitative methods. GT is a qualitative, discovery-oriented method of studying phenomenon wherein investigators strive to obtain an in-depth understanding of individuals’ perceptions and experiences (Pontorotto, 2005; Rennie, 1998). GT challenges quantitative theory and concept testing as the sole method of conducting systematic and structured empirical research.

The factors that influence intenders and active Americans' engagement in and maintenance of active lifestyles are part of a complex process that needs to be

comprehensively understood from the perspectives of the individuals themselves. In-depth study from the perspectives of intenders and active Americans that examines issues related to exercise adoption, maintenance, and motivation is necessary to achieve meaningful change in our nation's health. This more comprehensive participant-directed inquiry may lead to future study involving the development of interventions that are more culturally relevant for overweight, obese, and sedentary Americans.

One of the principle limitations in previous grounded theory literature exploring perceptions and behavior related to exercise is the approach to recruitment which has resulted in data that pertains to very specific groups only (e.g. pregnant African American women, male Vietnam Veterans, African American female church members, individuals with physical disabilities who are active; African American mothers). Of the nine studies reviewed in chapter two of this study, four studies (Dunn, 2008; Gordon-Larsen, Griffiths, Bentley, Ward, Kesley, Shields, & Ammerman, 2004; Kirchhoff, Elliott, Schlichting, & Chin, 2008; Setse, Grogan, Cooper, Strobino, Powe, & Nicholson, 2008) were conducted with exclusively female participants of African American racial heritage and one study, (Lang, 2000) was conducted with exclusively female participants of White racial heritage. One study included an exclusively male Vietnam Veteran sample (Otter & Currie, 2004). Another study interviewed female children and female caregivers to obtain perceptions of weight-related and activity issues (Gordon-Larsen et al., 2004). Therefore, six out of the nine studies reviewed limited their sample to either female or male participants.

From the three studies that included both female and male participants (Christensen et al., 2006; Giacobbi, et al., 2008; Crone, Smith, & Gough, 2005) two of

the studies (Christensen et al., 2006; Crone et al., 2005) noted the disproportionate number of women compared to men as a limitation of their studies. The third study (Giacobbi, Stancil, Hardin, & Bryant, 2008), which had a relatively equal number of male and female participants, reported no significant differences based on gender. This study examined the relationship between quality of life and physical activity from the perspective of individuals with physical disabilities who were part of a wheelchair user's basketball tournament. Although this study contributes to our understanding of how active people with physical disabilities view engagement in a specific activity, it does not address how sedentary individuals with physical disabilities may perceive exercise related to a specific activity or physical activity in general.

Only one study was found that compared maintenance issues in physical activity with Active and sedentary individuals (Kirchhoff, et al., 2008). However, Kirchhoff et al. (2008) limited their sampling of relapsers to include only individuals who had "participated in continuous exercise but were no longer active" (p.518), and excluded individuals who had never been active in the past as well as individuals who engaged in exercise for very short periods of time but not continuously (e.g. New Years' resolution exercisers). Additionally, Kirchoff et al.'s sample was limited to African American women who have been diagnosed with diabetes. Overall, GT literature involving sedentary and active individuals has been conducted with an emphasis on exploring the perspectives of very specific groups.

*Purpose of Current Study:*

The present study utilized a discovery-oriented approach grounded in the experiences of a diverse sampling of intenders and active individuals' perspectives. The

growing rates of health disparities, sedentary lifestyles, and concern for American's health, combined with the gaps in the literature regarding maintenance of healthy lifestyle change, suggest that a broader and deeper understanding of motivation to exercise is needed. Examination of this phenomena using grounded theory, which includes a more diverse sampling of participants in terms of race, ethnicity, age, gender, economic status, sexual orientation, and physical ability may help illuminate issues and participant reflections that have not surfaced in previous studies. Recruitment of participants was sought in urban and suburban areas that included diverse groups of people and at least some diversity was achieved in each area. Several areas in Philadelphia, West Chester, Allentown, and Bethlehem, Pennsylvania were chosen for potential recruitment based on the racial and ethnic diversity within these collective communities. Additionally, the YMCA was a main recruitment facility for the proposed study. YMCA facilities have open door reduced cost memberships for lower income members. YMCA facilities offer a broad array of programs that target a diverse range of members in terms of age (e.g. swim lessons for children as young as six months old, classes for senior citizens, youth basketball programs for teens). There are also family-based activities, community events, and programs for individuals with physical disabilities.

The purpose of this study, then, was to obtain an in-depth examination and analyses of adoption, maintenance, motivation, and concerns regarding weight and body image from a diverse group of participants who are in the process of beginning and/or maintaining physical activity behaviors. Intenders did not have to have been previously active. The requirement was that these participants intended to become or remain active within the next 30 days. This criterion was chosen because the objective was to sample

sedentary individuals who were in at least a contemplative stage of change (Prochaska, Norcross, and DiClemente, 1994) and chronically sedentary individuals with no intention to exercise would be thought to be in a pre-contemplative stage of change. An open, semi-structured interview format utilizing a grounded theory research paradigm was used so that the emerging theory, categories, and themes were interpreted from the voice of the participants. Interview questions were chosen to assist in exploring more in-depth information regarding how and why active individuals and intenders differ in their approach to, motivation for, and maintenance of physical activity. Knowledge obtained from this study using a GT approach may help inform theory development and further study (qualitative and quantitative) which more accurately addresses the unique cultural needs of this population. The specific research questions that were addressed in this study were:

Research Question 1a: Why do Intenders fail to initiate or fail to maintain physical activity behavior changes that support healthy lifestyles?

Research Question 1b: Why and how do Active individuals initiate and maintain physical activity behaviors that support healthy lifestyles?

Research Question 2: How could adoption and maintenance of physical activity be achieved by Intenders according to Intenders themselves? In other words, what would it take for them to become physically active and maintain their activity behaviors?

Research Question 3: According to both Intenders and Active-individuals, what are the weight-related, adoption, maintenance, and motivational differences between both Active individuals and Intenders and why are they different?

## CHAPTER II

### Literature Review

#### *Studies Employing Grounded Theory to Examine Physical Activity and/or Weight-related Concerns*

Nine articles examining physical activity and/or weight-related concerns that utilized elements of GT or a full GT approach were found and reviewed. Studies included in this literature review are limited to qualitative studies involving face-to-face semi-structured or open interviews (one-on-one or focus groups) that examined physical activity and/or weight-related issues (e.g. barriers, supports, exercise adoption and maintenance) wherein participant responses were used in the analyses and development of emergent themes. These nine articles are reviewed in detail followed by a discussion of the attendant contributions and limitations of these studies. Part two of this chapter includes a review of the literature and in-depth discussion of grounded theory in relation to this study.

Kirchhoff et al. (2008) conducted semi-structured interviews with 19 African American women who had at least one diabetes risk factor and were either currently physically active (maintainers) or were currently sedentary but had been previously active (relapsers). Recruitment of participants occurred at a Chicago YMCA via flyers advertising the study or referral from friends. Women were considered maintainers if they reported engaging in at least 30 minutes of exercise at least 5 days per week according to the Center for Disease Control guidelines (Pate, Pratt, Blair, et al., 1995; in Kirchhoff et al., 2008). Based on a review of current literature regarding barriers to

exercise in African American women, this study explored the strengths/preferences and barriers to maintaining exercise behaviors.

Interviews were conducted until a saturation of emergent themes had been achieved. All interviews, lasting approximately one hour, were taped and transcribed verbatim. Participant responses were analyzed based on grounded theory (Strauss and Corbin; 1998). Although Kirchhoff et al. (2008) reported analyzing participant responses without a theoretical framework; interview questions were derived based on previous findings. Therefore, the questions asked of participants may have directed them toward responding to specific content instead of more openly exploring their own perceptions and worldviews regarding exercise. Consensus regarding emergent themes was established with minimal discrepancies between the first two authors and an independent review was conducted on half of the transcripts by the third author.

Both maintainers (N=10) and relapsers (N=9) reported similar benefits and barriers regarding exercise. Benefits reported included improved physical appearance and weight loss and that exercising helped them “feel better” (Kirchhoff et al., 2008, p. 520). Additionally participants from both groups reported that exercise was helpful in preventing specific health problems (e.g. diabetes) as well as maintaining good health in general. Exercise was described by participants as a stress reliever, and they mentioned that it was helpful emotionally and improved their self esteem. Barriers mentioned by participants included work responsibilities (e.g. long hours, travel, and feeling exhausted after work), inclement weather (e.g. “very cold,” “rainy,” “just too icky”), familial responsibilities (e.g. caring for elderly or sick family member, death in the family) and economic constraints (e.g. cost of YMCA membership, cost of hiring a personal trainer).

Interestingly, in addition to reporting supports and barriers to exercise, the maintainers also reported specific facilitators to maintenance of exercise behavior. One of the frequently mentioned facilitators was being a role model for their children and a positive influence on family members as reflected in this participant's response: "Probably my daughter is a big influence on [my exercise]...I want to bridge the family curse [of being overweight]...and let her see that I am active and maybe that will motivate her" (Kirchhoff et al., 2008, p. 521). Some maintainers also reported actively attempting to engage family members in exercise behaviors by encouraging them to take classes or other activities together. Maintainers also reported actively seeking social support from YMCA staff, friends, and family members as a means to help them maintain active lifestyles. Maintainers additionally used goal setting and reward systems to help motivate them to continue exercising. For example, one participant reported using a "punishment/reward system" and mentioned: "...If I do 3 days [at the gym] then I don't have to come on the weekends. If I don't do my 3 days during the week, then I have to come on the weekends. I don't want to come on the weekends" (p. 521). Another maintainer described motivation with improvement: "...You know, it's very exciting when I can increase [the] weight [on the weight machine]" (p. 521). Other participants reported buying themselves something as a reward for meeting their exercise goals or crossing off the days on a calendar when they exercised.

Familial issues and social support were common themes that emerged across several studies and were reportedly related to motivation, lack of motivation, maintenance and cessation of physical activity. For example, in a study conducted by Dunn (2008) family responsibilities was the most frequently reported reason that

prevented participants from maintaining physical activity. As one participant stated: “I wanted to walk, but my family needed me” (p. 42). In this study, examining supports and challenges to physical activity, Dunn recruited fourteen postmenopausal African American women between 45 and 66 years of age who were overweight or obese. Announcements were made at a local church, and participants were also contacted via letters, phone calls and personal communication. The walking intervention itself was not the focus of this study and is reported elsewhere (Keller, Robinson, & Pickens, 2004). How participants felt about and responded to the walking intervention and physical activity in general, was the emphasis of this research.

Participants engaged in three focus groups involving discussion of the facilitators to and barriers of walking. An interview guide was developed which addressed the following content: Participants’ personal experiences, barriers and motivators to engaging in a walking intervention, and participants’ feedback regarding the health promoting effects of physical activity. Focus group discussions were recorded and transcribed verbatim. A systematic and iterative examination of the transcripts was conducted to identify categories of social processes and barriers and facilitators to physical activity. Coding validity was verified by having doctoral level nursing students independently code transcripts based on data categories and definitions created from the first-level coding process. Themes were inducted which examined the initiation, cessation, and maintenance of the walking routine established for the intervention.

Differences emerged between the walking maintainers in Dunn (2008) and those who stopped walking. For women who stopped walking, a multitude of situational issues (e.g. family responsibilities, lack of support to continue physical activity, lack of time,

giving up control of behavior to God, and developing a negative view of walking) were reported as deterrents to continued physical activity. Interestingly, among women participants in this study who maintained the walking intervention, the primary motivator was having a positive impact on their families and having their family support their walking behavior. Women who maintained walking gave priority to their walking routine and reported that having a person express interest in their walking routine, commend them for their efforts, and/or walk with them was a main facilitator for continued walking. Participants who maintained the physical activity enjoyed sharing their knowledge and experiences related to the walking intervention as a means of motivating other family members (or people in general) to engage in physical activity. One participant reported: “I met two new ladies at the mall and they said ‘You seem to be losing weight and your walking so slow.’ They started walking slowly with me and then on their own. So, when I finished with them, I started with someone else” (Dunn, 2008, p. 44).

Unlike the women who maintained, those who stopped walking did not have a personal objective or goal in mind and reported that they thought their motivation to walk would “come from other participants” (Dunn, 2008, p. 42). In contrast, women who maintained not only prioritized their walking routine, they reported changes in other health related behaviors: As one participant reported: “Walking made me change the way I cook. I use ground chicken and turkey. I eat a lot of vegetables. I eat a lot of fish. I eat a lot of salad” (p. 43). Spirituality was also reported to affect walking behavior differently between the groups. Women who stopped walking reported that they could not or would not walk even though some of them had “promised God” that they would. One

participant stated: “I promised God that I would do this [but I] was unable to manage a routine [because of] the devil” (p. 43). Women who maintained walking reported finding a connection between their spirituality and walking routine. One participant commented: “I took the time to get close to God and during my walk, especially when I walked by myself. I would just talk to God, like we were having a conversation” (p.43).

Certain differences between African American women who maintain physical activity versus those who stop engaging in exercise behavior seem to be related to family support or lack of support as well as perceived social support in general. Family was an important factor when considering physical activity intervention for African American women. Motherhood, and the physical, emotional and mental changes associated with childbirth also affects women’s perceptions of facilitators, barriers, and motivation for exercise.

Setse et al. (2008) examined African-American postpartum women’s perceptions of weight gain, weight loss intervention preferences, and barriers to weight loss. Twenty-two pregnant African American women participated in focus groups led by a race-concordant facilitator. Discussions during focus groups were prompted by open-ended questions. Focus groups were audio taped and transcribed verbatim and these transcripts were then analyzed by two researchers. Quotations were extracted from the transcripts and these extractions were coded and used to identify three broad domains (attitudes, barriers, and perceived advantages) and sixteen main themes. Most participant transcripts included seven themes. Postpartum depression and its effect on motivation for weight loss, and participants expressed strong desire to lose weight were two of the main themes. Additionally, this study found that participants were aware of the health disparities

associated with obesity, and were discouraged by how media coverage of celebrities focused on those who successfully achieved postpartum weight. Other themes included participants' concerns regarding the limited availability of childcare affecting the opportunities for exercise, and family-centered lifestyle behaviors that encourage unhealthy nutrition choices.

Interestingly, the themes in Setse et al. (2008) encompass a broad range of social, psychological, and economical concerns. Participants reported an understanding of the detrimental effects of overweight/obesity, expressed a strong desire to lose the weight after delivery, yet were unsure of what to do to lose the weight. The main disconnect, identified as the primary finding by Setse et al., (2008) was this breakdown between participants' awareness of negative health issues associated with obesity and lack of awareness of effective weight loss strategies. These women knew they should do something to lose weight but they were unsure about what to do or how to achieve the weight loss. This finding points to the importance of process and how a disconnect in the sequence of obtaining knowledge, possessing motivation for the desired behavior(s), and engaging in the desired behavior can make the difference between someone remaining sedentary versus someone taking action to change and maintain an active lifestyle and weight loss change.

Similar to the previously reviewed studies, participants in Setse et al. (2008) stressed the importance of spousal and familial support. Additionally participants reported frustration regarding social expectations such as media portrayal of celebrities losing weight quickly after delivery as the expected norm for all post-delivery women. The point was made that sustained support from their spouses and family was needed in

order for them to sustain their motivation. These women were realistic in their understanding that changes in their weight would not happen overnight yet were concerned that their families, and especially their spouses, might have unrealistic expectations. For this reason participants suggested that a “family-centered approach” (p. 124) be incorporated into the weight loss program. Participants also advocated for staff members involved in the weight loss program be trained in recognizing emotional concerns that mothers with newborns face and postpartum depression symptoms and how these emotional issues can affect a woman’s ability to lose weight.

Participants in Setse et al. (2008) also reported the importance that weight loss programs/strategies be individually tailored to their lifestyles and unique weight-related goals. This was well articulated in one participant’s response which was extracted from the transcripts and reported in their findings: “I think the main important thing is for a health professional to look at everyone. I don’t like to be put in a box. I think it works so much better when you work with me, my body fat, my body weight, my height, and not try to say that everyone my height should be a certain size” (p. 124).

Seste et al., (2008) described the methodology used as “qualitative data analysis” but did not define a specific method (e.g. GT, CQR). The paradigm used, although not specified, is similar to GT in terms of verbatim transcription of participant responses and identification of categories/themes emerging from participants’ transcripts. Seste et al. (2008) was different from the approach for the current study in terms of the use of focus groups not individual interviews to gain participants’ perspectives of weight loss and physical activity issues. It may be, and is mentioned as a limitation in the article, that some participants were reluctant to share their perceptions within the group setting,

especially if their perceptions differed from the consensus of the group. Also, the emphasis of this article seemed to be to obtain contextual information from participants to inform weight loss programs and policies on a community level as opposed to the exploration of participants' perceptions of weight-related and exercise issues that may be used to inform development of individualized interventions.

Familial relations, in addition to influencing the physical activity behavior of women, may also have a strong influence on childhood behavior and sedentary versus active lifestyle choices made by children. In a study conducted by Gordon-Larsen et al., (2004) eleven female caregivers and their twelve daughter/granddaughters between six and nine years old were interviewed about how their physical and household environments affected their patterns of activity. Semi-structured, in-depth interviews were conducted with caregiver/child dyads concurrently, but in separate rooms. Multiple interviews (N=51) were conducted (maximum of three interviews for each participant) and all interviews were coded and systematically analyzed using a matrix-based approach. Transcripts were analyzed for recurrent patterns and themes were examined that related to researchers previously developed hypotheses and research questions, however these hypotheses/questions were not clearly defined in the article. The purpose of their qualitative research was however "to explore perceptions of sedentary behaviors, barriers to and facilitators of physical activity, and directions for intervention factors in this high risk [African American females] population" (p.219).

Each researcher involved in this study (Gordon-Larsen et al., 2004) read all of the interviews and the research team reviewed text samples and related codes. There were three main themes in the interviews involving: (a) Exploration of the participant

children's sedentary behavior, (b) Caregiver and children's perceptions of barriers to physical activity and (c) Potential intervention strategies based on the children's identification of favorable physical activities. Six major thematic categories were identified and included: shared activity, barriers to activity, knowledge of the health-promoting effects of activity, need for change in activity, facilitators to activity, and control of behaviors related to activity by caregivers.

The children as well as the caregivers in Gordon-Larsen et al., (2004) reported a preference for sedentary behaviors such as watching television. The caregivers frequently reported the television was an effective "babysitter" when they needed to get things done. Caregivers also reported that their children watched a large amount of television; yet the children's report of the amount of television they watched was even higher than caregivers' reported amounts. Caregivers also mentioned that they monitored the type of programming their children watched but not the quantity of time spent watching television. Additionally, caregivers did not report any advantages to turning the television off. In terms of television viewing, children reported preferring to watch television compared to playing outdoors. They also reported using the television as a "pick-me-up" when they are feeling sad as well as a way to help them fall asleep.

Caregivers were aware of the health benefits of being physically active, but reported they lacked the motivation to be active. Caregivers were also aware that their lack of activity provided a role model for sedentary behavior in their children. One caregiver stated: I'm the one who is lazy and I can't make her run outside and make her do exercise while I sit there and watch TV. So I can't blame her if she wants to come inside and watch TV because she learns from example" (Gordon-Larsen et al., 2004, p.

220). This point illustrates that a vital part of addressing the childhood obesity epidemic involves attending to the physical activity behavior of adults, especially parents, who are important role models of active or sedentary lifestyles for their children.

Interestingly, when the children were asked to identify activities to do by themselves or with peers, the girls identified several active behaviors (e.g. jumping rope, dancing, swimming) but when asked to identify activities they could do with their caregivers, the girls most frequently reported watching television and eating. Caregivers, on the other hand, identified walking as their most preferred activity yet also reported it was not a regularly scheduled activity. This may be a result of the numerous environmental barriers reported by caregivers in terms of pedestrian activity in their communities (e.g. traffic, lack of sidewalks and street lights, non-leashed dogs, lack of recreational facilities and equipment in their neighborhood and communities).

Additionally, caregivers reported that the cost of physical activity programs that were available presented a considerable barrier as reflected in this participant's response:

“There is nothing around here at all. And what there is to do, half the time we can't afford it” (Gordon-Larsen et al., 2004, p. 220). Environmental concerns such as these represent important issues related to adoption and maintenance of exercise, especially walking, jogging or other outdoor physical activities and have been examined and reported by other researchers (e.g. Sallis & Glanz, 2009). These neighborhood and community-based issues contribute significantly to the obesity epidemic and increase in sedentary behavior in the U.S. The focus of this study is however, on individual perceptions of physical activity and how these perceptions may inform intervention on an individual level.

Readers interested in further examining these community-based obesity concerns may refer to Sallis & Glanz (2009) and Rovniak et al. (2010) for more information.

How activity patterns are shaped and change across the lifespan also provides meaningful information regarding health status and lifestyle choices. In an earlier study, Lang (1998) interviewed eight White women between the ages of 58-72 years old who retrospectively reported maintaining physically active lifestyles throughout their lives. Criteria for participation in this study included that the women were White, had at least one child and reported to have been physically active for their entire lives. Lang examined the life histories of these eight women to explore the self-reported facilitators of lifelong physical activity including their childhood backgrounds, support systems, factors that contribute toward sustaining active lifestyles (e.g. motivation) as well as challenges to physical activity maintenance. Multi-case study, and specifically, life history case study, and GT methodology was utilized for data collection and analysis.

Both methods were chosen to collect data that accurately reflects participants lived experiences. Two in-depth semi-structured interviews were conducted with each participant and interviews were recorded and transcribed verbatim. Although some deviation in questioning was used, basic questions were precisely worded, predetermined and asked of each participant. Participants were asked to keep a journal of their physical activity between the first and second interviews (approximately three to five weeks). Lang also kept a record of her perceptions, thoughts, and feelings throughout the research process via memoing. Snowball and theoretical sampling was used to recruit potential participants and data collection ceased when categories became saturated. Self-reported data about physical activity, and perceived contributors to activity maintenance across

participants' lives were collected, coded, and categorized into themes according to GT (Strauss, 1987).

Six themes emerged from the Lang (1998) data: participants described themselves as physically active currently, maintained active lifestyles throughout their lives, related more to their fathers versus their mothers, enjoyed being outdoors, reported many benefits but very few barriers to physical activity. Additionally, these women reported enjoying the feeling of movement and did not like sitting still. They perceived that their motivation for physical activity was genetic and that they inherited this tendency from their fathers.

Half of participants grew up on farms and reported that they enjoyed helping their fathers with outside chores as opposed to helping their mothers with inside household responsibilities. Although participants described their mothers as hardworking, they all expressed a disinterest for engaging in the responsibilities traditionally associated with mothers who stay at home and raise their families. Interestingly, none of the participants reported a close relationship with their mothers, yet each of them reported feeling close with their fathers. Further, most participants described themselves as being more like their fathers than their mothers.

All participants except one reported engaging in organized, planned physical activity at a facility (e.g. gym) as well as spontaneous activity. Participants also reported doing a variety of activities across their lives (e.g. baseball, horseback riding, swimming, riding bikes, ice skating, fitness classes). When they had young children, their activity consisted of doing things with their children (e.g. one participant walked with her son during his paper route several miles per day). When their children were in high school

they were not as active with them and changed their activity toward exercising with other women (e.g. attending a fitness class together, walking with a friend). Participants also report engaging in activities with their grandchildren. One participant comments: “We used to walk to the park...and play on the swings and all that jungle gym stuff in the park. We used to do a lot of walking with them...We used to play ball with them. I used to play ball with my own kids” (Lang, 1998, p. 68). Additionally many participants reported either not enjoying watching TV or not having access to one as a child. One participant states: “That was the thing to get outside and play because you didn’t have a TV, you didn’t have the radio, you didn’t have anything to keep you inside. So, you played outside most of the time. I did a lot of running and things like that” (p. 71).

Interesting demographics and generational characteristics of this sample (as well as small sample size) however may limit the findings to older White women who are physically active and may not apply to other women with or without children who are physically active. For example, several participants mentioned not having a TV during childhood. All eight participants grew up in families where both parents were present, living, and remained married throughout their childhood. Additionally all of the women reported that their mothers took on a traditional role in the family (e.g. cooking, cleaning, not working outside the home, and primary caretaker of the children). Further, participants themselves remained home most of the time prior to their children beginning school and often for many of the years their children attended school. Currently however, many younger adults were raised in single-parent families and/or have mothers who work outside of the home. Additionally, most American households now have at least one TV.

As a result, younger mothers (and older mothers) of various racial and demographic backgrounds may have different experiences and perceptions of physical activity.

Lang (1998) does offer valuable in-depth examination of older, White mothers' perceptions and experiences of physical activity across their lives. The childhood reflections regarding activity and parental influence on participants' activity behavior are notable especially in light of the childhood and parental role influences on young girls as reported in Gordon-Larsen et al., (2004). In contrast to Gordon-Larsen et al.,'s study which found a parallel between mothers' sedentary behavior and the sedentary behavior patterns that their daughters were developing, the women in Lang's study described themselves as relating more with their fathers and perceiving their physical activity tendencies to be genetically inherited from their fathers. Although it was not mentioned in Gordon-Larsen et al. it would be interesting to know what influence the fathers of the female children had on their physical activity behavior and perceptions. Both studies however highlight the importance of parental influence on health related behaviors such as exercise and general activity patterns.

In contrast to several previously reviewed articles wherein participants reported the importance of or desire for family or community-based exercise interventions (e.g. Gordon-Larsen et al., 2004; Seste et al., 2008), a study conducted by Otter & Currie (2004) reveals that participants reported low motivation and interest to become involved in community or family related physical activity programs. "All members of the group agreed that Vietnam Veterans would not normally be involved socially in their local communities, nor attend a programme like this set up specifically for the vets

themselves” (Otter & Currie, 2004, p. 29). On the other hand, all of the veterans who participated reported at least one positive change to their life.

Otter and Currie studied 14 male Vietnam Veterans who participated in a 40-week exercise intervention specifically designed for Vietnam Veterans. Five of the participants were diagnosed with Posttraumatic Stress Disorder (PTSD) and all participants had at least one PTSD symptom. The intervention consisted of moderate intensity cardiovascular activity lasting 45-55 minutes in length and included a warm up (5 minutes), 30-40 minutes of aerobic activity, 10 minutes of resistance training and endurance exercises, and a cool down period of stretching exercises. These classes took place in a fitness facility twice a week for one hour sessions and were led by a qualified exercise instructor.

Otter and Currie (2004) used a GT approach to collect and analyze the data. Three focus groups were conducted at 10 weeks, 25 weeks, and at the end of the intervention (40 weeks). These focus groups were recorded and transcribed verbatim and analyzed using GT (Strauss & Corbin, 1990). Data collections ceased at the point of saturation of categories. Several themes emerged from analysis of the data. Many veterans reported feeling isolated and working long hours as a means of avoiding social contact with family and friends. As one veteran responded: “I was anti-social, well most of us were...you became anti-social and lock yourself away and you did like I did....work” (Otter & Currie, 2004, p. 29). Veterans also reported having low motivation for physical activity and described themselves as “lazy” and “unfit” (p.29). Many of the participants mentioned a lack of motivation and a tendency to just complete their regular repetitive activities. One veteran reported: “Yeah, you come home and watch the television, have a

feed and then go to sleep and that's basically it..." This participant went on to describe how the exercise intervention had changed his lifestyle: "...Now we go home, have something to eat and go for a walk and we do that at least 5 times a week...now we walk somewhere where before you'd get in a car" (p. 30).

Participants also reported a decrease in their psychological symptoms and anger. One veteran mentioned that exercise: "Helps manage your Posttraumatic Stress Disorder, your anger, your anxiety...The episodes are getting less" and others commented on the effects of the intervention on medication taking: "It has reduced my medication I'm on, that's a cost saver..." and "The anger medication I was taking, I don't take it anymore and I'm in control now. It's amazing" (Otter & Currie, 2004, p. 30). Participants reported improvement in managing their daily activities and responsibilities. In commenting on his improved physical state, one veteran mentioned: "And now when I walk the dog around the same track it's so much easier, and up the hills without getting puffed out...when normally, ...simple things like getting in and out of the car, up and down from the lounge chair...you would be grunting and groaning and now it's much more easier" (p. 31).

In addition to feeling better as a result of the exercise intervention, participants reported making other changes in their lifestyle such as better nutrition, longer workout duration and frequency, and reductions in medication. (e.g. "I've cut down on beer. I've cut down on ice-cream" (p. 31). Two thirds of the sample reported engaging in physical activity (e.g. swimming, walking) in addition to the 40-week intervention. Four of the veterans reported the intervention helped improve their diabetes. One participant commented, "I do swimming too because I've got diabetes and my feet are starting to get

that numb feeling and the exercise seems to make me able to walk better” (Otter & Currie, 2004, p. 31).

Social support was an important theme that emerged in Otter and Currie (2004) illustrates the difficulty in overcoming social isolation for many veterans. Although participants reported many benefits from participating in this intervention, they also reported they would not attend a group for Vietnam Veterans in their communities nor a family-based physical activity program. “It was reported by group consensus that Vietnam Veterans would not normally be involved socially in their local communities” (Otter & Currie, 2004, p. 32). Interestingly many veterans in this study reported that they would have been more motivated if their spouses were involved in the intervention with them yet many also reported reluctance to joining a family-based exercise program. It may be that once the veterans were attending and having a positive, beneficial experience that they felt more open to the idea of having their spouses join them whereas at the beginning of the intervention they were more resistant to the idea. Additionally, it may be that when the idea of another (unfamiliar) exercise group was presented to them as a future possibility that their social anxiety and feelings of isolation resurfaced.

One frequently mentioned positive aspect of the intervention was the planned social gathering for coffee which occurred after each class. Veterans reported about how beneficial this was and described it as “a big part of the programme” (Otter & Currie, 2004, p. 33). Participants also reported that attending an exercise class with other Vietnam Veterans facilitated the increased social interaction wherein they could interact with other veterans who “understood and accepted” them (p. 33).

In an urban community-based intervention Christensen et al., (2006) examined group cohesion and social support with 87 formerly sedentary participants who reported low back, shoulder, or neck pain to their general doctor during a three month period. The exercise intervention consisted of a 32 week program occurring one time per week for 90 minutes. The first 45 minutes consisted of a warm up and resistance training exercises, and stretches that specifically addressed musculoskeletal problems. During the last 45 minutes, participants were offered choices of the activity to be completed (jogging outside, aerobics, folk dancing, ball games).

Fitness instructors who led classes possessed a minimum educational level of BA in physical education. These instructors incorporated praise and encouragement into the workout program while being knowledgeable and mindful of each participant's physical condition and perception about exercise (e.g. uneasy, confident). Eleven classes were formed with an average of 12-14 participants per class. Opportunities for social interaction were integrated into the classes via socially-based activity choices such as dancing, aerobics, and ball games as well as coffee breaks both between and after classes. Two main social variables were measured: perceived availability of social support and interaction among participants.

Quantitative and qualitative measures were used in Christensen et al., (2006). Questionnaires were mailed out at baseline and at the conclusion of the intervention. Outcome was measured via questions that pertained to the likelihood participants would join the classes for another session. Participants were also asked to report on their loneliness. Covariates included gender, years of education, age, frequency of interaction with people outside of exercise class and frequency of social participation. Participants

were invited to attend a personal interview and 30 participants reported an interest. Maximum variation sampling strategy (Kuzel, 1992) was used to select 18 interviewees. Semi-structured interviews were conducted and focused on past exercise experiences and perception of exercise intervention experiences. Additionally, questions addressed barriers of participation and the dynamic processes in the groups throughout the intervention period. These questions addressed group cohesion from a developmental framework wherein participants described experiences regarding initial group formation, increased communication, cooperation, unity, and consciousness. Other social aspects such as conflicts and splitting into sub groups were also explored. Participants were offered an opportunity to describe the formation of common goals, mutual trust, support, acceptance, and understanding.

Interviews were recorded and transcribed verbatim and analyzed using GT (Corbin & Strauss, 1990). Five of the interviews conducted by Christensen et al., (2006) were coded separately by the first author and another researcher. Consensus was obtained and the remaining transcripts were coded by the first author. Quantitative results indicated a significant difference between participants who reported having close relationships with other group members and those who reported they did not have any close relationships with other members. Those who reported close relationships with other group members were significantly more likely to report that they intended to join another exercise program in the future. No effect was found from the intervention in terms of self-reported loneliness.

Four out of the eleven groups that were formed disintegrated and seven remained intact throughout the intervention duration. Factors that influenced the formation and

maintenance of groups included the teaching ability of the instructor and the chosen physical activity. Participants from the successfully formed groups reported a feeling of group unity that included mutual trust, acceptance, and solidarity. One participant reported “I remember him, the instructor—he made us do some activities together. I remember that day because we got that feeling of solidarity and had great fun. All the time you’re taking part in something together with others—you never feel clumsy... You feel confident, you’re not afraid of making a fool of yourself...we are all quite relaxed. Maybe I’m a little clumsy, but I’m not embarrassed anymore, not at all...we have passed that stage” (Christensen et al., 2006, p. 683).

The core category that emerged from the data was “a shared attitude” which included a sense of unity that reflected mutual support relative to the exercises. Three categories of experiences emerged that were subsumed under the core category. These experiences included: practical experiences which described participants who expressed willingness to try new things when familiar with and feeling supported by other group members, experience among peers, which is summarized in this participant’s response: “...all of us [started] out at the same level...I don’t see myself as a clumsy fool, but I may be a candidate. But that goes for the rest of the group as well...we’re basically at the same age, and that is important as well” (Christensen et al., 2006, p. 683). The final category, experience of verbal support, reflected participants responses that included appreciation of both peer and instructor verbal encouragement as illustrated in the following responses: “So somehow, maybe because some of the others cheer or...somebody gives you a nice chat...then you forget that maybe you don’t feel too

good” and “Yes, [the instructor] is also good at saying. ‘You’re doing well’ no matter what, no matter how old you are, you always need encouragement” (p. 683).

Although the study reported that there were more females than males, it is unclear if the participants who dropped out were mostly males or females. Also, it would have been helpful when interpreting the scope of these results to know the number of male and female participants in both the intervention group and in the subgroup selected for interviews. As indicated in previous studies (e.g. Duncan, Duncan, & McAuley, 1993) men and women differ in terms of physical activity adherence and in terms of the type and importance of social support. Women emphasize the benefit of informational support, and guidance and esteem support which validates their feelings of worth as important factors of exercise maintenance (Duncan et al., 1993). In contrast, general social support (e.g. family and friends) was related to physical activity adherence in men (Duncan et al., 1993). When examining physical activity intervention for men with cancer however, informational support incorporated into the intervention had a positive impact on the participants’ ability to successfully cope with their illness and its consequences (Adamsen, Rasmussen, & Pedersen, 2001). The relationships that developed between these men who shared a common illness facilitated the sense of commitment and solidarity created between them (Adamsen, Rasmussen, & Pedersen, 2001).

Physical condition and ability can influence an individual’s perception of and engagement in physical activity. In a recent study, Giacobbi, Stancil, Hardin, & Bryant (2008) examined how active individuals with physical disabilities perceived their quality of life. Fourteen female and twelve male participants were recruited from a wheelchair

user's basketball tournament. Quantitative and qualitative measures were used including The Physical Activity Scale for Individuals with Physical Disabilities (PASIPD) and in-depth semi-structured interviews. An interview guide was created which included the following focal points: school or vocational activities, perceived benefits of physical activity, motivation that sustains maintenance of physical activity involvement, etiology and nature of participants' disabilities, and self-evaluation about participants' lives. Probes were used when needed to encourage participants to expand on ideas and experiences. All interviews were recorded and transcribed verbatim. Transcripts were analyzed using GT (Charmaz, 2000; 2002). Line-by-line and open coding of the text was performed by all four authors. Data was examined independently by each author and then discussions were facilitated regarding the similarities and differences in coding between the authors. Finally, an independent auditor reviewed the coded transcripts. Agreement among the authors coding was .69.

Five higher order themes that emerged from the data included: psychological benefits, physical health benefits of physical activity, influence of social support, social opportunities, and increased self-reported quality of life. Categories subsumed under the psychological benefits theme included cognitive benefits, emotional benefits, and behavioral benefits. A 21 year-old male participant commented "I've actually developed pretty good mental strength through basketball. You really have to stay focused and concentrate" (Giacobbi et al., 2008, p.200). Self-efficacy improvement was reflected in this statement from a 43-year old female participant "...The ability to get better at something and learn new skills...I wasn't sure that was possible" (p.200). Another 51 year old female participant reflected on the psychological and emotional benefits of

physical activity in relation to her disability “I played rugby, softball. It was a good way to deal with the rage and, um the depression and all the stuff that came with it [having a disability]” (p.200). Improvement in self-concept related to their engagement in physical activity was reflected in a comment made by a 36 year old male participant: “You know, it’s a self confidence kind of thing and to me you get a lot of that through athletics” (p.200).

Half of participants reported physical health benefits related to physical activity. A 31 year old female participant stated: “...since I was lifting all of the time it really helped, so, I’ll definitely keep lifting to make sure I’m not developing any kind of shoulder problems and for basketball...” (Giacobbi et al., 2008, p. 201). Another participant, a 36 year old male commented: “I mean, I look at myself now I train 4 or 5 days a week primarily doing it for health reasons, lower my cholesterol, lose some weight” (p. 201).

Eleven of the participants’ responses were related to social influences. Participants reported that people that were important to them (e.g. family, friends, peers with disabilities, health professionals) had introduced these participants to sports and/or encouraged them to continue engaging in physical activity. One respondent, a 21 year old female commented on the support of her family: “It was never, ‘Oh, Emily [pseudonym] can’t play.’ It was always, ‘That’s my sister and she’s going to play with us.” (Giacobbi et al., 2008, p. 201). Physical activity environments also provided social opportunities according to 23 participants. Opportunities mentioned by participants included building relationships with able-bodied people, educational and travel, and valued interactions with others in general. A 46 year old male reported: “It’s a very natural bridge to the

able-bodied world. People are comfortable to say, ‘Tell me about your [involvement in] basketball’ (p.202). A 20 year old male stated: “And so, from the social aspect, it’s like the campus looks at us not as a group of guys in wheelchairs... They look at us as a basketball team” (p. 202).

The final high order theme that emerged from participants transcriptions in Giacobbi et al. (2008) was increased subjective quality of life. This theme reflected participant responses that reflected overall happiness related to their physical activity and sport involvement. A 46 year old participant made this statement: “I’ve had a, not that I want to die right now, but if I died right now, I could truly say that I’m satisfied...I’ve been able to compete in an international level, I’ve been able to win national championships athletically, I have 2 incredible kids, great wife, good job. I live in a place where I’m happy” (p.202). In examining differences between participants in relation to age, gender, and activity level, what emerged were the notable similarities across participants in this sample as opposed to differences between them. This study explores important aspects of active individuals with disabilities yet did not explore the perspective of sedentary individuals with disabilities. It would be interesting to examine how sedentary individuals with disabilities perceive physical activity and attendant supports, barriers, and motivation to engage in such activity.

In a study by Crone, Smith and Gough (2005) semi-structured interviews were conducted with 18 people that examined participants’ perceptions regarding the relationship between physical activity and mental health. Participants were recruited from three exercise referral sites within the United Kingdom: a private health club, a leisure center, and a leisure center that included countryside hiking. Focus groups and individual

interviews were conducted, recorded, and responses were transcribed verbatim. None of the participants with a mental health disorder were referred for this study. Semi-structured guidelines were comprised based on a pilot study (Crone-Grant and Smith, 1998). Questions were formed from the research questions to assist participants to explore and describe their experiences of engagement in physical activity throughout their lives and in their current life and physical activity choices. Transcripts were analyzed using the QSR NUD\*IST computer program and GT. Three main themes: self-acceptance, social context, and actions emerged from the data. Each theme is described below with relevant sub themes.

Self-acceptance represents a core category without sub themes and is described as focusing on participants “acceptance of themselves, their health and social status and life situation” (Crone et al., 2005, p. 604). One participant stated: “When I go out on a bike some moments...I sweat and physical things like that but the greatest moments are those moments when I feel totally at one, totally alive, and totally happy” (p. 604). Participants’ level of self acceptance was dependent on the inclusive nature of the environment, participants’ body image, level of comfort with their environment, and length of time frequenting the facility.

Social context was comprised of four sub themes: social support, social network, culture and environment. Positive perceptions of social support (facility staff, family, friends) was related to enjoyment and maintenance of physical activity, confidence in successfully operating exercise machines, level of comfort in the environment, and motivation. Social network includes the type and structure of the facility as well as presence or absence of social opportunity. The culture sub-theme referred to the

atmosphere and social rules/norms of the facility reflected in the behavior patterns and attitudes of the people in the facility. One respondent reflected on a negative experience and stated: “It’s interesting what you say about going because I found just the opposite because every time I went...everybody was so heavily into what they were doing nobody would speak...Everybody looks the other way if you sort of say ‘how does this work?’...they are really there to do a job but they don’t want to stop and just help you at all I found...” (Crone et al., 2005, p. 606). Environment, although included under the main theme of social context, refers to the physical environment (e.g. physical quality of the facility, exercise machines and general equipment, locker rooms). A participant commented on the frustration of navigating unfamiliar equipment and lack of needed support: “[Fitness Instructor] wasn’t there and I couldn’t work out what to do with things. I really found it hard I’ve been half a dozen times but, I just, you know, thought how the hell does this work, you know, especially with that stepper and things like that” (p.606).

The third main theme, action, had three related sub-themes that referred to actions that were taken to resolve issues that helped participants foster self-acceptance. Playing a role, the first sub theme, refers to a process wherein participants adopted a social role to make a joke, advocate on their own or another’s behalf, or to make new facility members feel welcome. One participant describes his actions of welcoming others: “If I see any new chaps come, I always try and make them...[feel welcome]... I say, ‘are you alright? Cos I remember my first day, you don’t really know anybody and you think, ‘what do I do?, who can I sit with? And shall I go with her?, and you do think you are a bit out of it...so I usually say, ‘is it your first day? Come over with us like and you soon get into a group, you know, and you learn a name every time then” (Crone et al., 2005, p. 607).

Coping mechanisms, another sub-theme of action, related to how participants addressed challenges (e.g. poor eyesight, boredom, orientation). The last sub-theme related to action, act of coping, was coded for responses wherein participants generalized their adaptive coping behaviors learned in the fitness facility into other stressful or challenging aspects of their lives. One participant commented regarding her general sense of well-being: “You can take that for life as well, people will help you but you have to play your part and this scheme [fitness center] is helping you to play your part and join in” (Crone et al., 2005, p. 607).

Participants in Crone et al. (2005) reported three positive outcomes from engaging in physical activity: a sense of belonging, a sense of purpose, and physical health benefits. Participants described staff, other members, and quality of the fitness equipment and physical environment. Participant responses were coded as having a sense of purpose when they described their participation in an activity that provided benefits and was purposefully enacted as evidenced by one participant’s response: “I felt a sense of well-being from the exercise I get bodily enjoyment...you feel alive, you feel as though you are experiencing life...and not just sitting back...you are part of it” (p. 608).

Additionally, an important outcome was reflected in participants commenting on the benefits to their physical health as a result of participation on exercise. One participant stated: “Well, my breathing’s better, after an operation I was having trouble with my chest and I’ve got asthma, but that’s definitely better...” (p. 608). Some participants also reported a reduction in medication dosage as a result of the engagement in exercise. The range of reported outcomes depended on the length of time engaged in exercise behavior and lifestyle and frequency of attendance.

Social support was a main theme reported across all studies reviewed in this chapter. Women reported the importance of being a role model for their families as a facilitator for physical activity: (e.g. as one mother spoke of her behavior related to her daughter: “I want to bridge the family curse...and not let it continue on...let her see that I’m active and maybe that will motivate her” Kirchoff et al., 2008, p. 521). Sedentary mothers also perceived themselves as role models for their children as one mother comments on the effect of her sedentary behavior on her daughter’s behavior: “....So, I can’t blame her if she wants to come inside and watch TV because she learns from example” (Gordon-Larsen et al., 2004, p. 220).

Although active and sedentary participants emphasized social support as a critical factor in maintaining (or not maintaining) their exercise behavior, there were notable differences in their approach to acquiring this needed support. Those who maintained exercise behaviors actively sought social support from family, friends, and fitness facility and exercise class staff. Further, these individuals took an active role in motivating and encouraging others toward engaging in physical activity. Maintainers also reported that they enjoyed sharing their knowledge and experience of physical activity with others (Kirchhoff et al., 2008). On the other hand, sedentary individuals seemed to adopt a more passive approach to social support and physical activity engagement, reporting that they looked to others as their resource for motivation and perceived limited control over their ability to engage in and maintain exercise behavior (e.g. time constraints, giving up control to God/seeing the devil as responsible for their relapse). Interestingly, although sedentary individuals frequently report time limitations as a reason for not engaging in physical activity (e.g. Dunn, 2008), research suggests that physically active women

average more work hours and have less free-time when compared to inactive women (Jaffe, Mahle, Lutter, & Wu, 1996).

Men also report the benefits of social support as a motivator for engaging in and maintaining physical activity. Interestingly, the men seemed to develop this unity and social connection within a group of men who shared a similar experience (e.g. Vietnam War, Otter & Currie, 2004) whereas women tend to seek out interactions with members in their fitness environments that may or may not share with them a common experience besides physical activity. Additionally, since a majority of participants in these studies were women, qualitative findings related to men's perceptions of exercise and social support are limited. Further, the majority of women in these studies were mothers or pregnant women. Therefore the physical activity perceptions and experiences of women without children in relation to social support as well as other factors may be different. The proposed study seeks to include a broader sample including men and women as well as women who may or may not be mothers as opposed to limiting participant inclusion based on gender, parental status, age, race, or physical ability.

Group cohesion and unity were reported as a part of social support and reflect, when successfully achieved, a potential facilitator for maintenance for physical activity as long as the group is maintained (Christensen et al., 2006). Cohesion requires time to develop and may help certain individuals maintain active behaviors; however it does not address issues related to adoption of physical activity. Additionally, it may be more difficult for sedentary individuals to feel comfortable engaging in a physical activity group if their ability and knowledge of exercise is low or limited. If sedentary or relapse individuals are more likely to passively seek motivation through others, it may be even

more de-motivating if they perceive themselves as unable to be part of a cohesive fitness group.

The culture of the fitness environment was also reported as an important feature of exercise maintenance and motivation. The social rules and norms of the facility as well as the atmosphere, behavior, and attitudes of others (fellow exercisers, staff, personal trainers, and class instructors) were reported as important positive or negative influences on participants' fitness experiences (Crone et al., 2005). Participants reported that instructors and fitness staff being properly trained was a critical feature to their exercise regimen and ability to maintain their established fitness routines (Crone et al., 2005; Otter & Currie, 2004; Seste et al., 2008). Influences of participants' perceptions of the fitness atmosphere also included the physical environment (e.g. ease of use of the equipment, outdoor factors such as weather, traffic, sidewalks, and safety/crime issues). Barriers to walking activities for example included concern for one's physical safety in terms of navigating traffic, walking alone in a high crime area, letting children walk in areas perceived as unsafe and slipping and falling on ice in the winter time (Gordon-Larsen et al., 2004; Seste et al., 2008). Additionally societal and media influence on women's fitness aspirations were reported to be a potential barrier to adoption, motivation, and maintenance of physical activity in pregnant women. Women reported that unrealistic media portrayals of women successfully and quickly losing weight after pregnancy put extra pressure on women to lose weight more rapidly than they perceived possible (Seste et al., 2008).

Another main theme across studies was an awareness of and reported improvement in health benefits (physical and psychological) when maintaining exercise

behavior. Maintainers reported a decrease in disease related symptoms (e.g. diabetes) as well as decreases in psychological symptoms such as PTSD, depression, and anxiety. Additionally maintainers reported a decrease in dosages or need for certain medical and/or psychological medications. This may be a difficult benefit for relapsers to experience since they often cease physical activity engagement before these benefits begin to be noticed. Another difference emerged between maintainers and relapsers. Although relapsers reported knowledge and understanding of the relationship between physical activity and health, many reported a lack of motivation toward becoming active or a lack of understanding of how to begin physical activity. This is an important consideration yet is complicated by the fact that numerous intervention studies involve relapsers who participate in exercise interventions but do not maintain the activity once the interventions have ended (Marcus, Dubbert, & Forsyth, 2000). These interventions are often designed to assist with the gap between knowledge of what to do and the execution of the action. Therefore, if the issue is lack of knowledge of what physical activity to engage in, why are we not seeing better maintenance of activity behaviors that were learned and initiated by non-maintainers during intervention studies?

Barriers and facilitators to maintaining physical activity may be, in part, related to personality characteristics (e.g. self efficacy, self concept), attitudes, and goal directed behaviors than to the type of exercise or intervention program implemented to sedentary and active participants. If this is true then it makes sense why, despite the hundreds of intervention studies that have been conducted with various groups of people, in different settings, with many different types of exercises that maintenance issues remain a very challenging problem. Are personal characteristics such as having an outgoing personality,

tendency toward goal-directed behavior, and enjoyment of the feeling of movement more likely to produce lifelong movers or those who are, in general, more inclined toward physical activity? Are individuals who report more benefits and fewer barriers to engaging in physical activity more likely to maintain the behavior? Conversely are individuals who do not have specific exercise goals, perceive more barriers and fewer benefits to exercise, prefer activities such as watching TV, and subscribe to negative self-attributes (e.g. “I’m lazy”) or negative perceptions of physical activity more likely to relapse into sedentary behavior patterns? It seems likely that this might influence activity patterns and lifestyle tendencies across one’s life.

Physical activity self efficacy, (Bandura, 1997, in Dunn et al., 2008) is defined as “having a concept of self that fits with being active, successful experience, positive evaluation of the social environment of activity, and a pleasant emotional response” (Dunn, 2008, p. 44). Self efficacy has been theorized to play an important role in motivation and maintenance of physical activity (e.g. Christensen et al., 2006; Dunn, 2008; Giacobbi, et al., 2008; Seste et al., 2008) and one’s perception of mastery and control of exercise behavior has been reported to often lead to the adoption of other healthy lifestyle behaviors such as better nutrition (Otter & Currie, 2004). Improvement to overall quality of life among maintainers has also been reported as a benefit of a physically active lifestyle (Christensen et al., 2006). Although personality variables and their relation to physical activity behaviors and lifestyle are important, they are not within the scope of the current proposed study.

Type of exercise activity has been identified as important to both active and sedentary people but is one’s tendency to maintain or cease engagement in exercise more

notably influenced by differences in active and passive approaches toward activity? For example, if an active person is engaged in an activity that they perceive as undesirable, are they more likely to seek out a more desirable activity as opposed to becoming sedentary? Conversely, are individuals who were sedentary and then engage in an activity they perceive as undesirable more likely to cease activity altogether instead of seeking out an alternative, potentially more desirable activity?

The nature of intervention studies themselves may present a challenge to maintenance of physical activity. For example, if accommodations are not made at the end of the intervention that links participants (especially previously sedentary participants) to ongoing fitness resources; those participants who are less outgoing or lack the economic resources to join a facility may drop out. In the study by Otter & Currie (2004) Vietnam Veterans reported feelings of social isolation and engaging in behaviors to socially withdraw from society and their families prior to beginning the walking intervention. At first, the veterans reported being reluctant to join the exercise group yet they ended up participating and perceiving tremendous benefit from the intervention. Then the intervention ended. Based on the social issues these men reported during the focus groups, how likely is it that they will seek out another exercise group on their own outside of this group?

A better understanding of individual differences that influence one's tendency to enjoy or dislike movement, active or passive approaches to activity engagement, and tendency toward self-perception and attitude toward engaging in and maintaining activity is necessary to inform the development of appropriate exercise interventions. We know the "*what*" regarding the differences between those who maintain activity and those who

do not but *why are they different?* The underlying motivations, feelings, beliefs and values about oneself, others, and how these factors influence physical activity behaviors are not well understood. A predominance of positivist methodologies and the lack of consensus regarding the mechanisms of physical activity that affect health (physical and mental) suggest that exploration is needed that examines why and how fitness experiences and perceptions are important to active individuals and intenders and how these perceptions and experiences differ (Crone et al., 2005). The best way to acquire this vital information is through in-depth exploration of how and why intenders and active individuals' physical activity perceptions and experiences differ. As stated in Dunn (2008): "The meaning and value of health is both personal and subjective and influences [one's] physical capacity and desire to exercise" (p. 44).

#### *Summary and Conclusions from Grounded Theory Studies*

Social support was the most predominant concept related to exercise motivation and maintenance and was identified as a main feature in all of the studies reviewed for this chapter. Females in four studies (Dunn, 2008; Kirchhoff et al., 2008; Lang, 1998; Seste et al., 2008) emphasized the importance of sharing exercise knowledge with others and being a role model for their children/family as a facilitator/motivator for maintaining their physical activity behavior. Conversely, lack of family support was perceived as a barrier to motivation and maintenance of exercise (Dunn, 2008; Kirchhoff, 2008; Seste et al., 2008). Further, sedentary mothers reported that their lack of physical activity (Gordon-Larsen et al., 2004) was a model for sedentary behavior for their children. Additionally, physically active females initiated social contact (Dunn, 2008; Kirchhoff, 2008; Lang, 1998) whereas sedentary women reported that they thought their motivation

would come from others but did not actively seek out social support (Dunn, 2008; Kirchhoff et al., 2008).

Men emphasized the importance of engaging in physical activity with others who share a common experience with them in addition to the physical activity (e.g. Vietnam Veterans, Otter & Currie, 2004). For both women and men, group cohesion, when successfully formed, (Christensen et al., 2006) and familial and social support (Crone et al., 2005; Giacobbi et al., 2008) were facilitators for physical activity. Individuals with physical disabilities perceived their involvement in a group-related physical activity as facilitating increased social support among others with disabilities as well as those without physical limitations (Giacobbi et al., 2008). The culture of the environment (Crone et al., 2005) was reported to influence level of motivation and likelihood of maintaining exercise behavior. The social rules and norms of an environment such as the attitudes of the fitness center staff and fellow exercisers were reported to affect participants' perceptions of the environment and their likelihood of maintaining physical activity (Crone et al., 2005; Seste et al., 2008). Participants also mentioned that it was important for fitness instructors to be properly trained and skilled in teaching the exercise (Christensen et al., 2006; Otter & Currie, 2004) and having awareness of certain psychological issues that may affect participant's ability to participate (e.g. postpartum depression, Seste et al., 2008; ).

Both active and sedentary participants were aware of the healthful benefits of exercise (Crone et al., 2005; Dunn, 2008; Giacobbi et al., 2008; Gordon-Larsen, 2004; Kirchhoff et al., 2008; Otter & Currie, 2004; Seste et al., 2008) but the sedentary participants reported being unsure of what type of activity to engage in. Physical barriers

such as heavy traffic, crime/safety concerns, lack of fitness resources within the community were related to sedentary behavior (Gordon-Larsen et al., 2004). Sedentary participants also reported more barriers to exercise than their physically active counterparts. Sedentary individuals lacked specific goals related to their physical activity plans whereas physically active participants had clearly defined goals as well as reward systems for achievement of desired behavior and attainment of weekly fitness goals.

#### *Qualitative Research Paradigm: Grounded Theory*

Grounded Theory (GT), originally developed by Glaser and Strauss in 1967, is a qualitative, discovery-oriented method of theory development wherein investigators remain close to the data in order to gain an in-depth understanding of participants' perceptions and experiences (Pontorotto, 2005; Rennie, 1998). GT has its foundation in sociology and was based on the concept of "symbolic interactionism" defined by Fassinger (2005) as a "...fluid and dynamic process of interpersonal relating in which meaning is created within and derived from those social interactions" (p.156). The term "grounded theory" reflects the concept of a theory being "generated by (or grounded in) a close inspection of qualitative data gathered from concrete settings" (Pidgeon & Henwood, 1997, p.253). Creation of theory using GT provides an opportunity for meaningful examination of topics or processes not easily studied through more traditional quantitative means (Rennie, Phillips, & Quartaro, 1988) such as the study of the relevant processes related to exercise behavior adoption and maintenance among active individuals and intenders.

GT is often conceptualized from a constructivist-interpretivist research paradigm and can be defined as the interactive process between researcher and participant

regarding the issue being studied that focuses on the “lived experiences” of the participant and assumes there are “multiple, apprehendable, and equally valid realities” (Pontorotto, 2005, p. 129). The GT assertion that there are multiple and equally valid realities contrasts the positivist paradigm which centers on one “true” reality. GT researchers contend that examining unique individual behaviors or concepts within a sociocultural context (Pontorotto, 2005) involves the reflexivity and subjectivity of both the participant and the researcher (Rennie, 1998). This approach examines the meaning of participants’ experiences and utilizes an inductive approach which requires researcher immersion in data prior to theory development (Rennie, 1998). GT was chosen as the research paradigm for this study based on its inductive process and goal of discovering a theory or related categories regarding exercise adaptation and maintenance processes and behaviors derived from participants’ lived experiences.

GT’s inductive process of examining and interpreting data to inform theory development contrasts with deductive explanations of cause and effect relationships (Pidgeon & Henwood, 1997). In a positivist research approach, hypotheses are identified prior to data collection and data are then used to validate the preexisting concepts or hypotheses (Pidgeon & Henwood, 1997). The inductive only (e.g. Glaser, 1992) versus inductive and deductive (e.g. Strauss & Corbin, 1990) approach to GT is at the heart of the discrepancies among certain GT researchers.

One key dispute involves the originators of GT: Barney Glaser and Anselm Strauss who have diverged in their views regarding epistemological and certain methodological implications (Rennie, 1998). Glaser (1992) has remained committed to GT’s original discovery-oriented, purely inductive paradigm of inquiry which leads to

theory development not the testing or verification of hypotheses. Although theories emerging from grounded theory research may lead to future verificational research endeavors, those efforts are not, according to Glaser, part of the GT research process.

Strauss and fellow colleague, Julia Corbin (Corbin & Strauss, 1990; Strauss & Corbin, 1990; 1994) have modified the original GT paradigm to include both induction and deduction modes of verification. Experiences recalled from the researcher's own experience related to the phenomenon being studied (e.g. introspection) are included as empirical data and interpretations regarding the influences on the phenomenon being studied are not limited to data collected from participants. Furthermore, hypothesis testing is considered a necessary part of "constant comparison" which involves comparing each datum to other data, (explained in detail in the method section of this study). An axiomatic schema developed by Strauss called the "conditional matrix" (Rennie, 1998; p. 106) mandates that all social phenomena be conceptualized as a process.

Although the issues related to adaptation and maintenance of healthy lifestyle behaviors are suggested to be part of a process, insisting they are instead of allowing emergent categories to come from the data would require forcing the data to fit a preconceived framework (Glaser, 1992). Since it is entirely possible for some of participants' experiences to be categorized as stable unchanging structures, use of Strauss's conditional matrix did not seem appropriate for this study. Also, the intent of this study is discovery of participants' lived and perhaps hidden experiences that may be formulated into categories and emergent theory as opposed to the testing or verification of a priori hypotheses or concepts. Furthermore, although introspection is a potentially

valuable source of information, its subjectivity is best integrated into the research process via memoing (Fassinger, 2005) as opposed to being incorporated as empirical data (Strauss & Corbin, 1990) used to interpret participants' experiences. After reviewing literature from both Strauss and Glaser's opposing standpoints, I chose to use a GT approach as traditionally conceptualized (Glaser, 1965; Glaser & Strauss, 1967) and reaffirmed by Glaser in subsequent literature (Glaser, 1978; 1992) for this study.

GT was chosen in order to discover, a comprehensive understanding of participants' lived experiences in a content-specific environment (Ponterotto, 2005) related to lifestyle changes and attendant barriers of adopting and maintaining healthy lifestyle changes. In using a GT approach (Glaser, 1992; Glaser & Strauss, 1967; Rennie, 1998), the rhetorical structure of this research project was written in the first person and includes personalized information regarding my expectations, values, and biases as well as the personal meaning and impact of this transactional and fluid research process throughout my dissertation experience and completion (Fassinger, 2005; Pontorotto, 2005).

This axiological focus in detailing my interpretative lens included specific activities such as self-reflection, memo writing, and note taking (Levitt, Butler, & Hill, 2006). It is assumed that I, as principal researcher, cannot remove my values and experiences from the research process and therefore must engage in activities that delineate my role as researcher (Ponterotto, 2005; Rennie, Phillips, & Quartaro, 1988). As such, I disclose that my history of being raised by a chronically sedentary mother and a physically active father whom have very different views of the value of exercise has influenced my perspective and curiosity of differences in lifestyles in terms of activity.

Additionally, I have maintained, aside from minor infrequent disruptions, an active lifestyle for 22 years and perceive exercise as a mandatory part of my lifestyle. This approach integrates with an ontological understanding that specific contexts and individual perceptions and experiences influence and result in the development of multiple realities (Fassinger, 2005; Ponterotto, 2005) as opposed to one “true” reality. These multiple realities are influenced by the dynamic interaction between researcher and participant as well as by other social environments the participant and researcher encounter (Ponterotto, 2005).

The constructivist/interpretivist GT research paradigm (Morrow & Smith, 2000; Ponterotto, 2005) is consistent with the epistemological viewpoints and methodological implications of GT as described by Glaser (1992), Glaser and Strauss (1967), and Rennie (1998). This inductive (Glaser, 1992) approach emphasizes an idiographic (Ponterotto, 2005) and hermeneutical/interpretative (Rennie, 1998) perspective which adds depth and dimension to research investigations that is difficult to attain through a hypothetico-deductivism (Strauss & Corbin, 1990) approach to inquiry. I assert that the unique and complex perspectives and experiences of intenders and active individuals’ strengths and barriers in maintaining healthy lifestyles are hidden (Rennie, 1998) and not easily or comprehensively attained through quantitative positivist and postpositivist research paradigms (Ponterotto, 2005).

An epistemological approach that emphasizes the interactional dialogue between researcher and participant (Fassinger, 2005) is central to facilitating reflection and achieving an in-depth accurate understanding and interpretation of participants’ lived experiences (Rennie, 2000). In the process of accurately interpreting participants’ lived

experiences, extensive quotations extracted from participant interviews are included in my dissertation as a means of clarifying and understanding participants' experiences.

*Potential Goals of the Proposed GT Research:* In order to use GT as a well-focused and practical method for examination while being mindful of the labor-intensive nature of GT, potential goals for this project were defined (Pidgeon & Henwood, 1992): The goal of this study was to utilize a GT approach to discover a list of principles/categories or, if feasible, a preliminary theory that is “grounded in data collected from...” intenders and active participants, “...on the complexities of...” the issues and barriers related to maintaining healthy lifestyle changes (Fassinger, 2005, p. 157). This study concluded with the saturation of categories and identification of a core category through selective coding, which comprised the second phase of analyses. Selective coding is defined as a process involving the selection of a “central or “core” category...that integrates all of the other categories into “an explanatory whole”” (Fassinger, 2005, p. 161). Following the process of selective coding is the creation of a narrative which captures the most fundamental aspects of the data and describes how the sub categories are related to and are subsumed under the established core category (Fassinger, 2005). An “intermediate stage of analysis,” (Pidgeon & Henwood, 1992, p. 267) which follows the initial coding, saturation of categories, and definitions of categories (beginning stage) was the main goal and level of analysis used for this dissertation, however during analyses, a core category was identified and defined.

A “full-fledged” grounded theory development, as defined by Charmaz (1990) suggests that a theory clarifies phenomena, “specifies concepts which categori[z]e the relevant phenomena, explains relationships between the concepts, and provides a

framework for making predictions” (p.1164). As it has been suggested, the differences between intenders and active participants are not well understood and the emphasis of this study therefore is clarity, specification of concepts and categorization, and examination of the potential relationships between the categories. Although a core category was identified, it is suggested to be preliminary and further study is required to determine the applicability of this core category and related theoretical considerations to larger and more broadly diverse samples.

*Axiology: Researcher biases and values, knowledge of previous literature on topic, and self reflection:* According to GT, it is desirable for the researcher to have limited knowledge of the literature related to their topic when engaging in study conceptualization and data collection (Fassinger, 2005). This is tempered by the importance of the researcher knowing enough about the phenomena or population to properly attend to effective sampling and data collection procedures (Henwood & Pidgeon, 2003). Therefore, an ideal balance might involve knowing enough about the intended area of study to inform research design and implementation, yet not being too biased by the literature in such a way that expectations interfere with data collection and interpretation.

In this respect, it is important to note that I have some prior knowledge and understanding of the literature involving weight management issues as well as the literature involving lifestyle and exercise interventions. The specific familiarity, to an extent, was necessary in order for me to identify the appropriateness of using GT to address gaps in the literature regarding this issue. My familiarity with this research has also allowed a deeper understanding of the health disparities, economic and social

concerns that often accompany weight related issues and sedentary lifestyles. In other words, without some prior knowledge of the literature, I would not have been aware of the paucity of in-depth discovery-oriented research studies examining sedentary and active individuals' perceptions of issues related to lifestyle changes.

A deeper understanding from the perspective of the participants is needed in order to facilitate the development of culturally relevant interventions that intenders are more likely to maintain. Although several of the interventions for weight management are effective in reducing weight and fostering better health in the short-term, they are of limited value when individuals do not stick with the lifestyle changes on a more long-term, consistent basis.

In summary, my prior knowledge of obesity and exercise intervention literature has enabled me to identify gaps in current understanding of exercise adoption and maintenance behaviors in active individuals and intenders. This gap is best addressed by utilizing a discovery-oriented, GT approach that prioritizes an accurate interpretation of the participants' voices and the transactional and fluid dialogue between researcher and participant existing within a larger social context.

*Strengths and limitations of GT:* Strengths of GT research include approaching the study of phenomenon from a new, creative, and unassuming perspective which allows the uniqueness and complexity of participants' experiences to be interpreted in context with limited preconceptions from the researcher (Fassinger, 2005). The integration of theory and practice achieved in using a GT approach is closely aligned with the scientist-practitioner model and distinctly prioritizes the participants' voice in defining and exploring their experiences in context (Fassinger, 2005). It can serve as a comprehensive

and informative research process in itself; yet it also has extensive merit in providing valuable analyses to inform future research and advocacy.

GT can also however, be a cumbersome and laborious process which requires explicit disclosure of researcher biases, lengthy transcriptions of interview data, and comprehensive analyses. The lengthy and involved concurrent data collection and analyses make conducting GT on large samples impractical and is therefore usually limited to smaller samples (Fassinger, 2005). The potential richness in discovering theoretical implications of certain social phenomena, however may be best approached from a research paradigm such as GT designed to provide both clarity and depth despite its labor intensive methodology.

## Chapter III

### Method

#### *Participants*

This study recruited twenty adult participants eighteen years of age or older who completed comprehensive, face-to-face interviews, lasting approximately one hour in length, related to their physical health and behavior. Participants were recruited from selected YMCA fitness centers, Lehigh University's Department of Education listservs, and via word-of-mouth from Lehigh University students, YMCA staff and YMCA fitness members (see Appendix C). This broad and numerous list of recruitment sites was composed to help obtain a diverse sample in terms of race, ethnicity, age, gender, and physical ability. Inclusion criteria included: intent to start and/or maintain planned weekly physical activity including mild, moderate, or intense levels of activity. This criteria to select intenders versus sedentary but not intending individuals was chosen because the objective was to sample sedentary individuals who were in at least a contemplative stage of change (Prochaska, Norcross, and DiClemente, 1994). Chronically sedentary individuals with no intention to exercise were perceived as most likely to be in a pre-contemplative stage of change. Activities could include outdoor and/or indoor environments and recreational and/or utilitarian activity. Individuals who were currently active, those who were sedentary but had been active in the past, and those who had always been sedentary were eligible for recruitment as long as they intended to become active, or had become active, within 30 days of the interview (intenders). "Active" was defined as someone who participated in and had maintained weekly activity on a regular basis for a minimum of three months. The minimum length of activity maintenance reported by Active participants was 6 months.

Participants ranged in age from 19 to 68 years of age and all provided verbal and written consent for themselves (See Table 1 Demographics in Results section). All individuals participated in an audio recorded face-to-face interview conducted in a mutually agreed upon public location (e.g. YMCA facility, Lehigh University, other consultation or meeting room). Exclusion criteria included individuals with no intention to engage in physical activity in the next 30 days. Children and adolescents were also excluded from participating as this study focused on motivation and maintenance related issues among adults.

All participants were advised to consult with their doctor before beginning any exercise routine or program. No interventions were implemented in relation to this dissertation study. This study interviewed participants about their experiences with engaging in physical activity. No physical activity advice, information, guidance or suggestions were offered as part of this exploratory research project (aside from the suggestion to consult with a doctor regarding their fitness plans). All participants were given a list of referral sources that they can contact should they feel emotionally distressed or upset by the interview process (see Appendix I).

*Theoretical Sampling:* The number of participants recruited was ( $N=20$ ). The decision to interview twenty participants is a result of a review of the grounded theory literature which suggests a range from five to ten protocols (e.g. Rennie et al., 1988) to as many as twenty to thirty protocols (Fassinger, 2005) required in order to achieve saturation of the theory/categories (Fassinger, 2005). Saturation is achieved when “the analysis of additional protocols reveals no new categories, properties, or relationships among them” (Rennie et al., 1988. p.143).

In following a GT paradigm, new participants were selected for this study and interviewed concurrently with data analysis of prior interviewee data as the categories/theory emerges (Glaser & Strauss, 1967; Rennie et al., 1988). The selection of future participants was primarily guided, however, by aforementioned diversity considerations and subsequent interviews and analyses which were used to inform the evolving criteria for the sampling procedures (Fassinger, 2005; Rennie et al., 1988). In attempting to obtain as diverse of a sample as possible, priority was given to recruiting participants from diversity populations not yet sampled however, as previously mentioned, comprehensive sampling from all aforementioned areas of diversity was not possible. Therefore, when deciding among participants from diverse backgrounds (e.g. choosing between a Hispanic male or a woman with physical disabilities) wherein I was only able to recruit one of these individuals, previous data collection informed the choice made according to theoretical sampling procedures. Based on emerging categories and themes obtained from previous participant data, the choice of one subgroup of participants was more relevant to the overall process (e.g. finding inactive males who were willing to participate was extremely difficult. Therefore, regardless of their age, race, or ethnicity, all willing inactive but intender adult males were interviewed since a balanced sampling of active and inactive women and men was of importance to this study). These considerations were made as situations arose and were considered on an individual basis. Data were analyzed shortly after collection to direct the acquisition of new data (Fassinger, 2005; Rennie, et al., 1988). This analytic process was designed to elicit clarity, explanation, and comprehensiveness of the emerging principles/theory (Fassinger, 2005; Rennie et al., 1988; Rennie, 1998).

*Procedures:*

*Data Collection and Analysis: The Constant Comparison Method:* The Constant Comparison Method (Glaser & Strauss, 1967) is a process of data collection and analysis wherein “investigators systematically categorize data and limit theorizing until patterns in the data emerge from the categorizing operation” (Rennie, Phillips, & Quartaro, 1988, p. 141). This method involves several components including memo writing, data collection, open categorizing, analyzing and integrating the data into a parsimonious explanation via the identification of an emergent core category, revisiting earlier steps as needed for categorization and theory clarification, and writing up the results (Rennie et al., 1988). These steps and other relevant aspects are discussed in detail below in relation to the current study.

*Memo-writing and note taking:* Memo writing (also called memoing) was used throughout the data collection and analysis phases to ensure researcher reflexivity (Fassinger, 2005). This process helped capture my conceptualization and evolving insights that occurred as I concurrently collected and analyzed data. The product obtained through this process became part of the data and reflects the importance of accurate categorization of participant perceptions. Memoing also helped ensure that my interpretations closely reflected the voice of participants. By explicitly disclosing any biases that emerge before, during or in reflecting upon the research process, I was more aware of my biases and was better able to guard against their influencing data collection, analysis, and write up of results (Rennie, et al., 1988). Memo writing entries (*see Appendix B*) were systematically recorded and unedited, with the exception of editing typos, throughout the research procedure and included the date of entry, the topic and

participant the memo is referring to, and any relevant or potential ideas, categories, patterns, assumptions, biases, or theories that emerged (Pidgeon & Henwood, 1992; Rennie, et al., 1988). These reflective notes were a main resource of my interpretative activities related to identification of relationships among categories and emerging central categories (Rennie et al., 1988).

*Data Collection/Interviews:* Face-to face interviews were conducted with each participant. An in-depth, semi-structured interview format was used (see Appendix E), consisting primarily of open-ended questions and minimal use of prompts (Fassinger, 2005). When prompts were utilized, the focus was to encourage participants' elaboration (process) of their experiences or perceptions as opposed to paraphrasing what they had stated (content) (Fassinger, 2005). All interviews were recorded and transcribed verbatim. These transcriptions were then analyzed concurrently with the collection of interviews from additional participants. After interviews and data analyses were completed, follow up phone calls/emails were initiated to participants asking if they are still engaged in physical activity and how long they maintained the activity if they had returned to sedentary lifestyles.

Interviews consisted of capturing participants' experiences and perceptions at the start of their gym membership/exercise goals for intenders beginning to implement a fitness plan and during the maintenance phase for active participants who are already engaged in a regular exercise regimen. The beginning phase included the initial adoption of physical activity for individuals who planned to or were just starting an exercise routine. The maintenance phase was for individuals who reported engaging in established regular weekly exercise. Interviewees were asked to discuss their previous, current, and

desired future lifestyle choices and exercise goals, attendant planned behaviors, and psychological issues related to their overall health and wellness. A flexible and open interviewing style was used. This was an important characteristic of the discovery oriented, idiographic nature of GT research and sought to promote the goal of understanding participants' lived experiences without imposing researcher bias and preconceived hypotheses.

After gaining approval from the planned sites for recruitment at their facility, a handout (see Appendix F) briefly describing the study was placed on a table or bulletin board in the waiting area/entrance area of the fitness center and emailed via Lehigh University College of Education listservs (see appendix C). Interested applicants were asked to email or call for further information. I then called or emailed each interested applicant and asked them a few questions to determine eligibility and demographic characteristics (see appendix J). When the potential participant was determined to be eligible, met diversity sampling objectives, and was willing to meet in person, I then scheduled a date and time to meet and explain the study and obtain consent. Meeting with participants took place in a private available room within the fitness center, Lehigh University, or other designated meeting room. Written, informed consent was obtained from each participant prior to data collection. Incentives were provided in the form of gift cards. A choice between a \$10 gift card to Target or Home Depot was offered to participants at the completion of the interview although three participants declined the gift card.

By attaining an in-depth understanding of what distinguishes participants who maintain versus participants who do not it is hoped that the preliminary core category

derived from this study will be used to further clarify and define the needs of sedentary but intending individuals. A core category is defined as a category that “integrates all of the other categories into an explanatory whole” (Fassinger, 2005, p. 161). The preliminary core category developed from this study can then be used to define and clarify the development of a theory that better defines the needs, challenges, and issues of intenders who continue to attempt healthy lifestyle changes yet repeatedly fail. This theory, developed by accurate interpretation of participants’ lived experiences, may then be tested and modified accordingly in future research studies and may lead to the development of interventions and treatments.

*Audio recording, storage, transcription, and disposal:* All interviews were audio recorded. Potential participants were informed of the recording verbally when the study was proposed to interested individuals and in writing via informed consent (see Appendix D). All interviews, except the first participant’s interview which was transcribed by this researcher, were transcribed by an outside source. Transcriptions were stored in two combination-locked file boxes purchased specifically for this purpose: one box was used for the delivery and retrieval of participant data to and from the transcriber and the other box was used for all other participant data stored by this researcher. The transcriber was instructed and agreed to store participant data and transcriptions inside this locked container and agreed to take data out only when completing transcriptions. The transcriber was given a USB data storage device free of any data to transcribe participant interviews. Upon completion of transcription and the return of this device, this researcher removed all participant data before returning it to the transcriber for another transcription. Transcriber did not possess more than one participant’s data (in transcribed or audio

form) at any time. No other information regarding participants was provided to the transcriber besides the audio recording of participant interviews. All recordings will be destroyed after my dissertation is successfully defended.

*Data Coding: Open, Axial, and Selective:* All transcribed interview data were reviewed from beginning to end (i.e. audited by this researcher) to ensure that the transcripts matched the actual words of participants. Edits were made to the transcripts by this researcher as needed before analysis. The transcribed and edited interviews were then analyzed, concurrently with data collection, via breaking down the transcripts into “meaning units of individual concepts conveyed by the interviewees” (Rennie et al., 1988, p. 142); (see Appendix G) by writing related concepts and emerging themes in the margins alongside participants’ actual words. Early in the categorization process, the generation of such meaning units/sub-categories was descriptive to ensure accurate reflection of the participants’ language and experiences. These meaning units were then written on index cards representing emerging subcategories/themes. Open categorizing, defined as “the assignment of a given unit to as many categories as possible” (Rennie et al., 1988, p. 143), was used as part of the data analysis for this study. As additional categories emerged, further units of meaning were then compared to existing categories and either included in an existing category or a new category was created. Line-by-line analyses and coding was completed for all 20 transcripts and the index cards containing sub-categories and concepts were then sorted into piles.

A word document was created from the sorted index cards and included a preliminary list of higher-order categories and concepts with the related sub-categories and themes listed underneath them. As data collection and category development

progressed, analysis included examination of the relationships between the categories (Axial coding; see Appendix H) (Fassinger, 2005). Categories that were subsumed by other categories were integrated into other categories as needed. This process included comparison of sub categories to larger more central categories, comparison new data to existing categories, definition of the attributes and dimensions of categories, and examination of potential variations in the data, existing categories, and interrelationships among the existing categories (Fassinger, 2005). Separate documents were created for each participant reflecting the endorsement (or lack of endorsement) of each category and subcategory. The original preliminary list of higher order categories was reviewed and edited as part of this process. After all 20 participant transcripts were reviewed a second time, an integrated document was created that contained the final list of higher order categories and subcategories and included samples of participants' transcripts that represented each category/subcategory.

*Criteria for Evaluating Grounded Theory Research Projects: (Pidgeon & Henwood, 1992, pp 268-272):* This evaluative criterion is suggested by Pidgeon and Henwood to be used as a guide to determining the rigor of GT. One of the fundamental parts of GT is for the researcher to keep close to the data and therefore the emergent theory should be derived from and fit the data. An important part of this process is developing complete definitions of the main concepts which summarize why the issue or phenomena being examined have been labeled and categorized in a particular fashion. Another important consideration is how well the emergent theory is “integrated at diverse levels of abstraction” (Pidgeon & Henwood, 1992, p. 269). This synthesis which reflects a “thick” (Geertz, 1973) description of the issue or phenomena is reflected in the

researcher's memoing and depth of theoretical relatedness on various levels of abstraction.

Researcher reflexivity acknowledges the constructivist view of approaching research and the belief that both the researcher and participant are interdependent. Conducting GT research involves a social and dynamic process. Researcher reflexivity brings to the forefront the inherent subjectivity that is part of this process which leaves both the researcher and the researched changed as a result of their interdependence. This reflexivity can be evaluated based on the openness of the researcher in disclosing biases, attitudes, and values that affect the research process. This disclosure may take place throughout the research process via memoing or by keeping a reflexive journal. Thoughtful, accurate documentation of initial concerns, observations regarding data quality, and sampling issues can provide a "paper trail" which is available for external audits and evaluation of quality (Pidgeon & Henwood, 1992, p. 270).

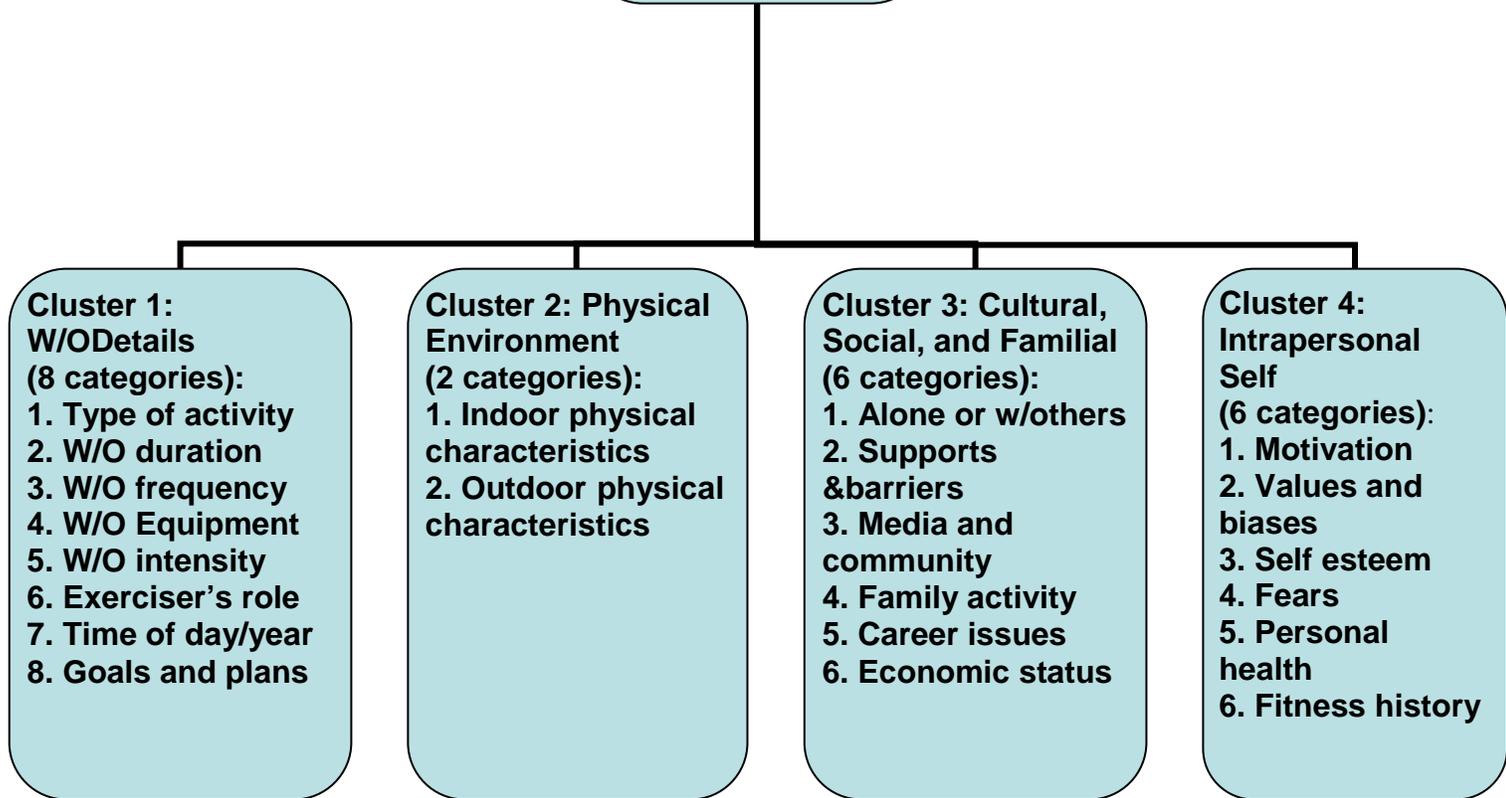
Researcher attention to reporting fully on the contextual aspects of a study helps highlight the "transferability" of findings (Pidgeon & Henwood, 199, p. 270) wherein the findings are applied to a context similar to the one in which the findings were derived. Detailed case studies or extensive participant quotations can be used to help illustrate key points and reflect the concept of keeping close to the data. Finally, a researcher's ability to persuade readers influences the evaluator's perception of the rigor and ability to articulate researcher findings to peers.

## Chapter IV

### Results

The GT analysis of the 20 interview recordings resulted in a total of 960 meaning units. The hierarchy consisted of four levels which included: Highest-Level 1: Core category; Level 2: Clusters subsumed under the core category; Level 3: Categories subsumed under related clusters; and Level 4: Subcategories subsumed under related categories. The focus in the data analysis was directed to exploration of the clusters of meaning units that were integrated into categories and further into higher-order clusters. The credibility checks (e.g. auditing of transcriptions) and the saturation of categories and related themes suggest that this analysis was comprehensive and continued to the point that, toward the last few participants, new data were redundant with that previously collected. The analysis did result in a preliminary core cluster and meaningful relationships among categories. Additionally, this study revealed information that may be used in future studies that may lead toward further clarification of the core cluster. The core category, four clusters, and number of related categories are displayed in Figure 1:

**Core  
Category:  
Fitness  
Philosophy  
and Lifestyle**



In Tables 3-6, each of the four clusters are defined, one per Table, and the subcategories within each cluster are identified with their related category. Additionally, participant endorsement of each category and subcategory is noted and is broken down by Active participants versus Intenders as well as total number of participants who endorsed each category and subcategory. When interpreting these numbers, it is

important for readers to keep in mind that the participant interviews were semi-structured. As a result, although the participants were each asked the same set of questions to address relevant content areas, the probe or follow up questions varied based on each participant's unique experience and worldview. In other words, participants spoke of the issues that were salient for them within their own experience of level of physical activity and related lifestyles. Also, since the coding was not exclusive, a participant's interview may be coded into multiple clusters as appropriate, therefore, the total of category endorsement numbers may exceed the overall endorsement number of their cluster. These numbers, then, are best thought of as an assessment of how many participants, active and intending to exercise, referred to a specific experience as a significant or an important part of their physical activity or related lifestyle. Please refer to Figure 1 for a graphic depiction of the hierarchical organization of the core category and four clusters.

Table 2: Participant Demographics:

Participant	Active/Intender	Gender	Age	SES	Sexual Orientation	Race	Recruitment Site
1	Active	Male	23	Middle	Heterosexual	Caucasian	Ambler YMCA
2	Intender	Female	65	Poverty	Heterosexual	Caucasian	Ambler YMCA
3	Active	Female	55	Middle	Heterosexual	Caucasian	W.C. YMCA
4	Intender	Female	40	Low income	Heterosexual	African American	Ambler YMCA
5	Active	Male	68	Middle	Heterosexual	Caucasian	Roxborough YMCA
6	Active	Female	55	Middle	Heterosexual	Puerto Rican	Ambler YMCA
7	Active	Female	52	Middle	Heterosexual	Caucasian	Roxborough YMCA
8	Active	Male	52	Middle	Heterosexual	Caucasian	WOM Referral
9	Active	Male	58	Middle	Heterosexual	African American	WOM Referral
10	Intender	Female	47	Low income	Lesbian	Caucasian	W.C. YMCA

11	Intender	Female	41	Middle	Heterosexual	African American	Lehigh University
12	Intender	Female	39	Middle	Heterosexual	Caucasian	Lehigh University
13	Active	Female	28	Low income	Heterosexual	Caucasian	Lehigh University
14	Active	Female	34	Low income	Heterosexual	Black/Kenyan	Lehigh University
15	Active	Female	46	Middle	Heterosexual	Caucasian	W.C. YMCA
16	Intender	Male	53	Middle	Heterosexual	Caucasian	WOM Referral
17	Intender	Male	19	Middle	Heterosexual	Dominican	WOM Referral
18	Intender	Male	42	Middle	Heterosexual	Caucasian	WOM Referral
19	Intender	Male	30	Upper-Middle	Heterosexual	Caucasian	WOM Referral
20	Active	Male	64	Upper-Middle	Heterosexual	Caucasian	WOM Referral

Overall, there were 11 participants who were maintaining active lifestyles (Active) and 9 who were sedentary but intended to begin working out or had just begun working out within 30 days of the interview (Intender). This clarification in the intender group was necessary as the participant may have just joined the gym and started working out for a few days/week before an interview could be scheduled with that person. These individuals were classified as Intenders if they had begun exercising less than 30 days from the interview. Nine participants were male (five Active and four Intenders) and eleven were female (six were Active and five were Intenders). Three participants identified as African American, one identified as Black/Kenyan, two identified as Hispanic (one identified as Puerto Rican and one identified as Dominican) fourteen participants identified as Caucasian/White and identified their heritage from the following ethnicities: Irish-American, Welsh, Polish/Slovak, Austrian/Canadian, Italian American, Russian, Norwegian, and German. Two participants identified as international students currently living in America and eighteen identified as United States citizens.

Ages ranged from 19 to 68 years old ( $X = 45.55$  years old). One participant was 19 years old, two participants were between 20-29 years old, three participants were 30-39, five were 40-49, six were 50-59, and three were 60-69. Socioeconomic status ranged from “below poverty level” to “upper middle class.” One participant identified as below poverty, four were low income, thirteen were middle class and two were upper-middle. One participant identified as lesbian and nineteen participants identified as heterosexual. Seven participants identified as having physical limitations ranging from mild to moderate. Three participants declined gift cards, twelve participants selected and were given a Target gift card and four participants selected and were given Home Depot gift cards. Nine participants were recruited from YMCA locations (four from Ambler YMCA, three from West Chester YMCA, and two from Roxborough YMCA), seven were recruited by word-of-mouth referrals, and four were recruited from Lehigh University.

Table 3  
 Cluster 1: Workout Details (Aspects of the actual workout/activity itself and the role of the exerciser). Total categories included: 8

<b>Category</b>	<b>Subcategories</b>	<b>Total</b>	<b>Active</b>	<b>Intender</b>
<b>Category 1a: Type of Exercise/exercise structure/exercise intervention.</b>				
	Cardiovascular, toning, and weight training	12	8	4
	Water Aerobics	2	1	1
	Walk/run outdoors	5	0	5
	Workout at home	1	1	0
	Utilitarian Activity	1	1	0

	Some of Workout in gym	16	11	5
	Some of workout outdoors	9	4	5
	Sports Related Activity	2	2	0
	Specific interventions to support exercise	5	2	3
<b>* Category 2a:</b>		<b>Total Time Range</b>	<b>Active</b>	<b>Intender</b>
<b>Duration of Workout</b>		30-120 minutes	30-120	30-60
<b>**Category 3a</b>	See description below			
<b>***Category 4a</b>	See description below			
<b>Category 5a:</b>		<b>Total</b>	<b>Active</b>	<b>Intender</b>
<b>Intensity of workout Low/Moderate/High</b>				
	Low	5	1	4
	Low Moderate	5	2	3
	Moderate	8	6	2
	Moderate-High	2	2	0
	High	0	0	0
<b>Category 6a:</b>				
<b>Exerciser's role in physical activity</b>				
	Participant only	17	8	9
	Participant and instructor	2	2	0
	Instructor only	1	1	0
<b>Category 7a: Time of day/year</b>		<b>Total</b>	<b>Active</b>	<b>Intender</b>
	Morning	10	5	5
	Afternoon	5	5	0
	Evening	5	3	2
	Varies	5	3	2
<b>Category 8a:</b>				
<b>Participants workout goals/plans</b>				
	Weight loss/maintenance	13	7	6

	Health management (med and psych)	7	2	5
	Role model for others	4	2	2
	Utilitarian activity	3	1	2
	Enhance physical appearance	17	9	8
	Consistency	15	8	7
	Increase strength, tone, flexibility	7	4	3
	Be healthy for retirement	4	3	1

*\*\*Category 3a: Days per week spent working out or intending to workout All participants fell within a range of 2-6 days per week. None of the participants, active or intender endorsed planned activity for only one or all seven days per week.*

*Category 4a: Workout equipment used included gym equipment, free weights, sneakers/workout clothes, pool, and sport equipment*

Cluster 1: Workout Details (Aspects of the actual workout/activity itself and the role of the exerciser)

Data in this cluster was endorsed by all 20 participants, which described her or his overall workout or physical activity routine or, for those who are sedentary but intending to start working out, plans for a workout or physical activity routine. Endorsement by category varied among participants as described in each category results.

Category 1a: Type of Exercise/exercise structure/exercise intervention

More than half of the participants described workouts that included ( $n = 8$  Active) or were intended to include ( $n = 4$  Intenders) cardiovascular, toning, and weight bearing activity at a fitness center. One Active participant engaged in water aerobics at a fitness center as her only physical activity, one Active participant walked to and from work as

her only form of physical activity and only one participant (Active male) worked out at home. Five Intenders planned to walk or run outside and one Intender planned to engage in water aerobics. Sixteen out of twenty participants completed ( $n = 11$  Active), or planned to complete ( $n = 5$  Intender) at least some of their physical activity at a fitness center. Nine participants engaged in ( $n = 4$  Active) or planned to engage in ( $n = 5$  Intender) at least some of their physical activity outdoors. Two participants currently engage in sport-related activities such as softball tournaments ( $n = 1$  Active) and Senior Olympics ( $n = 1$  Active). Five out of twenty participants ( $n = 2$  Active;  $n = 3$  Intender) had specific interventions they used, or planned to use, to support a healthy lifestyle. Two of the intenders were changing their nutritional intake as a way to support their exercise goals. Although these endorsements overlap with Cluster 4, Category 5d Personal Health, it is included here because these Intenders mentioned diet as an integral part of their fitness plan. Two participants, one Active who had used a Wii exercise program to get started in exercise and now no longer uses it, and one Intender, plans to purchase a Wii to help get her started in her planned fitness regimen. One Active participant has a device that he uses to track his food/calorie consumption and exercise/calories burned.

Category 2a: Duration of workout; Category 3a: days of the week; Category 4a workout equipment used; Category 5a: intensity of workout; Category 6a: Exerciser's role in physical activity (participator, teacher, instructor of instructors); Category 7a: Time of day/year; Category 8a: Participants workout goals/plans.

Participants' duration of time spent per session of physical activity/exercise (Category 2a Duration of workout) ranged from a minimum of 30 minutes to a maximum of 5.5 hours per session. Only one participant engaged in workouts lasting longer than

two hours per session and this Active participant worked full-time as a fitness instructor and instructor of instructors. Therefore, her workouts included time spent in her personal fitness routine as well as the time she spent teaching fitness classes since she often does most of the physical activity with her classes. The other 19 participants reported working out, or intending to workout between 30 and 120 minutes per session. Only one Intender planned to work out for 120 minutes compared to three Active participants who currently work out 120 minutes or longer per session. Eight of the nine Intenders planned to workout for 30-60 minutes per session. Eight out of eleven Active participants currently engage in workouts that range from 30-60 minutes.

Days per week spent working out or intending to workout (Category 3a) ranged from two to six days per week. None of the participants engaged in or planned to engage in exercise only one day per week or seven days per week. Workout equipment used or intended to be used (Category 4a) included gym equipment, free weights, sneakers/workout clothes, pool, and sport equipment. Intensity of workout (Category 5a) varied from low intensity to high intensity. Four out of nine Intenders planned to engage in low-intensity activity, three planned on low-moderate intensity workouts, and two out of nine planned to engage in moderate-intensity activity. None of the Intenders planned on engaging in moderate-high or high-intensity related activities. Only one of the Active participants currently engages in only low intensity activity (walking), two out of eleven reported low-moderate activity, six out of eleven reported moderate activity and two out of eleven reported moderate-high-intensity activity. Seventeen participants reported their role in physical activity (Category 6a) is as a participant of activity only. Three out of twenty participants, all Active, reported that they serve as personal trainers or instructors

of physical activity. Two of these instructors indicated that they did their own personal workouts separate from teaching fitness classes and one indicated the only time she exercises is when she is teaching her water aerobics classes.

Category 7a, Time of day/year indicated that a majority ( $n = 5$  Intenders) planned to workout in the morning, followed by two Intenders who planned on evening workouts and two who reported that time of day of their workouts would vary. None of the Active participants reported working out only in the morning, five reported completing their workouts in the morning and afternoon, three Active participants reported exercising in the evening, and three reported that the time of their workouts vary. Intenders were more likely to plan to skip their workouts if the weather was bad: *“Wintertime is harder because of the snow and it’s dark and cold.”* (Participant #10, pg 15), or if their work schedule changed: *“One of my concerns...is going to be...after summer...once I go back to school...I get up at 5:30am...and it varies when I am done...if I put it off until after school, it may not happen”* (Participant 18, pg. 16) whereas Active participants tended to plan for alternative ways to complete their workout: *“If the gym’s closed she’ll [wife] say why don’t you just walk with me today, so I’ll walk with her...”* (Participant 9 page 7).

Participants’ workout goals included six out of eleven Intenders who wanted to lose weight and seven out of nine Active participants who were exercising to maintain their weight or lose additional weight. Two Active participants and five Intenders’ workout goals included management of medical (e.g. T2DM) or psychological (e.g. depression) diseases or disorders. Two Active participants and two Intenders endorsed working out, or planning to workout to set an example/be a role model for others to engage in exercise. Two Intenders planned to engage in utilitarian exercise and one

Active participant endorsed walking to and from work as her sole means of exercise. Nine Active participants and eight Intenders worked out, or planned to work out, to enhance their physical appearance. Seven Intenders reported wanting to be more consistent in exercising and eight of the Active participants endorsed consistency as a main goal of their workouts. Four Active participants and three intenders wanted to increase strength, tone, and flexibility as part of their workout goals. Three Active participants and one Intender wanted to be healthy as they planned to or just recently retired.

The principle that was developed from Cluster 1 was that Active participants were less likely to report interruptions to their workout routines compared to Intenders and/or were more likely to develop alternative ways to complete their workouts. Participants engaged in various exercises and activities, mostly in a fitness center or outside. Time and days per week spent working out was similar across Active participants and Intenders, however, Active participants tended to report working out for longer periods of time and at a higher intensity compared to Intenders. Additionally, a larger portion of Active participants reported completing some of their workouts in a fitness facility whereas Intenders were split between working out in fitness facilities and outdoor activities. A majority of both groups do however complete some of their workouts at a facility. A majority of both Active participants and Intenders had exercise goals that included losing/maintaining weight, improvement of physical appearance, and being more consistent with their workouts.

Table 4

Cluster 2: Physical Environment of workout/activity: Total categories included=2

<b>Category</b>	<b>Subcategories</b>	<b>Total</b>	<b>Active</b>	<b>Intender</b>
<b>Category (1b) indoor physical characteristics</b>				
Positive Comments	Accessibility (proximity, hours, parking)	9	7	2
	Schedule of classes	6	5	1
	Enjoyment of using weight machines	6	5	1
	Variety of exercise opportunities	7	6	1
	Facility size	5	4	1
Negative Comments	Overcrowded/too small	3	1	2
	No place to socialize/eat a snack	1	0	1
	Difficulty parking	1	0	1
	Inconvenient class schedule	3	2	1
	Unclean facility	2	2	0
	Too expensive	2	0	2
	Long wait for weight machines	1	0	1
	Does not like working out on machines	3	0	3
<b>Category 2b: outdoor exercise environments/neighborhoods</b>				
Positive Comments				
	Walkable neighborhood	17	9	8
	Drives to fitness	12	9	3

	facility			
	Works out at home	1	1	0
	Running track/sport field nearby	4	4	0
	Facility size			
Negative Comments				
	Not walkable	4	2	2
	Heavy traffic	5	4	1
	No sidewalks	10	6	4
	Crime/fear for personal safety	3	2	1
	Terrain to hilly	2	1	1
	Unleashed dogs/animals	3	1	2

Cluster 2: Physical Environment of workout/activity: Total categories included = 2

This cluster includes aspects related to the built environment or other indoor/outdoor physical surroundings, accessibility, and proximity to home/work of the current or planned exercise routine. This section is limited only to comments that pertain to the physical aspects and accessibility of the facility.

The first category (1b) contains participant responses that relate to the indoor physical characteristics: accessibility, such as hours of operation and parking, and proximity to work/home of their exercise routine or plans. Most participants ( $n = 10$  Active;  $n = 8$  Intender), even if their workouts do not include use of a fitness center, commented on their perceptions of a particular fitness center or fitness centers in general. Positive comments included accessibility ( $n = 7$  Active;  $n = 2$  Intender) such as hours of operation, proximity to work/home, and parking. Schedule of classes ( $n = 5$  Active;  $n = 1$  Intender), enjoyment of using weight-bearing machines ( $n = 5$  Active;  $n = 1$  Intender),

variety of exercise opportunities/activities ( $n = 6$  Active;  $n = 1$  Intender), and size of facility ( $n = 4$  Active;  $n = 1$  Intender) were also mentioned. Problems mentioned included the facility being overcrowded ( $n = 1$  Active;  $n = 2$  Intender), no available space to socialize before/after workout or place to eat a snack without feeling cramped ( $n = 0$  Active;  $n = 1$  Intender), problems with accessibility such as hours of operation, proximity to work/home, and parking ( $n = 0$  Active;  $n = 1$  Intender), inconvenient fitness class schedule ( $n = 2$  Active;  $n = 1$  Intender), unclean fitness facility ( $n = 2$  Active;  $n = 0$  Intender), too expensive ( $n = 0$  Active;  $n = 2$  Intender), long wait for weight machines ( $n = 0$  Active;  $n = 1$  Intender), and do not like to work out on weight bearing machines/weight lifting ( $n = 0$  Active;  $n = 3$  Intender).

Seventeen participants ( $n = 9$  Active;  $n = 8$  Intender) indicated that their neighborhoods are walkable. Two Active participants and two Intenders indicated their outdoor exercise environments/neighborhoods were not walkable (category 2b). One Intender has two homes and defined the area around one of her homes as walkable and around the other home as non-walkable therefore, the numbers add up to 21 instead of 20 for this category. Twelve participants ( $n = 9$  Active;  $n = 3$  Intender) mentioned that they are within walking distance to their gym, or have walkable neighborhoods/ability to walk to stores, but they all chose to drive instead. One Active participant reported that he works out at home and does not walk in his neighborhood even though he defines it as walkable. Four participants, all Active, reported that they have access to running tracks/sports fields nearby and all reported that they use them occasionally. Although only four participants ( $n = 2$  Active;  $n = 2$  Intender) identified their neighborhoods as not walkable, most participants identified problematic aspects of navigating within their

neighborhood environments. Those participants who identified problems related to the walkability of their neighborhoods mentioned heavy traffic ( $n = 4$  Active;  $n = 1$  Intender), lack of sidewalks ( $n = 6$  Active;  $n = 4$  Intender), crime/fear for personal safety ( $n = 2$  Active;  $n = 1$  Intender), terrain too hilly ( $n = 1$  Active;  $n = 1$  Intender) and unleashed dogs/other animals ( $n = 1$  Active;  $n = 2$  Intender) as reasons for being concerned about walking in their neighborhoods, although these issues only deterred some of them from walking or planning to walk in their neighborhoods.

The principle identified in this cluster was that proximity, accessibility, and physical layout of the environment as well as safety features and aspects of the physical environment influence the physical activity behavior of the participants. Active participants were more likely to identify positive aspects of their indoor physical environments and Intenders endorsed more negative aspects of their indoor physical environments. Interestingly, Active participants and Intenders endorsed positive and negative aspects of outdoor physical environments more equally. Further, Active participants reported more access to outdoor resources such as sports/running tracks and were more likely to be bothered by traffic and lack of sidewalks when compared to Intenders. Three participants ( $n = 2$  Active;  $n = 1$  Intender) provided illustrative summaries describing how differences in their physical environments has notably affected their physical activity behavior and lifestyles. For example, participant 12, who has been sedentary for more than two years, described a place where she had previously found it much easier to be active: *“When I was living in Baltimore City, I had more access, like I could go out my door every day and run and also and there were a lot of bike trails and stuff near my house. It was kind of like people’s routine, like put your bike*

*in a car and go, bike on a trail or whatever... You had to walk to everything, you walked to everything cause there was nowhere to park....I prefer doing outside things and just normal, just leisure, what would be considered leisure things that I can beef up a little or do something with was opposed to being in a gym. So I was much more active when I lived in the city and I made more of an effort to be active in the city.”*

Additionally, both international students who have been living in America for several years reported that it was much easier to be active in their native country than in America. Active participant #13 mentioned: *“I mean, thinking about physical activity, I find that I'm a lot less active here than I was in England just because there's so much more driving here and you can just drive and just get out of your car places whereas in England I didn't drive so I was taking the bus places or walking so it's just kind of a lot more general activity throughout the day than here... I only learned to drive because I knew I was coming here. I never even drove in England. I was always having to get around on my feet”* (pgs 8-9).

Active participant # 14 describes the differences in her physical activity in Kenya versus America: *“in Kenya you walk everywhere, you walk to every place...and...in Kenya you're not just walking for exercise, you're walking because you don't have a car and that's what people do...(p.5)...when I run [in American town she lives in currently] I am like running...just outside people's houses so I feel like...maybe I'm too close to someone's property...I'm on the pavement here and at times in the morning at that time there are not like many cars so...I run like on the road so that I don't feel like I'm like invading people's walkway...but in Kenya like where I was running at that time like it*

*wasn't so close to the houses...so...the neighborhood I was in...there were chained fences, people had fences there so, I would just run”(p.6).*

Table 5

Cluster 3: Social/Cultural/Familial aspects of workout/activity. Total categories included=6

<b>Category</b>	<b>Subcategories</b>	<b>Total</b>	<b>Active</b>	<b>Intender</b>
<b>Category (1c) preference for working out alone or with others</b>				
	Prefer working out alone	5	3	2
	With others for social connection	11	7	4
	No preference/unsure	2	1	1
	With others for competition	4	2	2
	Being a role model for family	5	2	3
	Role model for community	2	2	0
<b>Category (2c) Supports and barriers toward physical activity</b>				
Supports	Family	9	6	3
	Fitness staff supportive	8	6	2
	Retirement	4	3	1
	Alleviates depression symptoms	4	2	2
Barriers	Family responsibilities	14	6	8
	Fitness staff unhelpful	4	2	2
	Unmet fitness needs	3	1	2

	School/work interferes with workout	9	5	4
	Financial concerns	5	1	4
	Bad weather	7	3	4
	Straining muscles/injuries	13	7	6
	Crowded gym	5	0	5
	Skill limitations	4	2	2
	Lack of time	9	3	6
	Feel self conscious	2	0	2
	Too fatigued	9	3	6
	Rather do something else	2	0	2
<b>Category 3c: Media and community influences</b>				
	Teaches children about healthy lifestyles	5	5	0
	Television (Biggest loser)	4	0	4
	Community weight loss program	3	0	3
	Fitness books, Wii	2	1	1
	Information on the internet	1	1	0
<b>Category 4c: Family's physical activity behavior past and present</b>				
	Family members were active when participant was a child	13	7	6
	Family was not active when participant was a child	7	4	3
	Family members	15	8	7

	are currently active			
	Family members are not active now	5	3	2
<b>Category 5c: Career-related issues</b>				
	Negative consequences of working on exercise	15	8	7
	Positive Consequences of working on exercise	10	5	5
<b>Category 6c: Participant's economic status</b>				
	Negative consequences on exercise	5	2	3
	Positive Consequences on exercise	5	3	2

### Cluster 3: Social/Cultural/Familial aspects of workout/activity

This cluster pertains to aspects related to social, cultural, and familial influence on exercise activity.

In terms of preference for working out alone or with others (1c), three Active participants preferred working out alone, seven preferred working out with other people for social connection and one indicated that it does not matter to her either way. One of the active participants, (Participant 15) responded, *“I don’t want to be on a team, but I don’t want to be alone either...I’ll come in by myself and I’ll get on a piece of equipment, but if someone comes to talk to me I’m thrilled as long as I don’t have to stop”* (pg 20).

Two Intenders reported having a preference for working out alone and one of these participants (Participant 16) indicated that he only likes to work out alone at first “*out of embarrassment for being out of shape*” (pg 16) and then he likes to run with other people, especially as part of “5k type of running.” Four Intenders reported social connection as a reason for wanting to work out with other people. When talking about the people in her water aerobics class, Intender Participant #10 mentioned, “*They’re the best. They call me skinny, they tell me how good I look. It really helps*” (pg 17). Intender Participant #2 stated, “*Once I get in there and the other people come in, they are all nice people, they come in, everyone says Hi and it is like and you sit in the chair and start your stuff because you do it in the chair basically then it’s like I am so glad I’m here...*” (pg 13). One Intender (Participant 19) mentioned that he never worked out with anyone and therefore, did not know whether or not he had a preference for it or not.

Two Active participants mentioned liking to compete with others and two Active participants endorsed the importance of being a role model for their family. Two active participants indicated the importance of being role models for the community/others at the gym. These two participants (Participants #1 and #15) are staff members at fitness centers and both indicated a felt sense of responsibility toward practicing healthy lifestyles. Participant 1 reported, “*...with my job I promote activity and a lot of healthy habits so I feel that to be an example I have to practice what I preach. So, I feel that’s very important as well*” (pg 8).

Two of the Intenders reported that they enjoy the competition of working out with others. One Intender, Participant 4, in response to a past attempt to engage in exercise stated, “*I joined Weight Watchers with my daughter thinking that if someone went with*

*me I'd have competition...She had no interest whatsoever so therefore she wasn't any competition for me"* (pg4). Participant #4 then ceased her exercise related activity for several years at this point. Intender Participant #17 also reported enjoying the competition of working out with others: *"I enjoy exercising with other people due to it makes it more fun and more competition and I love it...I can do it by myself, but it is not as much fun"* (pg13). Three of the Intenders mentioned the importance of being role models of physical activity and healthy lifestyles for their families but none of the Intenders endorsed being role models for their communities. Intender Participant 12 mentioned, *"Time goes so quick...if I'm not active, then my daughter and son won't be and won't learn that those are important things to have in your life. We try to expose them, but if they don't see me doing it, then they are not going to do it and it will be a whole pattern"* (pg20).

Interestingly, those Active participants that reported a preference for working out with others were also willing to work out alone if someone was not able to work out with them. This differs from the Intender participants who reported a preference for working out with others and, if no one was able to workout with them, they would often skip the workout session or stop working out altogether.

Six Active participants and three Intender participants mentioned family as a support for being active (2c). Intender participant #11 states in regard to her plans to become physically fit that, *"...my children are so happy for me and so supportive, so is my husband"* (pg. 20). Active participant #14 mentioned that talking on the phone with her sister, who does not live close by, about exercise is a support for her in maintaining her active lifestyle. Six Active and eight Intenders reported that family responsibilities

presented barriers (supports and barriers:2c) to initiating and maintaining exercise plans. The differences seemed to be that, Intenders would cease activity if family responsibilities seemed to conflict with their workout plans whereas Active participants would still work out, however their workout plans tended to be either shortened or rescheduled for another time, yet would still take place. For example, Intender participant #12 struggles with feeling guilty about working out instead of spending time with her family, “...*I love to hike so if I can get my family out to hike then I feel like at least we are all doing it... When my kids are at child care I feel guilty exercising because it's like I only have so many hours, I have so much work to do, how could I take an hour [to workout]? So it's hard for me to justify...if the kids are in child care I want to pick them up and be with them. I don't want to be at the gym.*” (pg. 3). Participant 12 also mentioned that she does not take her children hiking although she would like to. Comparatively, Active participant #15, struggles with the similar barriers but with a different outcome: “*Like, I think as my kids got older and they spent less and less time at home and needed me less and less I wanted them more and more...and so getting to the gym was not as much of a priority as having breakfast with my children. So I think over the last few years that's also come into play is like I'd rather be with you guys than be on a treadmill. But I'm fortunate that I have a job [fitness instructor] that keeps me busy enough during the week that I can afford to do that.*”

Fitness center staff and other members were also seen as being either supportive ( $n = 6$  Active;  $n = 2$  Intender) or a hindrance ( $n = 2$  Active;  $n = 2$  Intender) to exercise within the facility. For example, as a support, active Participant 13 described her current jazzercise instructor as “*easy going*” and “*fun*” but remembered a previous instructor

who was “*too critical*” and “*yelled at you if you weren’t doing it right*”(pg 10). Intender participant 2, who struggles with physical limitations as a result of Multiple Sclerosis, also had both positive and negative things to report about her recent interactions with staff during her fitness center experience (2c): “*I can go into the fitness room and supposedly the people there in the red shirts to help you, they are all there socializing with each other and it is awkward sometimes, I always feel like I am begging, I am interrupting their conversations there, that is awkward and I don’t want to be a complainer, I don’t want to be a griper but at least survey the room and see if anyone needs anything while you are conversing. I don’t care if you are talking, but I am having a need here, I don’t know what I am doing. They gave me a little orientation, I couldn’t do too much orientation at one time, you know because they give you, put this machine on this, put this machine on that, and it was all new to me... when I go there...to keep asking upsets me...plus I have to go in and say I have a situation...I am not like everyone else. So because I wanted to do the other class [standing exercise class]...and I said why can’t I do that one and [instructor] said I think you need to start here [chair exercise class]. And I said OK. She always said in a class, you do what you do, at your own pace, she’s really good...She’ll say to me, you’re fine, you’re doing fine, you’re where you should be” (pg 11).*

Three Active participants and one Intender mentioned retirement as a support for working out (2c) as they would have more time and also that they wanted to be in shape when they retire. Two Active and two Intenders endorsed exercise as very helpful in alleviating their symptoms of depression (2c).

In terms of barriers to exercise, five Active participants and four Intenders mentioned that work/school sometimes gets in the way of exercising (2c). In terms of economic concerns, four Intenders cited finances as being a barrier to exercising (e.g. cost of fitness membership) and only one Active participant mentioned cost as a barrier to exercising. This person, Participant #14 reported that she works out at the gym at her school which is free, but does not take any fitness classes, as she would need to pay extra for the classes. One Active person, Participant #6, who walks to work for exercise mentioned that, although she works at a YMCA and receives free membership, she does not work out there. Another Active participant reported that the money she pays for the exercise classes she takes motivates her to get her money's worth, as she pays one price for a set period of time, no matter how many times she attends the classes. Therefore, the more times she attends a class, the less each class costs her. Three Active and four Intender participants reported that bad weather deters them from working out (Intender) or makes it harder to exercise but they usually follow through anyway (Active).

Seven Active and six Intender participants mentioned concern about health issues, such as sustaining injuries or pulling/straining muscles during a workout, as a potential barrier to working out (2c). None of the Active participants mentioned a crowded gym as being a barrier yet five Intenders did. Two Active participants and two Intenders mentioned that they were concerned about their skill limitations (2c) in the activity they would like to do or are doing. For example, one participant, who walks to work as her only exercise, would like to start water aerobics, but does not know how to swim. Another Active participant uses the machines at the gym, but does not know how to use them properly and has strained her arm previously. Three Active and six Intenders

mentioned that a lack of time to workout as a barrier (2c) to engaging in physical activity. Two Intenders reported feeling self conscious (2c) about working out and other people seeing them when they were out of shape. Three Active and six Intender participants reported that, at times, they are too fatigued to engage in physical activity (2c). Two Intender participants mentioned that preferring to do something else would be a barrier to exercise.

Five Active participants and four Intenders mentioned media and community influences (3c) as supportive of exercise lifestyles. Five Active participants and zero Intenders mentioned that positive media and community influences help teach children about healthy lifestyles. For example, Active participant 1 offers seminars in the community to middle school-aged students to help them learn the benefits of engaging in healthy and active lifestyles. Four Intenders and zero Active participants endorsed the television, and shows such as “The Biggest Loser” as positive influences toward healthy active lifestyles. TV was also mentioned by one participant (#4) as a barrier to working out because of the temptation to watch TV instead of going for a walk. Three Intenders and zero Active participants considered community weight management programs to be supportive of healthy lifestyles. Two participants (one Active and one Intender) reported fitness books and Wii fitness as beneficial and one Active participant mentioned that finding information about fitness on the internet was helpful.

The following categories in Cluster 3 examine fitness and family history and take a retrospective and longitudinal look at childhood activity through current place in adulthood and its place in the participant’s level of activity overtime. This section includes immediate family members’ physical activity behavior past and present

(Category 4c). It also includes career-related issues, Category 5c (e.g. job change, retirement) that may have influenced exercise behavior at different times in participants' lives. Participant's economic status (Category 6c) also was reported by some participants as relevant to their activity over time.

Seven Active participants and six Intenders reported that their immediate family members were active when participants were children (Category 4c). Four Active participants and three Intenders reported that their families were not active at all when they were children. Eight Active participants and seven Intenders reported that their families are currently active. Three Active participants and two Intenders mentioned that their families are currently not active. Interestingly, these differences may be influenced by the differences in how Active participants versus Intenders define physical activity and exercise. For example, several Intenders (e.g. Participants 2, 4, 12, and 18) included activities such as walking through the aisles of a store, washing laundry, and running errands via driving/getting in and out of the car as exercise. On the other hand, Active participants tended to be more conservative as to what qualifies as exercise or physical activity. As participant 15 remarks when reflecting on her sister's definition of exercise,

*“...she doesn't do anything organized, like nothing structured. So she and her family will go ride their bikes so to me if I'm gonna go ride my bike it's gonna be a 20 mile bike ride. That's a worthwhile bike ride. Not to the park and back which you know might be 5 miles but that's her idea of a bike ride. My idea of exercise, and I think it comes from group fitness is it lasts an hour. If it doesn't last an hour it's not exercise...It doesn't count. So I'm not gonna say she's not active cause she does have, they all have*

*bikes and she did buy the treadmill. She's not active in terms that it's not structured and it's not regular I don't think. There"* (pg. 14).

This issue suggests an important area of exploration for future study which may involve specific questioning that relates to participant's definitions of exercise and physical activity. What are the parameters or boundaries of what constitutes exercise? If exercise and physical activity are not the same, then how and why are they different?

Seventeen participants ( $n = 10$  Active;  $n = 7$  Intenders) reported that career issues (Category 5c) had an impact on their physical activity behavior and lifestyles at some point in their lives. Fifteen of those participants ( $n = 8$  Active;  $n = 7$  Intender) reported negative consequences of working related to physical activity behavior and lifestyles such as working at a desk job, changing from a position that involved more walking/movement on-the-job to a less active position or environment. Other work-related barriers included working two full-time jobs for several years and not having time to workout during that period. Positive aspects of career and its influence on exercising included two Active participants who have recently retired as they reflected on how retirement has opened up their schedule to work out when they want to. Five participants ( $n = 2$  Active;  $n = 3$  Intender) cited economic barriers (Category 6c) to exercise including not having the money to join a gym. Some participants ( $n = 0$  Intenders;  $n = 2$  Intenders) struggle with receiving much needed information and support from financial resources that they qualify to receive. One participant with enduring physical limitations, who was a single parent and unable to work, described how she has handled financial problems over the years:

*“The whole system is horrible...they would put me in one program and then they would terminate it. All of this stuff about privacy act and all that stuff, everybody changes my life on a computer and knows everything about me without my permission and I just felt like a rag being thrown all over the place and I had nobody, you don't have an advocate, you don't have an advocate. Anyway that is what I was doing ...so anyway I say I am gonna join the Y, but it costs this much money so I had to go fill out all of their forms and prove how poor I am and you get tired of it so I did all that and then they gave me the scholarship and the balance due my Mom gave me some money for Christmas and I said, 'there, I am going to the Y.' It took a lot to go over there... I mean I feel like I am at the mercy of the systems and when they do a change out there it affects me and if they take my food stamps away, I won't eat well. If I can't get a scholarship to the Y, I won't go to the Y. I mean I'm a beneficiary of the systems even though they are not the greatest” (pgs 10 and 17).*

The principle of this cluster was that Active participants reported more supportive factors to working out, were less derailed by obstacles that interfered with their workouts and were more likely to work around barriers in a way that allowed them to complete some form of exercise even if it were not their preferred activity. More than half of the total participants reported wanting to be with others when they workout as a means of connecting with others. Both groups mentioned the importance of being role models for their families but only the Active group endorsed the importance of being fitness role models for their communities. Both groups also considered family to be a source of support and hindrance to exercise but twice as many Active participants compared to Intenders reported that their families were supportive of their workouts. Additionally,

although both groups identified more barriers to exercise compared to supports, Intenders endorsed the barriers with greater frequency than Active participants. Exceptions to this were straining muscles/injuries and school/work interfering with exercise wherein Active participants outnumbered Intenders in endorsing these subcategories. Additionally, Active participants were more likely to view non-television-related media and community influences as resources for teaching children about healthy lifestyles whereas Intenders were more likely to consider television programs that are related to fitness topics as positive media influences compared to none of the Active participants. There were not notable differences between groups in terms of family history of activity, career-related issues, or economic status except in terms of positive aspects of career related to exercise wherein three Active and zero Intenders reported examples of when their career actually supported their opportunity to exercise.

Table 6  
Cluster 4: Self/intrapersonal. Total Categories included: 6

<b>Category</b>	<b>Subcategories</b>	<b>Total</b>	<b>Active</b>	<b>Intender</b>
<b>Category 1d: Motivation</b>				
	Health concerns	8	2	6
	Weight loss	13	7	6
	Love working out	9	7	2
	Being outdoors	5	2	3
	Want to look good	9	4	5
	Setting and achieving goals	10	6	4
	Financial reasons	9	7	2
	Variety	8	7	1
	Structure	6	5	1
	Crises (e.g. divorce)	1	1	0

<b>Category 2d: Values biases, feelings</b>				
	Variety	8	7	1
	Exercise is fun	9	6	3
	Don't like exercise	5	1	4
	Working out is selfish	2	0	2
	Initiating activity is hard	9	3	6
	The importance to having a purpose for fitness	11	8	3
	Working out should be priority but it's not	5	1	4
	Commitment and discipline	14	9	5
	Need an established routine	17	9	8
	Need some success in order to continue	18	9	9
	Good habits go together	7	4	3
	I feel good after a workout	18	10	8
	Lack of exercise=laziness	8	5	3
	Lack of exercise=inability to work around barriers	14	6	8
	Exercise is part of my lifestyle	11	6	5
	Working out is mandatory	11	7	4
	Balance of	7	5	2

	lifestyle is important			
	Structure is a vital part of exercise routine	12	7	5
	Teaching children the value of ex/healthy lifestyles is important	10	5	5
	My drive to exercise is intrinsic	9	7	2
	My drive to exercise is extrinsic	11	4	7
	<b>Category 3d: Self Esteem</b>			
	I am too small	2	2	0
	Low Self esteem	4	1	3
	Satisfied with body weight/shape	10	7	3
	Unsatisfied with body weight/shape	10	4	6
	Unsatisfied with body strength	9	3	6
	Eating issues/disorder	2	2	0
	Self conscious about medical problems	8	2	6
	Self conscious about psychological problems	6	2	4
	Self conscious about medical and psychological	6	4	2
	Pride in workout	7	5	2
	Focused on and feel good about	11	8	3

	workout			
	Feel confident about exercise	13	11	2
	Better mood after exercise	12	7	5
<b>Category 4d: Fears/concerns about exercise/being sedentary</b>				
	Getting injured while exercising	14	9	5
	Fear of being sedentary	11	7	4
	Concerned disability will hinder workout	5	2	3
	Personal safety concerns	3	2	1
	Concern about age	4	3	1
	Others will see how out of shape I am	2	0	2
<b>Category 5d: Personal Health</b>				
	Weight related issues	15	8	7
	Eating related issues	2	2	0
	Obesity	3	2	1
	Mild physical health problems	5	4	1
	Moderate physical health issues	8	5	3
	Psychological problems	5	2	3
<b>Category 6d: Personal Fitness History</b>				
	Active as a child	17	9	8
	Not active as a	3	2	1

	child			
	Active now	11	11	0
	Not active now/but intending	9	0	9

Cluster 4: Interpersonal/Self aspects of fitness lifestyle included 6 categories.

This final cluster included intrapersonal aspects of fitness and active or inactive lifestyles. Factors that influence or contribute toward participants' level of motivation (Category 1d), values, biases, feelings and beliefs about physical activity (Category 2d), self image/esteem (Category 3d), fears/concerns about working out (Category 4d), personal health (Category 5d), and personal fitness history (Category 6d) were included in this cluster.

Participants endorsed the following motivators (Category 1d): health concerns (Active  $n = 2$ ; Intenders  $n = 6$ ), weight loss/maintenance (Active  $n = 7$ ; Intenders  $n = 6$ ), love being active (Active  $n = 7$ ; Intenders  $n = 2$ ), being outdoors (Active  $n = 2$ ; Intenders  $n = 3$ ), improved physical appearance (Active  $n = 4$ ; Intenders  $n = 5$ ), setting and achieving goals (Active  $n=6$ ; Intenders  $n=4$ ), financial reasons (Active  $n = 7$ ; Intenders  $n = 2$ ), variety (Active  $n = 7$ ; Intenders  $n = 1$ ), and structure (Active  $n = 5$ ; Intenders  $n = 1$ ). Only one participant, Active participant #8, reported that crises motivated him and that he worked out as a way to punish himself/cope with the crises (e.g. divorce, loss of job).

Interesting differences emerged between Active and Intenders in terms of motivation for physical activity. Active tended to be more specific about what motivated them and what interventions they used to get going when it was harder to workout on some days compared to others versus Intenders who tended to be more vague. For example, Intender participant #4 reported being motivated to lose weight and feeling concerned about her health but did not articulate a clear picture of what she planned to do:

*“...thinking oh my gosh I got to start losing it now. I don’t want all the extra sag. It is like oh my gosh, I mean it can happen to anybody, it can happen to this person, this, that and the other...I don’t have any set size I want to be, I just want to be healthy I realized I have too much weight on me and I need to take the weight off to make me feel better but now it is like medically I need to do it and that just makes you, gives your mind that OK I wanted to live to be the expected age of a woman OK let me start doing things to get there” (pg 23).*

Comparatively participant #9 also is concerned about losing/maintaining his weight after having lost 110+ pounds and maintaining the weight loss for 5 years. Although he would like to lose another 10 pounds, he is pretty satisfied with his current weight. He reported a very specific intervention he uses that helps motivate him to manage his weight through exercise and nutrition.

*“I got this thing here [Calorie Smart CS100S]. It has my food inventory, it has my exercise, and tracks your weight...I can track my weight so I can put in the weight for the day and I can log it in and it tells me how much I weigh that day ...Then if you plug in your exercise it can tell you with the weight... how many calories you burn for a specific*

*whatever you've done that day and then at the end of the day you can see whether you burned all your calories up or whether you're over the top and you're gonna gain weight that day. So it kind of summarizes your day for you...it's a way that I can control things"* (pgs 7-10).

Overall, Active participants tended to report what they do that helps them achieve their fitness goals in addition to how it motivates them. Intenders tended to talk more globally and generally about what they wanted to see change without a clear plan of how they would make it happen. Additionally, Active participants tended to report being more intrinsically motivated and, when environmental things came up that changed their exercise plans or routine, they planned ahead and were more proactive in seeking alternatives if needed. For example, participant #15 describes how she remained active during a time where her environment made it extremely challenging for her to be active.

*"When I graduated with my teaching certificate it was a bad time for English-Speaking teachers in Quebec...So I ended up on a reservation way, way up North...Hudson Bay...No roads, you could only fly in cause everything was wetlands...[I ended up in] this village of literally 876 people, one school, one grocery store...Everybody spoke Cree except for the 15 White teachers that were flown in to teach their children. So it was kind of...a stressful situation cause you really felt like an outsider...My issue was here I am in this tiny little village with no gym, with no pool, with no anything and the only road went from the school through the village to the airport. So it was one and one half kilometers each direction...So um, when I first got there the teachers would in the afternoons, Monday, Wednesday, Friday would wheel in the beta video player and the TV and plug Jane Fonda in...I thought you know what, I can do this*

*cause I had a friend at one of the small you know store front gyms I had been going to make me a tape to take with me. So I had that tape and I choreographed that audio tape all myself and we would plug it in...and that was my first teaching experience in terms of teaching exercise. So we did that 3 days a week for probably, I don't know, 2 years...[then the other teachers stopped working out with her so she changed her exercise plans]...I had discovered cross country skiing and I bought myself a pair of skis and...everybody had snowmobiles and as long as you stayed on the snowmobile trail you were fine... cause if you went off the tread the snow was like up to your belly button, you couldn't get out...so you would just go where ever the snowmobile happened to have gone so I would go out and cross country ski...but it was just, you know 3 in the afternoon it got dark in the winter. So you went to school in the dark and you came home in the dark...But you're not gonna go out in the dark to cross country ski, so pretty much it was Saturdays and Sundays that you could do that. Then the rest of the time I would jump some rope...or I would walk... So that was like the most challenging time for me in terms of finding a way to be active. Just because...nobody else was interested in it...So just finding somebody to be active with like finding a buddy so it wasn't always you that had to motivate yourself..." (pgs 9-11).*

Intenders, on the other hand, tended to get derailed and stop exercising or report that they were unsure of how they would negotiate around barriers that might surface in the future. Intenders also had a more difficult time clarifying how they would initiate an exercise plan and were then less clear on how to maintain it. For example, participant #12, Intender, seemed to struggle with how to initiate and maintain an exercise routine.

Throughout the interview, she proposed several ideas of how she could become active, and then seemed to talk herself out of them.

*“Usually, I like to run and walk the most but we also have...some exercise equipment in our house, I have 2 houses so it's kind of confusing... We have a treadmill and like weights [home #1]...here I can run [home #2] because it's nice...the other house is like in the mountains and there's hills like, they're not just inclines... I was a pretty good biker but I can't even go anywhere there on my bike, it's so hilly...but in [home # 2 area] it's nice and it's flatter so I feel like I should be able to get in a routine of running and stuff but, like while I've been in school I've been so tired from being up late. Like most of my work I do is at night after the kids go to bed...but then getting up early, the kids already get up early but getting up earlier than them to get out to run or do something before just hasn't happened so it will be interesting to see...[I am] not consistent. I mean I always, I get into it full force and I'm like in it and then usually there's a break, something happens or it gets cold out...like something happens to my schedule that kind of messes it up and then it takes me a while to figure it out how to make a good routine again... And like here [at school] it's free, I could go down...to the gym, it's free for students but then there's no parking down there. I'd have to take that bus...I mean it wouldn't even be worth it for a half an hour to take a bus both ways, like a half an hour of traveling like trying to get there for a half an hour of working out...So it's either like 5 in the morning which hasn't happened because I'm going to bed at like 3 after my work's done late, I'm just like so tired...I don't feel safe running at night...I don't usually go out after it's dark so it hasn't happened yet but I've got a pretty strong feeling that it's gonna happen... It would be awesome if they had a gym in this building*

*[at her university], that would be cool. Like I think some of it is resources and accessibility. Like when I hear about people who have a gym in their building I'm like wow, that could work. Like if there was a gym in this building and I don't have to go off, go to lower campus and come back or if things were accessible I could go run from here, like go outside, like I've seen people run and walk on campus and stuff so that's also a possibility but one of the weird things about here also is just like being sweaty and gross after you've run you know and then coming back....And then coming back, like we have class 4-7... ” (p.18)*

In the next category, participants' values, biases, feelings and beliefs about physical activity (Category 2d) were examined and interesting differences emerged between intenders and active participants. Seven Active participants mentioned that variety was an important part of their exercise plans yet only one Intender mentioned variety as important. Six Active participants viewed exercise as “fun” and/or “enjoyable” compared to only three Intenders who viewed exercise this way. On the other hand, only one Active participant reported that they did not like exercise compared to four Intenders and, further, none of the Active participants viewed taking time to workout as selfish, yet two of the Intenders did. Three of the Active participants viewed getting started/initiating activity as hard, but twice as many Intenders found initiating exercise plans as difficult. Eight Active participants described the importance of having a fitness purpose as an important part of their fitness lifestyles compared to only three Intenders. One Active participant versus four Intenders reported that working out should be a priority but it is not. Nine Active participants believed that commitment, discipline, and an established routine were important aspects of exercise lifestyles compared with only five Intenders

who endorsed commitment and discipline. Nine Active participants and eight Intenders endorsed an established routine as integral to exercise plans. Both groups equally ( $n = 9$  Active;  $n = 9$  Intenders) felt that they need to have successes in their fitness plans to continue working out, that good habits go together such as eating right and exercising ( $n = 4$  Active and  $n = 3$  Intenders), and that they feel good after working out ( $n = 10$  Active and  $n = 8$  Intenders). Some participants ( $n = 5$  Active;  $n = 3$  Intenders) felt that lack of exercise was a result of laziness or an inability to work around barriers ( $n = 6$  Active and  $n = 8$  Intenders). Six Active participants and five Intenders consider exercise as part of a lifestyle as opposed to an isolated set of behaviors and seven Active participants and four Intenders believe that working out is a mandatory part of life. Five Active and two Intenders mentioned balance as important to a healthy lifestyle and seven Active and five Intenders reported that structure is a vital part of an exercise routine. Both groups equally ( $n = 5$  Active;  $n = 5$  Intenders) felt that teaching children the value of exercise and healthy lifestyles was an important role for adults both in families as well as in the community. Seven Active participants described their exercise values/motivation as intrinsic compared to two Intenders whereas only four Active participants found extrinsic motivation to be central to their exercise behavior versus seven Intenders who were mainly motivated by external factors.

Participants endorsed several themes in the Self image/esteem (3d) category including positive and negative aspects. For example, two of the Active participants, both male, mentioned feeling physically too small to participate in football when they were younger and referenced their small size as a limitation several times throughout their interview. None of the Intenders nor any of the women in the sample mentioned feeling

too small. One Active and three Intender participants mentioned feeling that they have low self-esteem. Seven Active and three Intender participants reported being satisfied with their body shape and weight. Four Active and six Intender participants reported feeling unsatisfied with their weight and body shape. Three Active and six Intender participants mentioned that were not satisfied with the strength of their bodies. Two Active participants, one male one female, and zero of the intenders reported having current or previous problems with eating disorders/eating related issues. Two Active and six Intender participants reported feeling self conscious about their medical and physical problems, two Active and four Intenders reported feeling self conscious about their psychological problems and four Active and two Intenders reported feeling self conscious about both medical/physical and psychological problems and that this sometimes interfered with their engagement in physical activity.

On the positive side, five Active and two Intenders reported feeling a sense of pride and accomplishment after exercising. Eight Active and three Intenders indicated that they are focused on their workouts and feel good about it. All eleven Active participants compared with only two Intender participants reported feeling confident about exercising. This may be an important issue regarding why some participants have difficulty maintaining an exercise routine. Finally, seven Active and five Intender participants reported that their mood is better after exercising.

Participants endorsed several themes in the fears/concerns about working out (Category 4d). Nine Active and five Intender participants reported feeling concerned about getting injured while exercising (e.g. pulled muscle, torn ligaments) but none of them indicated that this concern would prevent them from engaging in physical activity.

Seven Active and four Intender participants reported that being sedentary and the health issues related to sedentary behavior was more of a concern than potential injury while exercising. Two Active and three Intender participants expressed concern about their disability hindering their workouts or feeling embarrassed about others noticing their disability. Two Active participants and one Intender mentioned personal safety concerns such as being mugged while running and traffic safety concerns which overlaps with Cluster 2 Category 2b Outdoor Environment. Three Active and one Intender reported feeling concerned that their age would hinder their ability to exercise in the fullest capacity they would like. Finally, zero Active and two Intender participants mentioned being concerned about others seeing how out-of-shape/overweight they are currently. These responses overlap with Cluster 4, Category 3d, Self-esteem/image.

All except one participant mentioned some degree of health problems or concerns (Category 5d, Personal Health). Seven Intenders reported weight-related issues currently, and Active participants reported having weight related issues currently ( $n = 4$ ) and past tense ( $n = 4$ ). Two of the participants, both Active, one male one female, disclosed that they have struggled with eating related issues during the course of their lives. One of these participants indicated that she still is affected by these issues and that her daughter has been diagnosed with an eating disorder as well. Two Active and one Intender identified as obese or overweight. One Active participant, whose exercise consisted exclusively of teaching water aerobics, reported that although the exercise helped reduce her diabetes symptoms, she did not feel it helped her reduce her weight. She identifies as obese despite being consistently active. Five participants ( $n = 4$  Active;  $n = 1$  Intender) reported mild physical health issues such as occasional pulled muscle and minor aches

and pains. Eight participants ( $n = 5$  Active;  $n = 3$  Intender) reported moderate to severe health concerns such as prior knee replacement (more than 2 years prior), type 2 diabetes (current), and gastric bypass surgery (1.5 and 5 years prior). Five participants ( $n = 2$  Active;  $n = 3$  Intender) mentioned psychological barriers such as depression and anxiety as potentially interfering with the consistency of their workouts or plans to workout. For example, participant #10 discussed how her mental health disability has interfered with her lifestyle and maintenance of activity, “...then I got real depressed and that was another month that I was out and not going [to the gym] again so I had problems with that past mental health issues that irritate my going sometimes. I don't want to go, am afraid to leave the house and things like that...” (pg 1).

In Category 6d; Personal fitness history, seventeen participants ( $n = 9$  Active;  $n = 8$  Intender) reported being active as a child and Two Active and one Intender reported not being active as a child. Eleven participants reported being active and maintaining a routine of activity on a consistent basis for a minimum of three months. Nine participants reported being sedentary for a minimum of three months but were intending to or had begun exercising within 30 days of their interview.

Principles developed in Cluster 4 included several differences between Active and Intender participants emerged in terms of how they perceive themselves and their values, biases, and feelings related to exercise and healthy lifestyles. Intenders were more likely to be concerned about health problems and less likely to be motivated by enjoyment of exercise or to see the value of variety and structure in their planned workouts. They were also less likely to report being motivated by “getting their money's worth” in terms of fitness membership/classes. Intenders were also half as likely as Active participants to

describe working out as “fun.” Intenders were more likely, however to mention that they do not enjoy exercise and that initiating exercise plans is “hard” or “difficult.” Intenders were also less likely to see the importance of having a “fitness purpose” commitment and discipline towards workouts, and an established routine. Intenders also mentioned that exercise “should” be more of a priority in their lives but that it is not. Intenders tended to be extrinsically motivated and Active participants reported or described more intrinsic ways they motivated themselves.

Active participants were more likely to endorse the value of a balanced lifestyle and exercise as a mandatory part of their life. Both groups endorsed the importance of having success in working out as vital to maintenance of fitness goals and behavior. Both groups reported feeling good after working out and that teaching children the value of exercise and healthy lifestyles is important. In terms of self image/esteem, Intenders were less likely to be satisfied with their weight and body shape compared to Active participants. Intenders were also more likely to be concerned about psychological and medical problems interfering with their exercise plans. Active participants were more focused on their workout and feeling good about it and were more likely to report feeling pride about their workouts. Most notable about self esteem, Active participants were much more likely to have confidence in their ability to exercise whereas Intenders reported a lack of confidence in exercise related behaviors. Active participants were more likely to fear getting injured while exercising and were more fearful of becoming sedentary than their Intender counterparts. Intenders were more likely to have moderate health issues compared to Active participants who were more likely to have mild or moderate medical issues.

There were not many differences between the groups in terms of being active during childhood. A large majority of both Active participants and Intenders reported that they were active when they were children. The Intender participants who reported being active as children mentioned that they remained active until high school or into their twenties/college age and then became sedentary. It seems likely that a participant's current view of self and exercise activity itself has a notable impact on whether or not a participant is inclined toward maintaining an active lifestyle or not.

Diversity-based differences between participants and across clusters, including gender, age, SES, and racial/ethnic differences are described below. Differences in sexual orientation are not discussed because the sample was almost exclusively heterosexual with only one lesbian participant. Additionally, none of the participants discussed their sexual orientation as influencing their physical activity behaviors or fitness lifestyles or plans. Both older and younger participants similarly engaged in gym based workouts and outdoor activities. Participants over 50 years old however, were not as likely to engage in moderate or moderate-intense exercise as compared to participants 49 years old and younger. Participants 35 years of age and younger were less likely to report physical health concerns and were less likely to report sustaining exercise-related injuries. Also, participants under 40 years of age did not report concern related to their age where as 12/14 of the participants over age 40 expressed concern about how their age does limit or soon will limit the choice, range, and/or intensity of their physical activity behaviors.

Female participants, especially Intender females were more likely to report positive and negative aspects of fitness centers whereas men, Active and Intender, were more likely to report only positive comments about fitness facility indoor environments.

Female participants, both Active and Intenders, reported a strong preference toward working out with others with none of the women reporting a preference for working out alone. Active female participants, however, were more willing to workout alone if no one was available for them to workout with whereas Intender females indicated they would be more likely to skip that workout or stop exercising entirely. Male participants, both Active and Intender were more varied. Almost half of the males, Active and Intender, reported that they prefer or would prefer to workout alone. Female Intender participants were more likely to report financial limitations, low income, and poverty compared with Active females and, further, these women reported economic concerns as barriers to engaging in physical activity. None of the men reported being impoverished or of low income status and none of the men reported financial concerns as barriers to engaging in exercise-related behaviors. No differences in race or ethnicity emerged in this study.

*Core Category: Fitness Philosophy and Lifestyle: A person's philosophy about fitness, which includes her or his fitness environment, fitness values, knowledge, attitudes, biases, influence her or his fitness related behavior, motivation to exercise, and lifestyle choices.*

The core category is the central finding from the analysis in this study. Overall, although intenders described a desire to engage in exercise-related behaviors, they tended to be vague about their plans, easily derailed from planned activities, and troubled by numerous barriers to motivation and maintenance of physical activity. Although they had the knowledge and information regarding the benefits of exercise as well as ways they could engage in exercise, they often tended to talk themselves out of it or felt self-conscious about exercising in front of others. Intenders often preferred working out with others for social connection and were less likely to workout anyway if they had to do it alone. There were numerous ways in which participants struggled with their difficulties

to engage in exercise behavior. First, they tended to make only one plan for activity with no backup if the original plan were to fail for some reason (e.g. bad weather, change in works schedule). When faced with this possible change in plans, Intenders were either unclear about what they would do or reported that they would not exercise in that situation and some indicated that they would cease or have ceased activity in the past altogether. Second, Intenders reported feeling most comfortable engaging in exercise behavior when they had family/social support, someone to work out with, and cooperative and pleasant weather and work schedules (external factors).

Active participants, on the other hand, tended to view their exercise behavior as purposeful and connected to their weekly routine, and part of their healthy lifestyle.

Active participants, when asked, easily came up with alternatives that they could use to “get a workout in” if their plans changed unexpectedly and often anticipated potential challenges to their workouts ahead of time and planned effective alternatives.

Additionally, Active participants valued and enjoyed the feeling of movement more frequently compared with intenders. They tended to have more clearly defined fitness goals and prioritized exercise into their schedules. Active participants also felt more confident in their ability to exercise and therefore, this may influence their ability to be more flexible about making adjustments to their fitness plans. Active participants may approach exercise engagement in a more consistent and organized fashion and enjoy their involvement in fitness related activities more than Intenders because of their increased self confidence and self efficacy. Intenders felt more self conscious about their bodies and about looking unskilled in engaging in exercise behaviors (e.g. using weight machines at the gym and needing to ask for help). The limited self confidence and self

efficacy in Intenders may be why they tended to give up more easily, were more unclear about what else to do when their original plan has changed, and had less clearly defined fitness goals. In terms of knowledge and information, it seems that both Intenders and Active participants knew the importance and benefits of exercise, the types of exercise they could engage in, and what behaviors they needed to execute in order to become physically active. The problems in knowledge and information seemed to be on more of a day-to-day level as in, “How do I make it happen every day/5 times per week?” How do I maintain my focus to exercise when other priorities come my way? and “What if I look stupid asking for help at the gym after I already had a tour and orientation regarding how to use the equipment?” and body image/self consciousness issues “What if I go to the gym and everyone sees how overweight and out-of-shape I am?”

Working with Intenders to structure and plan alternative workouts ahead of time and be more assertive and active in engaging others for assistance, instruction, and support (e.g. staff members) may help Intenders work through their low self efficacy and self confidence issues. Additionally, setting specific yet flexible goals related to their intended fitness behaviors and problem-solving/generating solutions that enable Intenders to fit exercise into their day-to-day lives may help them engage in exercise-related behaviors more consistently.

## Chapter V

### Discussion

This study contributes a further and more in-depth understanding of Intender and Active participants' experiences in engaging or intending to engage in exercise-related behavior and fitness lifestyles. The findings presented provide some clarification as to why exercise Intenders have difficulty becoming motivated to begin and maintain healthy, active lifestyles and why Active participants are more able to lead active lifestyles. Also explored is the role of self image and how one's confidence and perception of her or his exercise efficacy and body image influence her or his willingness to engage in and maintain exercise related behaviors. In addition, the findings highlight potential directions for future research that appear to be important within Active and Intenders' experiences and assist in producing effective recommendations for support, intervention and maintenance of exercise-related behaviors among Intenders. In keeping with a constructivist approach, this analysis is offered with the awareness that these findings are but one interpretation of these data, not the only possible interpretation of these data. The understanding and interpretation presented in this study, however, is based on the rigorous analysis of Active and Intender participants' in-depth interviews related to fitness aspirations and aspects of their lives.

This study helps inform future studies, intervention, and understanding from the perspective of those who are active and those who relapse back to sedentary lifestyles. This understanding is a vital part of helping address the obesity and overweight epidemic in America. Specifically, this study clarified some of the "why" reasons behind the behaviors that people tend to engage in (Active) or struggle to engage in (Intenders).

Although previous grounded theory research illuminated information regarding supports and barriers to physical activity (e.g. Kirchhoff et al.2008; Gordon-Larsen et al., 2004; Seste et al., 2008; Lang, 1998; Crone et al., 2005), the importance of social support (e.g. Christensen, 2006; Giacobbi et al., 2008), self/body image issues (Crone et al., 2005), extrinsic versus intrinsic motivation (e.g. Dunn, 2008), and financial issues (Gordon-Larsen et al., 2004), this study contributed to and furthered our understanding of these issues in the following unique ways: sedentary but intending individuals have very different perceptions of what constitutes exercise and how exercise is defined compared to their active counterparts. Intenders tended to include a broader scope of activities in their definitions of what entails exercise compared to the more conservative definitions of Active individuals in this study.

Despite exercise-related guidelines available from the U.S. Department of Health and Human Services (2008), many Intender participants considered walking through the aisles of a store, doing laundry, or “running” errands via driving in a car to be exercise, yet these activities do not meet criteria for being defined as exercise. On the other hand, Active participants are more likely to have perceptions of what constitutes exercise that more accurately confer with what the U.S Department of Health and Human Services specifies: “Children and adolescents should do 60 minutes (1 hour) or more of physical activity daily” (2008, p. vii) which includes aerobic, muscle-strengthening, and bone-strengthening activities; Adults “should do at least 150 minutes (2 hours and 30 minutes) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) a week of vigorous-intensity aerobic physical activity” (2008, p. vii) and older adults should strive for the same timeframe as adults at a moderate-intensity unless a chronic condition prevents their

ability to do so in which case they “should be as physically active as their abilities allow” (2008, p. vii).

Additionally, some of the potential reasons why Intenders have difficulty adopting and maintaining exercise patterns is because they feel self conscious about their bodies more so than Active maintainers do, even though some of the maintainers are also overweight/obese. Further, they lack the confidence to engage in (adopt) exercise related activities, especially if the movements or equipment are unfamiliar to them, which may tend to result in their giving up (e.g. lack of maintenance/motivation) because they do not feel effective and competent executing exercise related activities. Building Intenders’ self confidence and self efficacy while increasing their skills in assertiveness and exercise behaviors may help them overcome their limited self confidence and tendency to avoid asking for help when they need it. This seems especially important for women since Intender females are less likely to workout unless they have someone to work out with and would be more likely to fill that need if they took an active role in seeking out the social support they desire.

Since this study, compared to previous grounded theory studies examining exercise related issues, included a more even sampling of both men and women, both active and intending, a more comprehensive understanding of the social support preferences of these sub groups was achieved. Previous studies, which tended to focus more on active *or* sedentary participants who were predominantly women, made it difficult to compare and contrast across gender and active versus sedentary lifestyles. Although previous research clarified the relevance of social support for women, it was unclear whether or not social support was as important for men because males have not

been well represented in previous qualitative literature. Findings of the current study suggest that social support and connection was important for women, yet was found to be important for only half of the men in this study. Additionally, Active participants in this study tended to report having more social support than Intenders did, yet Intenders, especially females, reported needing it more than what Active participants reported. Further, Intenders are less active in seeking out the support they need to succeed (e.g. asking for assistance from fitness staff, asking a friend to work out with them) and are more likely to passively wait for motivation (external) to come to them.

It is an interesting paradox that the Intenders struggle to be active and value social support as motivation for exercise, yet are more passive in securing that which they reportedly need to be successful (extrinsic focus). On the other hand, intrinsically motivated, Active participants are more action-based in terms of seeking external support even though they have less of a tendency to require it for motivation and maintenance. Unlike participants in Seste et al., (2008), Intender participants in this study had both awareness of negative effects of health concerns and awareness of effective weight loss strategies, however, they struggled to access the flexibility needed to maintain active lifestyles in a complex and sometimes unpredictable society. In other words, Intenders did not seem to be uncertain about what they *should* do in terms of exercise; instead, they questioned whether or not they *actually would do it* if something changed in their schedule.

Sampling across both genders and sedentary and active individuals in this study also allowed for a better understanding of the differences in participant-reported supports and barriers, as well as stated preferences for indoor versus outdoor activity. Intenders,

especially female Intenders, in this study identified more barriers and fewer benefits to indoor/gym-style workouts compared to Active participants yet, interestingly, they reported similar supports and less barriers to outdoor activities compared to Active participants. This differs from findings in Lang, 1998 and Gordon-Larsen et al., 2004, wherein sedentary participants reported a dislike for outdoor activity. These differences may be related to the difference between those who are sedentary with no reported intention to begin working out (Lang, 1998; Gordon-Larsen et al., 2004) and those who stated their intent to begin working out within 30 days (current study). It may be that sedentary individuals at different stages of change (e.g. pre-contemplation vs. contemplation; Prochaska & Norcross, 1992) may have different preferences toward outdoor activity.

In addition, walking, as endorsed by several intenders in this study regarding their plans to begin exercise, may seem less complicated and intimidating than working out in a fitness center wherein they may not be familiar with the equipment and/or exercises. Additionally, more emphasis to outdoor activities may be important for some Intenders, especially economically disadvantaged women, who cannot afford fitness center membership costs. Built environment characteristics that encourage walking may also be more important for female Intenders compared to Active individuals who, although reside in walkable, connected communities, chose to drive instead.

Interestingly and in contrast to the belief that childhood environment influences physical activity behavior in children, both when younger and as adults, there were no notable reported differences in this study in terms of Active and Intender participants coming from an active family background. Both groups reported, in general, that their

families were active when they were children, yet intenders took a different path toward sedentary behavior instead of maintaining activity from childhood which differs from their active counterparts. Interestingly, the timeframe in which intenders became sedentary tended to be either after high school for those who did not attend college and during college for those who did. One of the reasons Intender men reported in relation to this difference was that they ceased engagement in school-related sports activity. Those men and women who remained active, on the other hand, transitioned to exercising in fitness centers instead of becoming sedentary. One of the reasons why this occurred may be related to the differences between Active and Intender participants in terms of enjoyment versus obligation. Intender participants, both male and female, tended to report less enjoyment in physical activity and exercise when compared to their Active counterparts. Intenders were also more likely to report plans to exercise because they *should* exercise to be healthy compared to active participants who were more likely to report working out because they enjoy it and because it is part of their healthy lifestyles. This difference seemed especially true in terms of gym-style activities which Intenders tended to view as less desirable than what Active participants reported. Another possibility is the differences in how one defines exercise. Intenders describe their families as active, but active as defined by whom? It may be that they are using the same criteria for their families as they did for defining their own physical activity.

Health issues and concerns were prevalent for both active and intending participants, yet active participants had clearer goals and plans regarding how to remedy or improve their health-related concerns whereas intenders tended to report having health concerns, yet offered vague ideas about how they planned to address these concerns. It

seems that intenders specify what health issues they want to change (e.g. lose weight) but look at the solution of exercise more globally (e.g. I need to be more active.) without clarifying what specifics will accompany this goal (e.g. type of activity, time of day, frequency, back up plan if chosen activity is not available).

It is especially important to consider how intenders' lower sense of self efficacy and self confidence related to exercise may more easily lead toward their feeling overwhelmed or intimidated by exercise. This may also be related to their tendency not to ask for help when they need it and their tendency to cease working out when something interrupts their exercise plans. For example, the guidelines for physical activity from the U.S. Department of Health and Human Services (2008) may be perceived as intimidating by those who have been sedentary for long periods of time (e.g. having to exercise for 60 minutes every day may seem too hard or impossible to achieve and therefore many sedentary individuals may just chose not to try).

In light of the new information provided by this study, future intervention may be directed more specifically at the type of guidance and understanding that Intenders lack: the flexibility to brainstorm and plan alternative activities when their fitness plans become altered, specific and repeated hands-on instruction regarding use of exercise equipment, and instruction for how to be more active and assertive in asking for help and social support when needed. Future studies that continue to explore these issues from the perspective of participants' themselves are needed to broaden the applicability of these results across diverse samples of active and intending populations. The philosophy and value-based system that keeps active individuals motivated and maintaining is exactly what the intenders continue to search for yet cannot quite grasp. This study provides

some clarification as to why these differences exist however more research is needed to further this understanding and to inform the continued modification and development of effective individualized exercise interventions.

Interventions that integrate exercise into sedentary individuals' lives gradually (e.g. 10 minutes per day with gradual increases) while emphasizing the value of this exercise may help sedentary individuals make a slower yet more consistent change into a more active lifestyle. Unfortunately, social biases and expectation suggests that doing less than 60 minutes either "doesn't count" or is a "weak attempt" from people who are "just too lazy" to do what they "should" do. In contrast, however, enduring changes in behavior are easier to achieve when implemented on a gradual and consistent basis. Therefore, individualized interventions that focus on exploring what types of movement and activity Intenders like and enjoy may be important in terms of changing behavior toward more consistent adoption and maintenance of physical activity. Interventions are also needed that help Intenders see the link between how their consistently executed and specific personal goals translate into better health and improvement of specific symptoms. These interventions may allow intenders to feel a greater sense of personal agency in terms of adoption, motivation and maintenance of active lifestyles.

Future grounded theory research could examine the previously mentioned differences in exercise philosophies and related behavior by including questions involving how participants define physical activity, exercise, and sedentary behavior. This could be further specified by looking at measurable aspects such as distance, time, frequency, and intensity in relation to what defines exercise for that person rather than focusing on these aspects in relation to what activity they currently engage in or plan to

do. By examining the variation in definitions of activity, exercise, and sedentary behaviors in this way, we may uncover meaning and purpose related to fitness behavior and lifestyles that currently sedentary but intending individuals may struggle to identify. This may assist Intenders in becoming more specific in their exercise-related goal setting and plans for adoption of physical activity.

Future grounded theory research could also examine how differences in sexual orientation relate to one's participation in or struggle to maintain active lifestyles. This may be particularly relevant in light of the findings from Bowen et al.'s 2007 review of obesity issues among sexual minority women which suggest that lesbian and bisexual women are at greater risk of being overweight and/or obese. Additionally, further study that explores more specifically what Intenders, especially female Intenders, dislike about the physical and social indoor gym-style workout environments and how to make these environments more appealing to females and Intenders may help in developing more effective individualized interventions with this group of those who want to but cannot maintain exercise behaviors. Also it would be informative to examine the perspectives of individuals from extreme ends of the spectrum in terms of being chronically sedentary with no intention to exercise and those who obsessively exercise to the extent it becomes unhealthy.

Although informative, this study is not without limitations. The sample size, although typical for grounded theory analysis, does not allow for generalizability of the findings to Active or Intender populations. Causality cannot be inferred or determined by this study and was not a goal for this research endeavor. The time needed for this comprehensive and intensive analysis is another limitation of grounded theory research,

especially when conducted by one researcher as detailed in Glaser & Strauss's original framework (1967) and Glaser 1992; instead of consensus via research team (Strauss & Corbin, 1990); however it was believed to be necessary in order to return to a more purely inductive approach to studying this phenomena. As previously mentioned, intervention studies continue to be plagued by attrition and limited maintenance of physical activity in previously sedentary samples, which suggest that there are inherent differences between those who maintain and those who cease to engage in physical health behaviors, but that these differences are not well understood. Therefore, in-depth analyses of these differences from the perspective of active and intending participants were warranted.

Although gender, SES, and age differences emerged, this study did not offer further clarification regarding physical activity differences between active and intending individuals in terms of race, ethnicity, or sexual orientation. This may, in part, be due to this study's more even sampling across race and ethnicity in terms of SES compared to a more diverse sampling across gender in terms of SES. Additionally, as there was only one participant who identified as lesbian and all other participants identified as heterosexual and, further, none of the participants mentioned sexual orientation in their exploration of physical activity, sexual orientation was not able to be examined in this study.

Together with the present study, previous grounded theory studies and the numerous and informative quantitative intervention studies provide support for the developing preliminary theory and related principles that has emerged thus far regarding exercise-related issues among active and sedentary but intending individuals. Together,

these studies form a collective framework for a better understanding of adoption, maintenance, motivation, and weight-related issues of Americans in terms of exercise-related health. This study further and uniquely contributes to our understanding of how individuals' exercise worldviews are formed and how one's perception and behavior may change based on one's philosophy of fitness and fitness related behaviors and lifestyles.

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## Appendix A

Appendix A summarizes exercise intervention methodology, results and analyses for grounded theory studies involving physically active and sedentary individuals.

Article/Authors	Hypotheses/Purpose	Sample	Method/Measures	Results
<b>1. Strategies for Physical Activity Maintenance in African American Women (Kirchhoff, Elliott, Schlichting, &amp; Chin, 2008).</b>	Explore benefits and barriers to maintaining exercise behaviors in a sample of African American women who either currently maintain an active lifestyle or have relapsed into sedentary behavior patterns. Additionally, facilitators to maintenance of exercise were sought from the maintenance group.	19 African American women were recruited from a YMCA in Chicago who met criteria for being at risk for diabetes. Additionally, they had to be currently or previously physically active for at least 30 minutes per day at least 5 days per week.	Grounded Theory (Strauss & Corbin, 1998) was used to analyze participant responses collected via semi-structured interviews which were recorded and transcribed verbatim.	Themes: benefits (improved physical appearance, weight loss) and barriers (work constraints, bad weather, familial obligations, cost of gym membership and personal trainer fees) Maintainers reported facilitators (role model for family, actively seeking social support in exercise environment, setting goals and rewards for desired behavior) that relapsers did not.
<b>2. Psychosocial Mediators of a Walking Intervention Among African American Women (Dunn, 2008)</b>	Exploration of psychosocial variables that support or hinder maintenance of physical activity in African American women enrolled in a walking intervention study.	14 African American women between 45 and 66 years of age who were overweight or obese were recruited from announcements at a local church, letters, phone calls and personal communication. Participants engaged in three focus groups involving discussion of the facilitators to and barriers of walking.	Focus group discussions were recorded and transcribed. A systematic and iterative examination of the transcripts was conducted to identify categories of social processes, barriers, and facilitators to physical activity. Once coding validity was verified, themes were inducted which examined the initiation, cessation, and maintenance of the walking routine	Women who stopped walking: situational issues (e.g. family responsibilities, lack of support and/or time, giving up control of behavior to God, and a negative view of walking) were reported as deterrents to continuing physical activity. Women who maintained walking: prioritized walking routine. Motivating

			established for the intervention.	factors: person interested in walking routine, commending efforts and/or walking with them.
<b>3. Weight loss programs for urban-based, postpartum African-American women: Perceived barriers and preferred components. (Setse, Grogan, Cooper, Strobino, Powe, &amp; Nicholson, 2008)</b>	To examine African-American postpartum women's perceptions of weight gain, weight loss intervention preferences, and barriers to weight loss.	22 pregnant African American women participated in focus groups led by a race-concordant facilitator.	Focus group discussions prompted by open-ended questions. Audio taped and transcribed verbatim. Transcripts analyzed by two researchers. Quotations extracted from the transcripts were coded to identify major themes.	16 main themes 1. postpartum depression and its effect on motivation 2. strong desire to lose weight. 3 aware of the health disparities of obesity 4. economic issues of weight loss programs 5. media issues 6. Childcare issues 7. family-centered lifestyle behaviors unhealthy choices.
<b>4. Barriers to physical activity: Qualitative data on caregiver-daughter perceptions and practices (Gordon-Larsen et al., 2004).</b>	To explore perceptions of facilitators and barriers of physical activity and perceptions of sedentary behaviors to inform directions for intervention.	12 African-American girls aged 6-9 years old and their 11 female caregivers (mothers N=8 and grandmothers N=3).	51 semi-structured interviews (approximately 2-3 per participant). Interviews were recorded and transcribed verbatim Analyzed using NUD*IST. Themes and categories were identified based on research teams' pre-	6 major categories: 1. shared activity 2. barriers 3. knowledge of health-promoting effects of activity 4. need for change 5. facilitators 6. control of behaviors related to activity by

			identified hypotheses.	caregivers. Girls: preference for sedentary behaviors. Caregivers: limited type of show but not quantity of TV. Environmental barriers: safety, access to resources, cost.
<b>5. Contributors to lifelong moderate physical activity in the lives of women Lang (1998)</b>	To examine the life histories of eight women to explore the self-reported facilitators of lifelong physical activity including their childhood backgrounds, support systems, factors that contribute toward sustaining active lifestyles (e.g. motivation) as well as challenges to physical activity maintenance.	Eight White women between the ages of 58-72 years old who retrospectively reported maintaining physically active lifestyles throughout their lives. Inclusion criteria: women were White, had at least one child and reported to have been physically active for their entire lives.	Multi-case study (life history case study, and GT) methodology. Two in-depth semi-structured interviews with each participant Interviews were recorded and transcribed verbatim. Basic questions were precisely worded, predetermined and asked of each participant. Participants asked to keep a journal of activity between interviews. Memoing. Snowball and theoretical sampling.	Six themes: 1. currently physically active 2. maintained active lifestyles throughout their lives 3. related more to fathers versus mothers 4. enjoy outdoors 5. many benefits but very few barriers to physical activity 6. enjoy the feeling of movement and do not like sitting still
<b>6. A long time getting home: Vietnam Veterans' experiences in a community exercise rehabilitation programme (Otter &amp; Currie, 2004).</b>	Exploring and documenting Vietnam Veterans' perceptions of participating in a rehabilitative exercise group	14 Australian Vietnam Veterans: 5 of them diagnosed with PTSD who participated in a 40-week exercise programme	Three focus groups designed to elicit participant feedback regarding the exercise programme. Analyses included a GT approach (e.g. audio recording of focus groups, transcription of participant data) analyses and identification of emergent categories and themes derived from participant data.	Themes: 1. social isolation 2. long work hours 3. low motivation 4. negative self-attributes Positive effects of exercise: 1. social support of other Veterans 2. decrease in medication dosage and symptoms 3. increase in physical health 4. led to other

**7. Group cohesion and social support in exercise classes: Results from a Danish intervention study (Christensen et al., 2006).**

To examine the formation of group cohesion and social support in exercise groups with previously sedentary individuals

87 formerly sedentary participants who reported low back, shoulder, or neck pain to their general doctor during a three month period

Exercise intervention: 32 week program: 1x/week for 90 mins. First 45 mins: warm up, resistance training and stretches. Last 45 mins: choice of activity. 11 classes: 12-14 participants per class. Questionnaires: baseline and end of intervention. 18 semi-structured interviews: past exercise and view of intervention (e.g. participation barriers, dynamic processes, group cohesion, initial formation, increased communication, cooperation, unity, and consciousness. Data transcribed verbatim. GT (Strauss & Corbin, 1990)

healthy changes

Those who reported close relationships with other group members were significantly more likely to report intention to join exercise program in the future. Factors that influenced the formation and maintenance of groups: teaching ability of instructor and chosen activity. Successfully formed groups: group unity, mutual trust, acceptance, and solidarity. Core category: “a shared attitude” which included a sense of unity reflecting mutual support relative to exercises.

**8. Physical activity and quality of life experiences by highly active individuals with physical disabilities (Giacobbi et al., 2008).**

To examine how active individuals with physical disabilities perceived their quality of life.

14 female and 12 male participants were recruited from a wheelchair user’s basketball tournament.

The Physical Activity Scale for Individuals with Physical Disabilities (PASIPD) and in-depth semi-structured interviews. Transcripts were analyzed using GT

Five higher order themes that emerged from the data:  
 1. psychological benefits  
 2. physical health benefits  
 3. influence of social support

<p><b>9. “I feel totally at one, totally alive and totally happy’: a psycho-social explanation of the physical activity and mental health relationship (Crone, Smith, &amp; Gough, 2005).</b></p>	<p>To explore the relationship between physical activity and mental health according to the experiences of individuals within 3 different exercise facilities.</p>	<p>18 participants were recruited from three exercise referral sites within the United Kingdom: a private health club, a leisure center, and a leisure center that included countryside hiking.</p>	<p>(Charmaz, 2000; 2002). Line-by-line and open coding of the text was performed by all four authors.</p> <p>Semi-structured interviews and focus groups and were conducted, recorded, and transcribed verbatim. Transcripts analyzed using the QSR NUD*IST computer program and GT.</p>	<p>4. social opportunities 5. increased self-reported quality of life.</p> <p>Three main themes:  1. self-acceptance (core category)  2. social context  3. actions  Social context: 4 sub themes: support, network, culture and environment.  Action: 3 sub themes: playing a role, coping method and act of coping.  Outcomes: a sense of belonging, purpose, and health benefits.</p>
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*Appendix B*  
MEMOING JOURNAL

**Memo-writing Entries**

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Memorandum: Title/Concept/Category: Pre-interview Reflections

Date: 2/1/2010

Content of Memo: I have scheduled my first interview for Wednesday, February 3, 2010. As I reflect on my own physical activity participation over the course of my lifetime, I find my current status of inactivity interesting in terms of the current study. I have been physically active on a consistent basis since I was 18 years old. I engaged in sporadic activity as a child with a rather lengthy period of sedentary behavior as an adolescent. Ironically, I was in a bad car accident on November 9, 2009, and have been sedentary to date. I plan to begin exercising now, within the next couple of weeks as my knee seems to have healed well enough to resume my aerobic activity. In some ways, I feel like an intender—someone who is currently sedentary but plans to begin working out within the next 30 days. In some ways, I feel like a maintainer—as I have been consistently active up until my accident, for the past 21 years. I am hopeful that my current situation will help me better understand the different perspectives of active individuals and sedentary intenders as I have lived both lifestyles at some time in my life.

Memorandum: Title/Concept/Category: Reflections during analysis (P2):

Date: 3/15/2010

Content of Memo:

- I may want to combine or rename interactions with staff and helpful staff to clarify what the characteristics define. Maybe helpful vs. unhelpful staff? What qualities make a person beginning to work out feel comfortable and supported?
- Should I enter sub-categories under the main framework of initiation, motivation maintenance and weight related issues? That does not sound particularly clever... Plus, social and other themes go across and unite those topic areas. So...need to keep analyzing and adding index cards/units of meaning while I continue to think about how to organize this information.
- I feel like I need to have an answer as to how I should categorize these data but perhaps I just need to be patient and it will come together.
- Is a person's learning style important in terms of how you support someone who is beginning to workout? In other words, is finding out how a person tends to learn best (e.g. hands on, reading first then doing...) important to know in terms of how to approach them to help support them with exercise initiation, motivation, and maintenance?
- When analyzing P2...I got to figure out how to code her feelings about being physically limited but looking normal. Sometimes people expected things of her

that she could not do (e.g. dance) and at other times, people treated her too delicately (e.g. fitness staff afraid to engage her in physical activity because of her disability. Maybe cognitive dissonance between others' expectations of her ability and her actual abilities?

Memorandum: Title/Concept/Category: Definitions of physical activity and exercise

Date: 3/18/2010

Content of Memo: I realized as I was analyzing P2 data that people have very different ideas about what qualifies as physical activity and what qualifies as exercise. I also realize my own bias about these concepts. For example: when P2 was describing cooking and doing laundry/household chores as exercise, I automatically thought, "That's not exercise." I realized that, for me, exercise is something I do that's planned and structured. It involves cardio, strengthening, toning, and/or stretching types of activities. It elevates my heart rate and I sweat and it lasts at least 20 minutes, preferably longer. I never have considered playing with my son or doing housework, or even taking a walk as exercise. I wonder as I continue collecting and analyzing data, how other participants might define exercise and physical activity. Will it vary between active individuals and intender participants? Men and women? Young and older adults?

Memorandum: Title/Concept/Category: Water Aerobics

Date: 3/20/2010

Content of Memo: I have to admit, when P3 mentioned younger people think of water aerobics as "an old lady exercise" that I am one of them (although I am not exactly younger). When I reflect on my bias, it seems unfounded since I have never taken a water aerobics class, so how would I know how easy/hard it is? I also have an idea that water aerobics is not helpful in losing weight. So, when P3 was attributing her obesity to her "messed up metabolism" I was thinking, maybe it is the type of exercise you have chosen. Again, how would I know?

I was mindful of my biases when analyzing her transcript to minimize the likelihood that my biases would interfere with coding. For example, I coded her reporting having a "messed up metabolism" under the subcategory "Metabolism" because that is reflective of P3 worldview of why she came to be obese and continues to struggle with her weight issues. She also mentioned nutrition which I coded as well.

Memorandum: Title/Concept/Category: External Locus of Control

Date: 3/25/2010

Content of Memo: When I was analyzing P4 interview, especially once I got to page 6, I noticed that she mentioned wanting to try weight watchers again but with other people for competition and to help her get going. Yet, the time she was successful for 3 months in weight watchers she did it mostly on her own. When she tried it with her daughter, for competition, she did not succeed and ceased going. It seems she is looking for others to motivate her (external) and when she fails, she attributes her failures to others (e.g. my daughter did not want to attend meetings). It also seems as I go through her transcripts,

that she has numerous excuses for not doing physical activity, more so than the previous 3 transcripts. She does not seem to see the barriers as something she can work through (e.g. when gym was too crowded, she stopped exercising, instead of trying to overcome the barriers such as choosing a different time to go, or use another machine when the one she wanted was in use. Page 8: When discussing her participation in Herbalife to lose weight fast for her wedding, I began to notice a recurrent theme of wanting results to happen fast and then once she loses weight, she stops exercising.

Date 3/26/2010 P4 page 17:

Content of Memo: P4 reflects on what feels like exercise to her and what doesn't. She also mentions that "everybody has their own take on what they think exercise is to them." This made me reflect back to P3 and my bias about water aerobics being for old people/not strenuous. Also, I thought about P2 and how she defined housework as exercise. I do not count any housework as part of my exercise routine. I do not consider walking to the grocery store or playing with my son as exercise either. This makes me think about what my definition of exercise would be. It seems that, for me exercise needs to involve moderate-strenuous activity that is a challenge for me to complete, usually involving cardio activity for at least part of the routine. If it's toning, I would need to feel the burn and be challenged to complete the repetitions. I need to feel that is hard to do and when I'm done, that I have accomplished something that makes me feel different than when I started (e.g. warm, flexible and tired muscles, and sweating). Usually, it's an organized, structured activity with a predetermined beginning, middle, and end (e.g. workout DVD). The only exception would be if I decided to spontaneously take a strenuous hike which almost never happens.

Date 3/27/2010:

Content of Memo: P4 page 19 mentions the need for determination. There are several things she mentions she needs to do or needs to complete but it does not sound like she knows how to acquire/complete these things. On the other hand, P1 (Active) and P2 (Intender) and P3 (Active) have determination and use it, or plan to use it to remain consistent. In reflecting back and during the analysis of these transcripts, I realize that I should have probed to find out what P4 thinks is needed for her to become determined—how does she define determination? How will she use that to remain consistent once she starts? Determination may be a really important factor when examining the differences between active and sedentary people. Not just the presence or absence of it, but how do different individuals define determination as it relates to exercise? How does it influence their behavior? In the case of sedentary people, do they believe they can acquire determination and what would it look like if they did? How would their approach to physical activity/exercise change—workout philosophy ect? Taking time to further explore determination factors in future studies may be an important step to helping better understand the differences between active and sedentary individuals.

Date 4/19/2010:

Content of Memo: Idea of parents influencing children to become active in pro-sports. It is interesting to think of the differences that may emerge between children who are pressured to excel in sports and what their exercise behavior looks like over their

lifetime. How does this pressuring relate or not relate to childhood obesity or obesity later in life? P5 made several self-depreciating comments and negative self-references in terms of body image. Was this related to his eating-disordered issues? Was it related to his need to exercise to excess?

Theme of self-depreciating comments across several participants' transcripts...

Philosophy of workouts—What am I noticing in regard to differences between Maintainers and Intenders? Maybe this could be a theme or category.

P5 is a little obsessive with the running, even after knee replacements, and his weight—does he have an eating disorder?

Date 4/25/2010:

Content of Memo: At first, I was not really sure where to categorize her—Maintainer or Intender. She walks every day (utilitarian activity) but intends to begin swim classes. She indicated that she has never “worked out” per se but she has walked to and from work for years, 6 days per week. She reported that she enjoys walking, but mentioned that that does not really matter because she has to walk (no car) so she does it whether she feels like it or not.

As I analyze these interviews, I realize the importance of individual definitions of exercise, reasons for working out, clarity of workout plans, and choice of activity and why they chose a certain activity. I think sometimes Intenders chose activities for reasons other than enjoyment (e.g. to lose weight fast, financial reasons/walking is free) and their actual choice of activity may be something less desirable and may make it harder for them to follow through.

P6 sounds vague in her plans to begin swim classes. As she talks, I can feel myself not believing that she will follow through. She does not sound convinced of it herself. I got this feeling with P4 also.

Date 5/2/2010:

Content of Memo: P7 mentions having spondylitis related to her elbow pain which, I thought was related to intermittent back pain that is improved rather than exacerbated by exercise. I looked it up and it is more common in men and, although the etiology is not known, it is thought to be influenced by genes.

Page 2: It is interesting that, when she was working out at the YMCA before and stopped, she was doing exercise classes (not preferred activity). Now that she is running and using the elliptical machines (preferred activity), she has maintained for 3 months.

When I finished analyzing P7's transcript, I felt like I was missing something. I am not sure what it is.

P7 made an interesting distinction between exercise and being active: “I never really did exercise” and later on in the interview said, “I am always active.”

Date 5/10/2010:

Content of Memo: P8 describes his motivation to workout is crises and that he works out as a way to punish himself. This is the first negative form of motivation to exercise that I have come across in the transcripts thus far. Also he mentioned that when he is happy he tends to stop working out and “gets fat.” Then when he is feeling discontent, he starts working out again. I wonder if this pattern of gain weight/punish self with vigorous

exercise routine to punish self is a factor for individuals with eating disorders. That belief that, if one gains weight or becomes sedentary one must be punished is an interesting framework for engaging in physical activity. I wonder if other participants will mention the felt need to punish themselves.

Date 5/28/2010:

Content of Memo: Seems like a theme to those who maintain exercise so far is to look ahead and plan for solutions to possible barriers and how participants will overcome them. Maintainers seem to adapt to changes as they get older and to life changes between than Intenders by adjusting their workouts accordingly Uses words like committed, determined, focused.

Date 6/5/2010:

Content of Memo: P 10-Interesting theme in terms of input versus results for her. Compared to Maintainers, P10 felt that after 1 year of working out, she did not lose much weight and then stopped working out. Could it be that perception of results is related to differences between those who maintain versus those who quit? For example, 2 people could lose 40 pounds over a 1 year period. One may think “great!” whereas the other may be disappointed. Which one, then would be more willing to continue working out? P10 sounds like she approaches her weight control by listening to her doctors and following what they advise which is great.

Date 6/12/2010:

Content of Memo: P 11 mentioned several times during the interview her concern about the daughters needing to lose weight/get in better shape. I met her daughters and neither of them seemed to be even slightly overweight. I felt uncomfortable when she was describing her daughters’ bodies as too big/not strong and worry about how they will internalize this as they get older. I liked when this participant described that activity causes you to be focused and in-the-moment. This differs with my own experience wherein I am familiar with a routine, I find it quite easy to space out while doing it. I do find, however, that regular exercise does in an overall sense, help to ground me and that I tend to generally be able to focus better on other things. P11 describes herself as “obese” which surprises me since she does not look obese. Overweight, yes but not obese. She sounds hard on herself.

Date 6/23/2010:

Content of Memo: P12 uses this phrase, “It will be interesting to see...” at different times during the interview in relation to fitting exercise into her schedule. It sounds very removed from her control—as if she is an observer as opposed to a participant in her own activity and lifestyle choices. It kind of sounds like, “It will be interesting to see if my life lets me exercise or not.” P12 does a lot of talking herself out of exercise. For example, “gym at school is free, but...no parking...have to take the bus...takes too long...can’t go to classes all sweaty and gross...” I can totally relate to the demands of being a mother who works and is in a doctoral program...the guilt, the overburdened husband...but it sounds like she shoots down possibilities that, even by her own reasoning should work. She is spending a lot of time and energy talking herself out of possibilities to workout.

Maybe she feels hopeless to fit it in somewhere that all she can see is how it will not work. Despite my schedule and responsibilities, I tend to blame myself if my workouts don't happen. My workout duration has notably decreased from what it used to be. I used to workout about 2 hours per day 6 days per week. Now it is more like 30-45 minutes per day 3-5 days per week. When I don't make at least that much exercise happen, I totally see it as my failure as opposed to me being the victim of my responsibilities and hectic schedule.

Date 6/27/2010:

Content of Memo: P13 and P14. Interestingly, I interviewed the two international participants back to back. I included them in the sample because both had lived in America for several years, and what they mentioned in terms of differences between their home country and America was very informative in terms of fitness related to American culture. Both participants mentioned how much easier it was to be active in their home countries and that upon coming to America, both reported gaining weight and struggling to lose it. Both also mentioned having to make more conscious efforts to be active in America versus their home country wherein it was more built into the culture. It seems that people in other countries are more active in general especially in terms of utilitarian activity partly because many of them have to be (walking to work, working on the farm).

Date 7/1/2010:

Content of Memo: P15 page 24: Participant 15 seemed to contradict herself when. Earlier in the interview she mentioned that people need to be successful at exercise in order to enjoy it. I agree with this and, thus far in the analysis, it seems this is true and that lower confidence lowers a person's engagement in related activity. But, then later on in the interview, P15 suggests that "exercise is stuff that you suck at...once you're really good...it's not working for you anymore." While I understand the need for variety (e.g. muscle confusion), I do not agree that you need to suck at it. It should be challenging, yes but at the same time be something you feel confident in doing.

Date 7/15/2010:

Content of Memo: P16 page 3: I wonder how it is going to work for him running on the treadmill if he does not like working out indoors but loves to run outside. I feel bad for him as he loves to run outside but is so fearful of becoming injured that he believes that running on his treadmill is less risky. P16 is another intender who describes walking through the aisles of a store as exercise. This may be part of the disconnect between intenders and Active individuals –a major difference in what is considered activity. Therefore individuals who are sedentary who are seeking guidance from active individuals may not feel understood by them (because of different perspectives and definitions of exercise) and may be intimidated by active individuals' criteria for what it means to be active. For example, if someone who is very sedentary is told that she/he must workout for at least an hour at a moderate-high intensity or it will be of no benefit, this person may give up before even trying because the goal sounds unattainable.

Memorandum: Title/Concept/Category: Information as motivation to exercise

Date: 8/28/2010

Content of Memo: When re-reviewing P1 data, I found it interesting that he mentioned the benefits of being informed as something that people who don't work out need in order to want to workout. Yet, on the other hand, he reports being informed about the benefits of cardio/aerobic activity, but he still struggles to do cardio as he greatly prefers weight training. This brings me to one of my biases about people who are sedentary. I think some of the people who do not work out don't tend to enjoy movement as much as those who do. Or, it may be that they have not found a physical activity that they enjoy. I think about myself and how I detest running. I love many types of activity and movement but running is not one of them. I think about how hard it would be for me to run on a consistent basis if that were the only form of activity that I could do. I think I would be sedentary if that were the case. I really don't like the way running feels and therefore, I don't do it. This tends to help me in terms of empathizing with people who are sedentary. I do not tend to see them as lazy but rather I want to investigate how they feel about movement and if the activity they are planning to do is something that they like. It seems to me that many people who fail at maintaining activity do so because they chose an activity for reasons that don't include enjoyment (e.g. "I am going to run because I have heard it burns the most fat" or "I am going to walk because it is free). I think that information regarding the benefits of exercise is necessary but not sufficient to motivate someone to initiate or maintain a physical activity routine. P1, who is a consistently active (weight training) person does not always consistently engage in cardio activity which he knows is beneficial for his health but really boring for him to do.

Memorandum: Title/Concept/Category:

Date: 9/10/2010:

Content of Memo: As I continue to go back through the data, I find I keep revising the categories as I find interrelations among them. This is a long process. I feel like I am coming to a more comprehensive understanding of the issues at hand, but the process is immensely cumbersome. I know I chose to analyze the interviews myself to keep with a more inductive approach to viewing the data (i.e. as opposed to coming to consensus via research team) and I am glad I did. I can see however why many researchers choosing to use grounded theory chose Strauss and Corbin, 1990 as opposed to Glaser and Strauss 1967 or Glaser, 1992. Still, I think that since I am doing this alone, my tendency when I am perplexed is to go back through the data, again and again, constantly revising the categories and clusters. The point being, I go back to the data not to a research team to find answers related to this phenomena. I keep going back to the experiences as told by the participants themselves. And, for that reason, I am glad that I am conducting the analysis alone at least for this particular study.

### Appendix C

Selected YMCA fitness centers, newspaper advertisements, Lehigh University Health and Student Centers, and Department of Education listserv

NAME OF SITE	ADDRESS	CONTACT INFORMATION	CONTACT PERSON	NOTES
1. Ambler YMCA	400 North Bethlehem Pike Ambler, PA 19002	215-628-9950	Dave Prodorutti: Facility Director dprodorutti@philaymca.org	Facility will be relocating to new location within the next three years
2. Ft. Washington YMCA	410 Commerce Drive Ft. Washington, PA 19034	215-641-1245	Not specified	
3. Abington YMCA	1073 Old York Road Abington, PA 19001	215-884-9622	Maurice Earl Facilities Director ext: 1833	
4. Roxborough YMCA	7201 Ridge Avenue Philadelphia, PA 19128	215-482-3900	Debbie Saunders Executive Director ext: 2116	
5. Main Line YMCA	100 St. George's Road Ardmore, PA 19003	610-649-0700	Mary Francis Reilly: Executive Director mfreilly@philaymca.org	
6. Northeast YMCA	11088 Knights Road Philadelphia, PA 19154	215-632-0100	Paula Green: Executive Director ext: 1327 pgreen@philaymca.org	
7. West Philadelphia YMCA	5120 Chestnut Street	215-476-2700	Bertram L. Lawson II: Executive Director blawson@philaymca.org	

	Philadelphia, PA 19139			
8. West Chester YMCA	1 East Chestnut Street West Chester, PA 19380	610-431-9622		
9. Lionville Community YMCA	100 Devon Drive Exton, PA 19341	610-363-9622	Jacqueline v. Fenn: Branch Executive ext: 2222	
10. YMCA at Eagleview	699 Rice Boulevard Exton, PA 19341	610-458-9090	Not specified	
11. Phoenixville YMCA	400 East Pothouse Road Phoenixville, PA 19460	610-933-5861	Not specified	
12. Bethlehem YMCA	430 East Broad Street Bethlehem, PA 18018	610-867-7588	Randy Ballangee: Executive Director ext: 121 <a href="mailto:randyb@ymcabeth.net">randyb@ymcabeth.net</a>	
13. Allentown YMCA & YWCA	425 South 15 <sup>th</sup> Street Allentown, PA 18102	610-434-9333	Veronica Elias: Executive Director <a href="mailto:velias@allentownymcaywca.org">velias@allentownymcaywca.org</a>	
14. Bethlehem YWCA	22 West Broad Street Bethlehem, PA 18018	610-997-3786	Stephanie Hnatiw: Executive Director <a href="mailto:shnatiw@ywcabethlehem.org">shnatiw@ywcabethlehem.org</a>	
15. Lehigh University Fitness Center	641 Taylor Street Asa Packer Campus Bethlehem, PA 18018	610-758-4432	Doug Strange: Director of Fitness <a href="mailto:dws0@lehigh.edu">dws0@lehigh.edu</a>	
16. Lehigh University Graduate	14 E. Packer Avenue	610-758-3648	Dr. Kathleen Hutnik: Director of Graduate Student Life	

Student Life Office	Christmas-Saucon Hall Bethlehem, PA 18018		kaha@lehigh.edu	
17. The Morning Call	101 N. 16 <sup>th</sup> Street Allentown, PA 18101	General Questions: 610-820-6565 or <a href="mailto:classified@mcall.com">classified@mcall.com</a>	Not specified	
18. The Philadelphia Inquirer	400 N. Broad Street Philadelphia, PA 19101	215-854-2000	Not specified	
19. The Daily Local News	250 North Bradford Avenue West Chester, PA 19382	610-696-7000	Classifieds	
20. Lehigh University Department of Education listserv				

## Appendix D

### **INFORMED CONSENT FORM**

This form is to request your agreement to participate as a subject in the research study on: A Qualitative Examination of Adoption, Maintenance, and Motivation Issues and Weight-related Concerns for Active and Sedentary Individuals conducted by Debra Boyd under the supervision of Dr. Arnold Spokane: Advisor and Dissertation Chair.

The purpose of the study is to conduct an in-depth examination and analyses of adoption, maintenance, motivation, and weight-related issues from participants who are in the process of beginning and/or maintaining physical activity behaviors. You are advised to consult with your doctor before beginning any exercise routine or program.

The purpose of this study is exploratory and does not involve any interventions, professional advice, or recommendations.

The procedures which will be used in this study are open, semi-structured face-to-face interviews. All interviews will be video and/or audio recorded and transcribed verbatim for analyses.

Your participation in the study will involve an in-person interview lasting approximately one to two hours in length. Follow-up interviews or phone contact may be requested for clarification purposes or additional information as needed.

The possible risks associated with the study are emotional discomfort in exploring exercise adoption, maintenance, motivation, and weight-related issues. These risks are proposed to be minimal and participants reporting emotional concerns will be referred for counseling.

Being in this study may or may not benefit you personally, but participation may help to increase knowledge and understanding that may benefit others in the future.

Any data or answers to questions will remain confidential with regard to your identity. Participant transcripts will be de-identified. Your identity will not be disclosed in any published reports of this study. Any information collected through this research project that personally identifies you will not be voluntarily released or disclosed without your separate consent, except as specifically required by law.

Your decision whether or not to participate is completely voluntary. You are free to withdraw from this study at any time without jeopardizing your relationship with Lehigh University. In participating in the semi-structured interview or follow-up inquiry, you may decline to answer any questions you are not comfortable answering and you may end your involvement in this study at any time. If you have any questions about this study and what is expected of you in this study, you may call Debra Boyd at 713-505-0482.

You may report problems that may result from your participation or direct questions in regard to your rights as a subject in this study to the Office of Research and Sponsored Programs, Lehigh University, (610)758-3021. All reports or correspondence will be kept confidential.

To confirm that you have read and understand the foregoing information, that you have received answers to any questions you asked, and to consent to participate in the study, please sign below.

Printed name of subject: \_\_\_\_\_

Date: \_\_\_\_\_

Subject's Signature: \_\_\_\_\_

I, the undersigned, have defined and fully explained the study to the above subject.

Date: \_\_\_\_\_

Investigator's Signature: \_\_\_\_\_

Initial of Participant:

"I have received a copy of this informed consent/authorization document": \_\_\_\_\_

## Appendix E

### Semi-Structured Interview

These questions have been developed as a guide to exploration and will be asked to facilitate dialogue. If a respondent answers a question that renders one of the other questions unnecessary to ask (e.g. information was already provided via exploration in a previous question) then it will be skipped. This semi-structured, open-ended interview is designed to allow for free response from participants yet also attend to trigger points that uncover relevant information without interrupting the flow of a participant's experience. The questions are organized according to the main areas of exploration for the proposed study

#### Adoption:

1. What physical activity do you plan on doing/currently engage in? Why did you choose this type of activity?
2. How would you describe your neighborhood in terms of being accessible to walking/getting around?
3. [For people who have tried to maintain exercise in the past but have failed and are now trying again]: Compared to past times you have initiated exercise but have not maintained it, what is different about this time and why is it different?
4. [For people who have been chronically sedentary up to this point and are now initiating exercise for the first time]: Please describe your past lifestyle and why you have decided to make this change. Why right now versus another time?

#### Maintenance:

1. Please describe your exercise history/background.
2. Have you ever/how long have you maintained a physical activity routine? Please describe the routine and/or attempts to maintain a routine. Why do you think you have/have not maintained activity?
3. During childhood, were you active/was your family active?
4. How frequently do you/do you plan to engage in exercise/physical activity?
5. Do you have/can you foresee any barriers or challenges to your physical activity plans? How do you/do you plan to handle these barriers?

#### Motivation:

1. What types of physical activities do you most/least enjoy? Why?
2. What types of recreational physical activities do you engage in? Why?
3. Do you engage in activity related to work or personal business (e.g. walking to work, walking to shop or run errands?)
4. How does being physically active make you feel? Why?
5. Where will your/does your motivation come from? Why is that/would that be motivating?
6. Describe your attitude toward working out. Why do you feel this way about exercise?
7. Do you have any fears or concerns about being active/sedentary? How does this affect what you do?
8. Why do you think some people work out and some do not?

9. What influences your exercise behavior? Why?
10. Do you usually exercise alone or with others? Which do you prefer and why?

Weight-related concerns:

1. How would you describe your weight and body type?
2. Does exercise help you in maintaining a healthy weight?
3. Do you think exercise would help in your maintaining a healthy weight?
4. Are you satisfied with your current weight and body shape?

## Appendix F

### *Handout briefly describing the study*

- **Would you like to earn a \$10 gift card to Target or Home Depot? If so, please read!**

My name is Debra Boyd and I am conducting a study that is looking at the similarities and differences between people who work out and people who don't. The supervisor of this study is my advisor, Dr. Arnold Spokane from Lehigh University.

#### Purpose:

- Basically, I would be meeting with you for approximately an hour and asking you various questions about your workouts or plans to work out.
- You do not have to answer any questions you don't want to.
- I will be asking questions regarding how you feel about working out and how motivated you are to keep working out
- I will also ask you questions about how satisfied you are about your weight and if you think working out would or does help you maintain a certain weight range.
- This study is exploratory and does not involve any interventions, professional advice, or recommendations.

You can participate if you:

- a. are 18 years or older
- b. intend to start working out within the next 30 days **or**
- c. if you currently maintain some form of physical activity

Information from this study may be used for future research and intervention development that looks at how to help people who are generally sedentary become more active on a regular basis.

If you or someone you know who fits this description would like to find out more about participating, please contact me: Debra Boyd, M.Ed. at 713-505-0482.

Thank you!

## Appendix G

### *Id of Categories/Open Coding:*

This is the first step in analyzing/coding the data wherein concepts are identified and labeled into categories (Fassinger, 2005; Pigeon & Henwood, 1992). Index cards or a word document set up to fill in relevant information will be used. First, an index card or a document will be created for each participant wherein units of meaning from a participant's transcript are identified and labeled (open coding). Then as repetition emerges across participants, participant responses will be integrated onto index cards or documents that reflects commonalities (categories) across participants. Then, as relationships among the categories emerge, integration of categories (e.g. identification of main categories versus subcategories that are subsumed under main categories) occurs which further defines the categories and the interrelations between them (axial coding).

### Coded Concepts and Potential Categories

---

Selected paragraphs from an interview relating to the *Qualitative Examination of Adoption, Maintenance, and Motivation Issues and Weight-Related Concerns for Active and Sedentary Individuals* study.

Interview: (de-identified participant number/code name)\_\_\_\_\_

Date:\_\_\_\_\_

Interview Conducted by:\_\_\_\_\_

Paragraph # \_\_\_\_\_

Description:\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Paragraph # \_\_\_\_\_

Description:\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(continue adding paragraphs as needed)

Significant units of meaning and concepts identified within paragraphs:

Paragraph#\_\_

Units of meaning/concepts:

Appendix H

*Concept Card to Assist with Axial Coding*

---

Number of Card: \_\_\_\_

Title of Category/Concept: \_\_\_\_\_

Interviewed Participant Code or Number \_\_\_\_\_

Paragraph # \_\_\_\_\_

Description: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Interviewed Participant Code or Number \_\_\_\_\_

Paragraph # \_\_\_\_\_

Description: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Continue adding paragraphs/participant responses as needed)

Cross References: Describes what categories/concepts links with this card:

Card # \_\_\_\_ Title of Card \_\_\_\_\_

Card # \_\_\_\_ Title of Card \_\_\_\_\_

Card # \_\_\_\_ Title of Card \_\_\_\_\_

Earlier Labels/Category Names:

\_\_\_\_\_

\_\_\_\_\_

Appendix I

*Referral List of Mental Health Resources*

LOCATION	NAME	ADDRESS	CONTACT
<b>1. Community Mental Health Services in Philadelphia</b>	John F. Kennedy Community MH/MR Center	112 North Broad Street Philadelphia, PA 19102	215-568-0860
	Northwestern Human Services (various locations)	27 East Mount Airy Avenue Philadelphia, PA 19128	215-248-67--
	Northwestern Human Services of Philadelphia	Benjamin Rush Division 11082 Knights Road Philadelphia, PA 19145	610-632-9040
	Dr Warren E. Smith Health Centers	1006 West Lehigh Avenue Philadelphia, PA 19133	215-226-7100
	Dr Warren E. Smith Health Centers	1315 Windrim Avenue Philadelphia PA 19141	215-455-3900
	The Consortium, Inc. University City Counseling Center	451 University Avenue Philadelphia, PA 19104	215-596-8163 ext 229
	The Consortium, Inc. Southwest Counseling Center	6408 Woodland Avenue Philadelphia, PA 19104	215-596-8000 ext 229
<b>2. Community Mental Health Services in Allentown/Bethlehem</b>	Psychology Associates of Bethlehem	264 East Broad Street Bethlehem, PA 18018	610-866-9311
	Lehigh Valley Community Mental Health Centers: Bethlehem	865 East 4 <sup>th</sup> Street Bethlehem, PA 18015	610-691-4357
	Lehigh Valley Community Mental Health Centers: Allentown	210-214 North 6 <sup>th</sup> Street Allentown, PA 18102	610-432-4356
	Lehigh Valley Community Mental Health Centers: Allentown	530-532 Ridge Avenue Allentown, PA 18102	484-223-3112
<b>3. Community Mental Health</b>	Holcomb Behavioral Health	1308 West Chester Pike # B3 West	610-692-1959

<b>Services in Chester County and Montgomery County</b>		Chester, PA 19382	
	Counseling & Clinical Services	1503 McDaniel Drive Westtown, PA 19395	610-692-6797
	Human Services 222 North Walnut Street West Chester, PA 19380		
	Access Services 114 Nutt Road Phoenixville PA 19460	610-935-7235	

Appendix J

Phone Contact Script/Initial Screening:

- After greeting potential participant, mention the following information:  
*I am only selecting 20 participants to interview and I hope to get a broad and diverse sample. For this reason, not everyone I screen will be scheduled for the interview process. Now I am going to ask you a few demographic questions which help me in understanding how diversity influences my topic. You do not have to answer any questions that you do not want to.*

- What is your:
  - Race: \_\_\_\_\_
  - Ethnicity: \_\_\_\_\_
  - Age \_\_\_\_\_
  - Economic status: \_\_\_\_\_
  - Sexual Orientation: \_\_\_\_\_
  - Gender: \_\_\_\_\_

- Do you have any physical limitations? If yes, please describe:

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- How would you describe your neighborhood/community's physical environment?

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**DEBRA BOYD**  
7040 Chew Avenue  
Philadelphia, PA 19119  
(713) 505-0482  
dlf5@lehigh.edu

## **EDUCATION**

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Counseling Psychology Program; Ph.D. Candidate, Lehigh University,  
August 2004 to Present  
Current GPA: 3.93

Master of Education in Counseling and Human Services, May 2006  
Lehigh University, Bethlehem, PA  
GPA: 3.94

Bachelor of Science in Psychology with Business Minor, May 2003  
Ursinus College, Collegeville, PA  
Graduated Summa cum Laude  
GPA: 3.98

## **CURRENT POSITION:**

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***Pre-Doctoral Psychology Intern: Coatesville VA Medical Center, Coatesville, PA  
September 1, 2010 to August 31, 2011***

Internship training and experience includes conducting individual, and group counseling, co-teaching psycho-educational classes, psychological and intellectual testing and assessment, case conceptualization, behavioral assessments, and treatment planning for veterans across three, four-month rotation periods. Rotations include: full-time rotations on the PTSD Inpatient and Substance Dependence units and half-time rotations on Biofeedback and Outpatient PTSD units. Rotation on the PTSD unit completed in January 2011. Currently completing rotation on the Substance Dependence outpatient unit and receive supervision from Ira Kedson, Psy. D. and Frank Angelini, Ph.D.

## **PREVIOUS CLINICAL EXPERIENCE**

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***Practicum Student: Coatesville VA Medical Center, Coatesville, PA***

***July 2009 to August 31, 2010***

Practicum experience included administering, scoring, and interpreting cognitive and personality assessments with veterans. Tests administered included the Rorschach, WAIS-IV, MMPI-2, MCMI-III, PAI and TAT. A full integrated report was required for each person tested. Supervision for practicum was provided by Ira Kedson, Psy.D. and Donald Dow, Ph.D.

***Practicum Student: West Chester University Counseling Center, West Chester, PA September 2007 to May 2008***

Experience included conducting intake evaluations, individual counseling, case conceptualizations, vocational assessment and treatment planning for college students with mental health concerns. Received supervision from Debby Beirschwale, Psy.D. and Jim Bleiberg, Psy.D.

***Practicum Student: Allentown State Hospital, Allentown, PA July 2006 to July 2007***

Full-time position involved conducting individual and group counseling, intake evaluations, psychological, intellectual, and vocational testing and assessment, case conceptualization, and treatment planning for adults with severe mental illness. Received on-the-job training in Rorschach administration, scoring, and interpretation (Exner System). Received supervision from William Schneller, Ph.D., Director of Psychology at Allentown State Hospital

***Practicum Student: Methodist Services for Children and Families, Bangor, PA September 2005 to May 2006***

Practicum responsibilities included conducting individual, couples, and family counseling, intake evaluations, psychological and intellectual testing and assessment, case conceptualization, and treatment planning for children and adults. Received supervision from Jannice Bailey, Psy.D.

**GRADUATE ASSISTANTSHIP**

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***Behavioral Consultant: National Center for Intensive Interventions: Center for Promoting Research to Practice, Project REACH, Bethlehem, PA January 2004 to June 2006***

Assistantship involved data collection via direct observation, assessment, and intervention development for children with emotional, social, and behavioral needs. Additional duties included instructing teachers and parents on the implementation of individual and class-wide interventions. Supervision and modification of interventions were provided as necessary for successful accommodation of children's needs. Position also involved administration and scoring of various assessment measures, and collaboration with parents, teachers, and school administrators. Received supervision from Lee Kern, Ph.D., Professor and Program Coordinator of Special Education at Lehigh University

**TEACHING EXPERIENCE**

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***Teaching Assistant: Counseling Psychology Department, Tina Richardson, Ph.D. Lehigh University, Bethlehem, PA August 2005 to December 2005***

Assisted with course preparation, lecture planning, and teaching the Counseling Psychology Cultural Centered Career Development online course for international students. Involvement included creating an online presentation using video technology, facilitating and monitoring online student discussions, and participating in development and grading of exams and assignments

***Teaching Assistant: Counseling Psychology Department, Arnold Spokane, Ph.D.  
Lehigh University, Bethlehem, PA  
August 2007 to December 2007***

Responsibilities included helping prepare course material, teaching, and co-facilitating class discussions for the Counseling Psychology Advanced Techniques course. Taught two classes about the fundamental aspects of DBT. Presentations included lecture, demonstrations, and in-class activities. Participated in grading essays and other assignments

## **SUPERVISION EXPERIENCE**

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***Doctoral Student Supervisor: Counseling Psychology Department,  
Lehigh University, Bethlehem, PA  
September 2007- May 2008***

Supervised one Masters level student in the Counseling and Human Services Program at Lehigh University. Received supervision of supervision from Tim Silvestri, Ph.D. and Nicholas Ladany, Ph.D.

## **RESEARCH**

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***Independent Contractor: Palo Alto Institute for Research and Education  
Palo Alto VA Health Care System: Menlo Park, CA  
April 2009 to August 31, 2010***

As a consultant for the Homecoming Line Study, responsibilities included revising, and editing an Operations Manual. Additional duties included conducting literature reviews, writing reports and summaries, and assisting in the preparation of presentations and publications related to the Homecoming Line Study. Supervisors: Carolyn Greene, Ph.D. and Quyen Tiet, Ph.D.

***Research Assistant: Coatesville VA Medical Center, Coatesville, PA  
March 2008 to March 2010***

Assisted Principal Investigator, Dr. Susan Rogers, in a collaborative multi-site study, “*Telephone Case Monitoring for Veterans with PTSD.*” Duties included obtaining informed consent, explaining study description to veterans and administering various assessments during intake and pre-discharge from Coatesville VA Medical Center’s inpatient PTSD Program. Position also involved collaborating with members of the research team, gaining familiarity and skill with using the VA’s computerized patient record system (CPRS), and an overall knowledge of the responsibilities and training associated with conducting research within the VA System. Report

to Susan Rogers, Ph.D., Local Principal Investigator, Assistant Director and Research Coordinator, PTSD Program

***Counseling Psychology Department, Arnold Spokane, Ph.D.***

***Lehigh University, Bethlehem, PA***

***January 2005 to June 2007***

Part of a research team that examined the effects of the built environment on public health. Research was funded by the National Institute of Mental Health/National Institute on Environmental Health Sciences. This longitudinal study was being conducted with a population of Hispanic elders from low-income communities and provided valuable information in the realm of community design and public health. Completed a research proposal: *Neighborhood Built Environment Characteristics and Density of Elders*

***Counseling Psychology Department, Nicholas Ladany, Ph.D. and Arpana Inman, Ph.D. Lehigh University, Bethlehem, PA***

***February 2004 to October 2006***

Researcher for the study: *Advisee nondisclosures in doctoral-level advising relationships* Duties involved literature review, coding data, data analysis via SPSS, manuscript writing including first draft of entire manuscript, and collaboration with other members of the research team

***Counseling Psychology Department, Nicholas Ladany, Ph.D.***

***Lehigh University, Bethlehem, PA***

***May 2004 to March 2005***

Assisted with a research project examining aspects of the therapeutic relationship between supervisee and client and the supervisor/supervisee relationship. Involvement included graphing and organizing data to prepare for analysis and submission for publication

***Counseling Psychology Department, Arpana Inman, Ph.D.***

***Lehigh University, Bethlehem, PA***

***November 2004 to March 2005***

Assisted with a qualitative study analyzing trainees' multicultural sensitivity and awareness within the therapeutic and supervisory relationship. Received training in coding qualitative data from Dr. Inman and conducted the coding process and inter-observer agreement with another doctoral student

***Psychology Department, Catherine Chambliss, Ph.D.***

***Ursinus College, Collegeville, PA***

***January 2001 to May 2003***

Research included one study that explored single parent versus intact family environments of college students. Examined how perceptions of maternal employment and quality of relations with mothers and fathers differed among the study groups. Another study explored the changes in attitudes of college students about maternal employment over the past decade. A third study examined attitudes toward maternal employment in elementary school and early childhood as a function of gender differences. Additionally, my research endeavors included investigating married men and women's attitudes toward self as a function of gender and locus of control. My final undergraduate research project involved urban and suburban middle school students' attitudes toward maternal employment as a function of gender and type of school attended. All undergraduate studies were submitted and accepted for publication

## **PRESENTATIONS**

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*Lehigh University, April 2008*

Boyd, D. Architectural Features of Middle Schools in Relation to Activity and Social Behavior

*Diversity Challenge, October 2007*

Cruza-Guet, M.C. & Boyd, D. Culturally Sensitive Psychotherapeutic Interventions with Elderly Women of Hispanic Origin

*American Psychological Association, 113<sup>th</sup> Annual Convention, August 2005*

Boyd, D., Ngoubene, A., Ladany, N. Training issues regarding GLBT clients: Answering the really hard questions. *Roundtable Discussion: Hot Topics in Clinical Supervision and Training—2005*

*Society for Psychotherapy Research International Meeting, June 2005*

Ngoubene, A., Boyd, D., Ladany, N. Training issues regarding gay, lesbian, bisexual, and transgendered clients

*Eighteenth Annual University of Scranton Undergraduate Conference, February 15, 2003*

[Boyd]Farrell, D., Lindquist, M., Strauss, A., Denis, L., Nyce, S., Johnson, L., Covert, S., Gorton, L., Maggi, L., Fields, S., Eddy, P., McCauley, J., Black, A., & Chambliss, C. (2003). Male and Female Middle School Students' Perceptions of Maternal Employment as a Function of Gender and School Environment. *Resources in Education ERIC/CASS, CG32185*

Arena, J., Black, A., Dantonio, K., [Boyd] Farrell, D., Fleming, H., Fontanez, M., Gelband, A., Sosnowski, J., McCauley, J., Nyce, S., & Chambliss, C. (2003). Married With Children: Males and Females' Attitudes about Self. *Resources in Education, ERIC/CASS CG032146*

*PSI CHI: Delaware Valley Undergraduate Research Colloquium, March 25, 2002*

[Boyd] Farrell, D., Thomas, A., Johnson, L., Arena, J., Weiner, S., Nyce, S., Lang, A., Alvazian, C., Szuchyt, J., Cane, S., Gelband, A., Zohe, D., & Chambliss, C. (2002). Young Adults from Single versus Two-Parent Households: Attitudes Toward Maternal Employment and Quality of Current Relationships with Parents. *Resources in Education, ERIC/CASS*, ED463491

Gambone, K., Arena, J., Weiner, S., Thomas, A., Johnson, L., Nyce, S., Lang, A., Alvazian, C., Szuchyt, J., [Boyd] Farrell, D., Cane, S., Gelband, A., Zohe, D., Dous, J., Black, A., & Chambliss, C. (2002). Changes in Attitudes Toward Maternal Employment During the Past Decade. *Resources in Education, ERIC/CASS*, ED463485

## **PUBLICATIONS**

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[Boyd] Farrell, D., Lindquist, M., Strauss, A., Denis, L., Nyce, S., Johnson, L., Covert, S., Gorton, L., Maggi, L., Fields, S., Eddy, P., McCauley, J., Black, A., & Chambliss, C. (2003). Male and Female Middle School Students' Perceptions of Maternal Employment as a Function of Gender and School Environment. *Resources in Education ERIC/CASS*, CG32185

[Boyd] Farrell, D., Thomas, A., Johnson, L., Arena, J., Weiner, S., Nyce, S., Lang, A., Alvazian, C., Szuchyt, J., Cane, S., Gelband, A., Zohe, D., & Chambliss, C. (2002). Young Adults from Single versus Two-Parent Households: Attitudes Toward Maternal Employment and Quality of Current Relationships with Parents. *Resources in Education, ERIC/CASS*, ED463491

Arena, J., Black, A., Dantonio, K., [Boyd] Farrell, D., Fleming, H., Fontanez, M., Gelband, A., Sosnowski, J., McCauley, J., Nyce, S., & Chambliss, C. (2003). Educating Students About Parents: Husbands Versus Wives' Attitudes About Self. *Resources in Education, ERIC/CASS* CG032146

Baker, K., Beck, C., Camp, K., Censullo, E., Collins, C., Deitrick, S., Lu, C., [Boyd] Farrell, D., & Chambliss, C. (2003). The Relationship Between Maternal Employment and Perceptions of Child, Spouse, and Self. *Resources in Education, ERIC/CASS*, CG032145

Gorton, L., McCauley, J., [Boyd] Farrell, D., Nyce, S., Johnson, L., Covert, S., Strauss, A., Maggi, L., Fields, S., Eddy, P., Denis, L., Hemperly, M., Fronheiser, A., & Chambliss, C. (2003). The Relationship Between Maternal Employment and Preadolescents' Attitudes and Ambitions. *Resources in Education, ERIC/CASS*, CG032232

Gambone, K., Gelband, A., [Boyd] Farrell, D., Black, A., Szuchyt, J., Alvazian, C., Lang, A., Nyce, S., Johnson, L., Thomas, A., Arena, J., Weiner, S., Zohe, D., & Chambliss, C. (2002). Gender Differences in Attitudes Toward Maternal Employment During Early Childhood and the Elementary School Years. *Resources in Education, ERIC/CASS*, ED463871

Gambone, K., Arena, J., Weiner, S., Thomas, A., Johnson, L., Nyce, S., Lang, A., Alvazian, C., Szuchyt, J., [Boyd] Farrell, D., Cane, S., Gelband, A., Zohe, D., Dous, J., Black, A., & Chambliss, C. (2002). Changes in Attitudes Toward Maternal Employment During the Past Decade. *Resources in Education, ERIC/CASS*, ED463485

## **PROFESSIONAL DEVELOPMENT CERTIFICATES**

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### ***Rorschach Training Programs: Rorschach Beginning Level Training Program June 10-14, 2009***

Intensive week-long training seminar provides the equivalent of one course graduate education in the Rorschach Comprehensive System (35 hours total). Approved by the Society of Personality Assessment

### ***Eye Movement Desensitization and Reprocessing Training (Part I): For the Treatment of Military Related Trauma: Coatesville VA Medical Center October 6<sup>th</sup>-8<sup>th</sup>, 2008***

### ***Eye Movement Desensitization and Reprocessing Training (Part II): The Department of Army Eye Movement Desensitization and Reprocessing II Presented by the Post Traumatic Stress Disorder Training Section, AMEDD Center and School, Fort Sam Houston, TX 78234 October 20<sup>th</sup>-22<sup>nd</sup>, 2008***

### ***Drexel University College of Medicine Behavioral Healthcare Education Philadelphia, PA***

*PTSD: Posttraumatic Effects Throughout the Lifespan: 10/26-27/06*

*Motivational Interviewing: Skills in Reflective Listening: 12/15/06*

*Dialectical Behavior Therapy (DBT): 01/18-19/07*

*Ethical Issues Related to Psychiatric Recovery: 03/15/07*

*Cultural Competence: Steps & Skills in a Recovery System: 09/21/06*

*COD: Skill Building-Individual & Group Methods: 09/22/06*

*Evidence-Based and Promising Practice for Adults: 03/27/07*

*Juvenile Sex Offending: Development, Treatment, & Correction: 06/22/07*

*Forensic Prerequisites: What Clinicians Need to Know: 06/21/07*

*Recovery in Action: 11/14/06*

*Supporting "A Call for Change": 11/15/06*

***Penn State Education, Health Services and Outcomes Research  
Division Department of Psychiatry  
Seminars held at Allentown State Hospital, Allentown, PA***

*State of the Art Treatment for Posttraumatic Stress Disorder: 10/4/06*

*Sleep and Posttraumatic Stress Disorder: Data from Motor Vehicle Accident Survivors: 10/20/06*

*Cognitive-Behavior Therapy for Psychosis: 02/28/07*

*A History of Alcoholism Treatment: 10/4/06*

*Substance Abuse and the Elderly: 02/21/07*

*Borderline Personality Disorder: An Overview of Assessment and Interventions: 01/31/07*

*The Nature and Treatment of Social Anxiety Disorder: 09/6/06*

*Outcomes of Undiagnosed and/or Untreated Eating Disorders: 11/29/06*

*An Examination of Factors that Distinguish Groups of Young Adult Ecstasy Users: 10/18/06*

*Professional and Personal Development in the Mental Health Provider: 01/3/07*

*Working with the Resistant Mental Health Patient: 01/10/07*

*Prevention of Alzheimer's Disease and Palliative Care in End Stage Alzheimer's: 03/21/07*

*Sleep Paralysis: Overlooked Fearful Arousal: 12/6/06*

**FITNESS PROGRAM DEVELOPMENT**

---

***University Counseling & Psychological Services, Jeff Van Lone, Ph.D.***

***Lehigh University, Bethlehem, PA***

***December 2004 to October 2005***

Participated in the co-development of physical fitness groups for college students experiencing anxiety and depression. Experience included co-facilitation of fitness groups involving exercise, relaxation, post-workout discussions, and a focus on healthy lifestyles

**WEBSITE DEVELOPMENT**

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***Counseling Psychology Department, Nicholas Ladany, Ph.D.***

***Lehigh University, Bethlehem, PA***

***May 2004 to January 2007***

Developed and edited a website for the Special Interest Group (SIG) Supervision and Training Section of the American Psychological Association. Experience involved completion of training in design and development of a website using Dreamweaver software

## **HONORS**

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Dean's List

Gamma Omicron Chapter of Alpha Sigma Lambda National Honor Society

## **PROFESSIONAL MEMBERSHIPS**

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American Psychological Association

Division 17 of the American Psychological Association: Counseling Psychology

Division 19 of the American Psychological Association: Military Psychology

Division 38 of the American Psychological Association: Health Psychology

Division 47 of the American Psychological Association: Exercise and Sport Psychology

Division 56 of the American Psychological Association: Trauma Psychology