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"I'm still molding myself into the person I want to be": an interpretative phenomenological analysis of physical activity within the transition to adulthood

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"I'M STILL MOLDING MYSELF INTO THE PERSON I WANT TO BE":
AN INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS OF
PHYSICAL ACTIVITY WITHIN THE TRANSITION TO ADULTHOOD

A Masters Thesis presented to the Faculty of the
Graduate Program in Exercise and Sport Sciences
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In partial fulfillment of the requirements for the degree
Master of Science

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By

William Way

August 2014

Ithaca College
School of Health Sciences and Human Performance
Ithaca, New York

CERTIFICATE OF APPROVAL

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MASTER OF SCIENCE THESIS

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This is to certify that the Thesis of

William Way

submitted in partial fulfillment of the requirements for the
degree of Master of Science in the School of
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ABSTRACT

Across the lifespan, marked declines in daily physical activity (PA) have been found to coincide with the transition to adulthood (Zick et al., 2007). However, little is known about how emerging adults think about and engage in PA within the developmental context of their lives. An Interpretative Phenomenological Analysis (Smith et al., 2009) was conducted to inductively explore the experiential impact of PA within the transition to adulthood. Six highly physically active (M_{PA} = 19 hrs/week; range = 7-27 hrs/week) emerging adults (3 male, 3 female; M_{age} = 25.5 years, range = 23-28) participated in semi-structured interviews. Analyses revealed three sub-themes: *Context of Life and PA*; *Social Connection, Support, and Energy*; and *Positive Insights and Sensations*. The higher-order theme that linked all six interviews to describe the perceived impact of PA during emerging adulthood was, *An Outlet for Continued Goal-Striving and Self-Change*. Participants' ongoing PA participation enabled them to continue striving towards meaningful goals in their activity. Participants also recognized positive impacts of PA that influenced other aspects of life, and integrated their PA experiences within their pursuit of long-term life aspirations. Results indicated that deliberate reflective efforts and self-awareness were important precursors to developing these PA insights. Empirical models of personal growth have included reflective effort as an important precursor to the experience of meaningful self-change (e.g., O'Connor & Wolfe, 1991). Practical applications are offered for practitioners to help facilitate growthful, physically active life transitions for emerging adults.

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I would also like to acknowledge my two favorite women: my mom, and my beautiful bride-to-be, Gabby. You have inspired me and supported me not just in my work toward this project, but in my efforts to become a young man of substance and character. You have always been there to listen when I have needed to vent, and have helped me to take a step back and reflect when I've been too hard on myself. You have helped me to laugh, and have allowed me to cry. I am so blessed to have you both in my life, and love you more than I can say.

Within my own continued goal-striving and self-change, I would like to thank Tom Sexton, Jim Nichols, and Eric Sambolec. As my coaches, you have guided me to see that running is not just a sport, but more broadly, a metaphor for life and a medium through which one can learn life's most valuable lessons. We have shared incredible highs and crushing lows, and through them all, you have helped me to grow tremendously, not just as an athlete, but as a young man. Thank you.

In a similar light, I would also like to acknowledge Rich Bernstein, Eric Parker, John Baker, Drew Hilker, Gary (The Legend) Hunter, Kwaku Attoh, Jason Trumble, and all of the Ithaca High School cross country / track and field athletes that I have had the privilege of sharing these last three years with. You have encouraged me more than you realize through the process of completing this project, and have helped me to maintain a much-needed sense of perspective. At times there was nothing I needed more than a chance to step back, laugh at my frustrations, and share a nice run. You are an inspiring, energizing, and incredibly caring bunch of people.

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DEDICATION

To you, dad.

You introduced me to the sensation of movement, and to sport.
In doing so, you taught me far more than how to
swing a golf club, or throw a ball.

You taught me about enjoying life, through all of its inevitable ups and downs.
You taught me how to win, and more importantly, how to fail.
You taught me to persevere, and to pursue excellence in all that is worth doing.
You taught me about balance, and about what is really important in this world.

You are sorely missed, but continue to inspire me each and every day.

You are the model of the man that I strive to be.

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Chapter 1

INTRODUCTION

<u>Preamble</u>

Obesity and sedentary lifestyles are becoming alarmingly common in the United States (e.g., CDC, 2010a; USDHHS & CDC, 2010), which is of concern as an abundance of empirical research has presented links between obesity and increased risk of disease (Garber et al., 2011). Across the lifespan, it appears that some of the most marked declines in regular physical activity occur within the transition from adolescence to adulthood (Zick, Smith, Brown, Fan, & Kowaleski-Jones, 2007). This time of life has been referred to as *emerging adulthood*, and generally occurs between the ages of 18 and 29 (Arnett, 2000; 2004; Arnett & Fishel, 2013). The emerging adulthood years can present several developmental transitions that could potentially influence physical activity behavior, namely increased time and energy devoted to career development, committed romantic relationships, and perhaps parenting (e.g., Arnett, 2000).

While these transitions can be exciting, they are not always enjoyable (Arnett, 2000). Perhaps in line with that observation, it has been suggested that emerging adulthood can present relatively steep declines in perceived well-being (part of a U-shaped pattern over the lifespan; Stone, Schwartz, Broderick, & Deaton, 2010). As various components of well-being have been positively associated with physical activity (Biddle & Mutrie, 2008), perhaps it is no coincidence that the transition from adolescence to adulthood presents concurrent declines in both physical activity behavior and psychological well-being.

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Within the well-being literature, a fascinating, yet highly ambiguous and subjective construct of personal growth has surfaced. In line with the trends mentioned above, it has been observed that the experience of personal growth seems to decline with age, particularly after the college years (Bauer & McAdams, 2010; Robitschek, 1998; Ryff, 1989a; Ryff & Keyes, 1995; Ryff & Singer, 2008). It has been argued that the inherent nature of the college experience may readily provide for a sense of growth (Robitschek, 1998); and so too that middle-aged adults might experience personal growth through mid-life crises and transitions (O'Connor & Wolfe, 1991). This appears to leave post-college aged emerging adults to be at a loss for the experience of personal growth.

Limited research has suggested that sport (Udry, Gould, Bridges, & Beck, 1997), exercise (Morgan, Tobar, & Snyder, 2010), and lifetime physical activity (Crust, Keegan, Piggott, & Swann, 2011) may offer potential avenues to personal growth, so perhaps these pursuits could offer emerging adults a sense of growth during a time in their lives that might otherwise be void of it. Some of this research has been done with adolescents (e.g., Gould, Flett, & Lauer, 2012) and adults (Crust et al., 2011; Morgan et al., 2010); but, to date, there appears to be no research that has been conducted specifically to examine emerging adults' personal growth experiences through physical activity. Indirectly, one study examined young adults' experience of athletic injury and found growth to surface therein (Udry et al., 1997), and another study found growth to follow significant adversity for elite female athletes (Tamminen, Holt, & Neely, 2013).

While it would make intuitive sense to simply ask emerging adults if they feel they have perceived a sense of personal growth through physical activity, the idea of achieving growth is one that is socially desirable in American culture (Bauer, McAdams,

& Pals, 2008), so such a direct approach could bias participants' responses. For this reason, an open-ended, inductive exploration of emerging adults' physical activity experiences (also glaringly absent in research to-date) is a logical and necessary first step to understanding the potential relationship between physical activity and personal growth. Further, an open-ended, richly descriptive exploration of the experience and impact of physical activity within the developmental period of emerging adulthood could yield new insights that might help to explain the declines in physical activity and perceived well-being found for this age cohort in larger scale epidemiological research. Nelson, Story, Larson, Neumark-Sztainer, and Lytle (2008) appeared to emphasize this gap in the research, arguing that, "emerging adulthood may be an important, yet overlooked, age for establishing long-term health behavior patterns" (p. 2205).

<u>Scope of the Problem</u>

Emerging adulthood appears to present declines in both physical activity behavior and perceived well-being. To date, no research has been conducted to offer an in-depth description of how emerging adults engage in and think about physical activity, or to explore its' perceived impact specifically within this developmental period. An interpretative phenomenological approach (Smith, Flowers, & Larkin, 2009) was employed to explore how physical activity fits within the lives of emerging adults, and what they perceive they have taken from their physical activity experiences. Findings can be applied to inform professionals that work with emerging adults (e.g., sport and exercise psychology consultants, mental health counselors, healthcare professionals, etc.).

<div align="center">

Statement of Purpose

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The purpose of this study was to explore the lived experience and impact of physical activity within the developmental period of emerging adulthood.

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Research Question and Objectives

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1. For emerging adults, what is the perceived impact of physical activity on their lives?

    A. Describe the idiosyncratic impacts that emerging adults have perceived to follow their physical activity experiences.

    B. Outline themes that transcend and link each participant's unique experiences.

    C. Contextually situate central themes within the broader social, cultural, and developmental lives that emerging adults describe.

<div align="center">

Sensitizing Concepts ("Qualitative Hypotheses")

</div>

1. Emerging adulthood can present unique developmental challenges including identity exploration within the realms of love, work, and worldview, as well as efforts to achieve self-responsibility and financial independence (Arnett, 2000).

2. Participants will likely speak to myriad positive and negative impacts of physical activity on their lives. Components of personal growth may or may not surface within their descriptions.

3. Participants may perceive intrinsically motivated physical activity in a more positive light than extrinsically motivated physical activity.

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Assumptions of the Study

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1. This study followed the assumptions of a post-positivist research paradigm. Some realist ontological assumptions were blended with some interpretivist epistemological assumptions (See Appendix A).

2. Participants shared accurate reflections of their physical activity experiences, as well as their true feelings therein.

3. As an interviewer and analyst of qualitative data (i.e., a research "instrument"), the researcher could not remain entirely objective; however, efforts were made to remain true to the data through bracketing and member-checking (Hatch, 2002; Smith et al., 2009).

4. The idea of achieving personal growth is socially desirable within American culture (Bauer et al., 2008), so directly asking about it could have produced biased responses. As such, this term was not used during interviews unless organically generated by a participant.

<div align="center">Definition of Terms</div>

Autonomy: A basic psychological need; a sense of volition in one's actions (Deci & Ryan, 1985).

Eudaimonic well-being: A process of continually striving for one's fullest potential (e.g., Ryff & Singer, 2008).

Emerging adulthood: A distinct developmental period identified by Arnett (2000, 2004) generally occurring between the late teenage years and the mid- to late-twenties. The author used the term to describe individuals specifically in their mid- to late-twenties.

Extrinsic motivation: A drive for behavioral persistence that stems from the desire to obtain some reward (or avoid some punishment) through that behavior (Deci & Ryan, 1985).

Hedonic well-being: A state of comfort and positive affect (Kahneman, Diener, & Schwarz, 1999).

Internalization: A process in which extrinsic motivation shifts to more authentic, autonomous motivation (Deci & Ryan, 1985).

Intrinsic motivation: A drive for behavioral persistence that stems from the sense of enjoyment, interest, or challenge derived from engagement in that behavior (Deci & Ryan, 1985).

Personal growth: A highly subjective component of perceived well-being that can be said to include the following elements (See Appendix B):

a) New, broadened, or enhanced self-perceptions;

b) New, broadened, or enhanced understanding or perspective of concepts, events, and the world that exists outside oneself;

c) An increased openness to experience; and/or

d) A conscious, deliberate intent to grow or expand oneself.

Physical activity: Bodily movement or effort exerted for the purposes of exercise, sport (competitive or recreational), leisure-time pursuits, work/physical labor, and/or personal transportation (e.g., walking, biking; Caspersen, Powell, & Christenson, 1985).

Delimitations

1. A small, purposive, and relatively homogenous sample was recruited.

2. Highly structured inventories and assessments were not used. A semi-structured interview guide was used for all interviews.

3. Interpretative phenomenological methods provided rich description and analysis, but correlations drawn or predictive properties observed were not verified through statistical analyses.

4. Theory-based, a-priori hypotheses were not tested or used to guide this study. Instead, an exploratory, descriptive approach was adopted.

5. A non-experimental, retrospective research design was employed.

<div align="center">Limitations</div>

1. Conclusions reached may not apply to sedentary populations, or to populations outside the age range of participants in this study.

2. Participants' retrospective responses may have been influenced by the passage of time or other recall biases (e.g., adherence to a cultural script).

3. As individuals volitionally chose to participate in this study, a volunteer bias may have influenced findings.

Chapter 2

REVIEW OF LITERATURE

<u>Introduction</u>

The transition from adolescence to adulthood is often a time of life marked by change, exploration, and increasing self-responsibility. In relatively recent years, a strong, empirically-based argument has been made that this is a distinct developmental period, termed "emerging adulthood" in the work of Jeffrey Arnett (e.g., 2000, 2004). Within public health literature, it appears that some of the sharpest declines in daily physical activity across the lifespan occur within this stage of life (Zick et al., 2007). As there has been a suggested link between physical activity and perceived well-being (Biddle & Mutrie, 2008), it may be no coincidence that this time of life also appears to present a dip in perceived well-being (Stone et al., 2010). The construct of personal growth has surfaced as an interesting, but highly subjective, component of well-being that might also be lacking during emerging adulthood. Limited research has suggested that engagement in physical activity might provide for the experience of personal growth, but has not addressed how, or even if, emerging adults experience personal growth through physical activity. The intuitive approach of simply asking emerging adults if they feel they have experienced a sense of growth through physical activity could, however, yield biased and skewed results as there is a high level of social desirability for stories of growth and redemption within American culture (Bauer et al., 2008). Consequently, a more open-ended exploration of emerging adults' experiences with physical activity (also surprisingly absent in research to date) may be warranted. The review and study that follow seek to fill this gap in knowledge.

The Developmental Experiences of Emerging Adulthood

Arnett (2004) coined the term *emerging adulthood* to describe the transition from adolescence to young adulthood, which typically occurs during the "period from (roughly) age 18 to the mid-twenties" (p. 9). His more recent work has extended this period to range from ages 18 to 29 (Arnett & Fishel, 2013). One's age, however, may do little to indicate the extent to which they feel situated in either emerging adulthood or young adulthood. Demographic markers traditionally thought to be associated with an adult status – like completing one's education, settling into a career, getting married or committing to a long-term romantic relationship – do not seem to hold much weight either with regards to emerging adults' perceptions of what characteristics comprise an adult status (Arnett, 1998). Further, it has been observed that emerging adults tend to assume these demographic shifts at considerably different ages when comparing one individual to another (Cohen, Kasen, Chen, Hartmark, & Gordon, 2003). As opposed to these traditional demographic markers, emerging adults tend to view an "adult" status as consisting of more subjective markers like accepting self-responsibility and independent decision-making, as well as the more tangible marker of achieving financial independence (Arnett, 1998).

There are a few historical and cultural shifts in American society that may have contributed to the relative unimportance emerging adults now place on the aforementioned traditional demographic markers of adulthood (Arnett, 1998). One key shift appears to be a later age of marriage in recent years. Arnett (2013) reported that median age of marriage has increased to be about seven years later for men and women than it was in 1960 (20 to 27 years for women, 22 to 29 years for men), and indicated that

age of first childbirth has shown a similar increase. These shifts may have stemmed from the increasing demand for post-secondary education as the nation has shifted from an industrially-based economy to one based more on information and technology (Tanner & Arnett, 2009). Indeed, the proportion of young Americans that pursue further education past high school has risen from 1960 to 1994, particularly so for young women (38 to 63%, 54% to 61% for young men; Bianchi & Spain, 1996). Ultimately, as emerging adults are settling into long-term, adult roles later in life, their late teens and early twenties have become increasingly mobile and exploratory in nature (Arnett, 2000).

Arnett (2004) outlined five key characteristics of emerging adulthood that encapsulate this mobility and exploration: identity exploration, instability, self-focus, feeling in-between, and an age of possibility. First, emerging adults seek to define who they are and what they want out of life, and thus tend to explore their identities in the two core areas of love and work (Arnett, 2004; Arnett & Fishel, 2013). Whereas the romantic relationships of adolescents are often more transient and tentative, emerging adults' relationships are commonly more focused and serious (Arnett, 2000). Emerging adults have a similar, future-focused exploration within the realm of work as well. Adolescents' employment tends to be undertaken as a means to fund their hobbies and interests while emerging adults' employment is often geared more towards exploring their perceived competencies, sources of personal satisfaction, and chances of securing stable jobs in a given field (Arnett, 2000).

Second, and as a function of the exploration in love and work, emerging adulthood is a time of instability (Arnett, 2004; Arnett & Fishel, 2013). Emerging adults often move about amongst various jobs, romantic partners, and living situations (Arnett

& Fishel, 2013). Arnett (2000) emphasized the mobility of this developmental period by pointing out that emerging adults present higher rates of residential change than any other age group. Third, Arnett (2004) found emerging adults to be self-focused – not in terms of vanity or selfishness – but in terms of independent decision-making and progressing into self-sufficiency. Through their self-focus, emerging adults often explore their desired career path and begin pursuing the training or education that will best prepare them (Arnett & Fishel, 2013).

Fourth, Arnett (2004; Arnett & Fishell, 2013) gathered that emerging adults often feel "in-between"; they do not feel wholly adult, but also feel that they are beyond adolescence. In terms of the structure of their day-to-day and month-to-month lives, emerging adults are tied down by neither the restrictions of adolescence, nor those of adulthood (Arnett, 2004). While this freedom affords emerging adults the flexibility and mobility to form their identities in love and work, it also permits explorations for their own sake; that is, simply experimenting with roles, activities, and pursuits while they can before being grounded by the responsibilities of adulthood (Arnett, 2000). Finally, Arnett (2004) saw emerging adulthood as the "age of possibilities," stating "It tends to be an age of high hopes and great expectations, in part because few of their dreams have been tested in the fires of real life" (p. 16).

As a developmental period, emerging adulthood is not without its challenges. Arnett (2000) pointed out that explorations in work can yield failures and/or frustrations finding meaningful and stable employment. So too, explorations in love can sometimes end in rejection and disappointment (Arnett, 2000). For some, the impetus to "do" and assert their independence can serve as a distraction from reflecting on inner values and

meaningful long-term goals (Shulman, Blatt, & Feldman, 2006). In addition to these, emerging adulthood can present yet another challenge: maintaining a physically active lifestyle.

For some emerging adults, leaving high school or college might mean decreased access to team sports (Bélanger, Townsend, & Foster, 2011; Zick et al., 2007) – be they recreational or highly competitive. For highly competitive athletes, this could present a transition out of their sport, or perhaps into higher levels of competition (e.g., Stambulova, Alfermann, Statler, & Côté, 2009; Wylleman, Alfermann, & Lavallee, 2004). Moving on from high school or college could also present challenges like decreased access to affordable fitness centers and programs, as well as increased time demands and normative pressures like career development or marriage (Calfas et al., 2000). In short, the transition to adulthood has its challenges; not the least of which is maintaining a physically active lifestyle. The following section will present patterns of physical activity over the emerging adulthood years, as well as public health concerns therein.

Physical Activity Trends During Emerging Adulthood and Public Health Rationale

Physical activity levels in the United States are low. Data from the National Health Interview Survey (USDHHS & CDC, 2010) suggested that only 35% of adults engage in regular physical activity. The remaining 65% were either inactive or engaged in some physical activity (with 32.5% in each category). Evidence has also indicated that physical activity levels tend to decline with age (USDHHS & CDC, 2010). Across the lifespan, particularly sharp declines in regular physical activity behavior have been observed during the transition to adulthood. For example, one cohort study found that

mean physical activity time dropped from 50 min/day for males ages 15-19 to only 25 min/day for males ages 20-24, and further still to 21 min/day for males ages 25-29 (Zick et al., 2007). Mean physical activity times fell from 28 min/day for females ages 15-19 to 17 min/day for females ages 20-24, and then again to 15 min/day for females ages 25-29 (Zick et al., 2007). Longitudinal data has also found that only 4.4% of polled adolescents achieved five or more weekly bouts of moderate-vigorous physical activity and maintained that level of activity into the emerging adulthood years (Gordon-Larsen, Nelson, & Popkin, 2004). Nearly one third of participants in that sample (31.1%) demonstrated that level of activity during adolescence but failed to maintain it into emerging adulthood (Gordon-Larsen et al., 2004). Patterns of declining physical activity levels within the transition to adulthood have been observed in a number of westernized societies, including Canadian (Kwan, Cairney, Faulkner, & Pullenayegum, 2012), Australian (Bell & Lee, 2005; Leslie, Fotheringham, Owen, & Bauman, 2001), Finnish (Telama & Yang, 2000), and Dutch (Mechelen, Twisk, Post, Snel, & Kemper, 2000) samples. Perhaps in relation to these declines in regular physical activity, McKinley (2006) found that body mass index and weight dissatisfaction increased for both males and females across the emerging adulthood years.

These trends are alarming in light of the numerous health consequences associated with a sedentary lifestyle. In conjunction with poor eating habits, it has been estimated that sedentary lifestyle contributed to about 400,000 deaths in America in the year 2000 (Mokdad, Marks, Stroup, & Gerberding, 2004). This number surpassed the estimated number of deaths attributable to alcohol consumption, microbial agents, toxic agents, automobile crashes, gun violence, sexual behaviors, and the illicit use of drugs

combined (Mokdad et al., 2004). Conversely, governing bodies in health and sports medicine have issued physical activity guidelines (CDC, 2010b, USDHHS, 2008) that, when met, yield such benefits as the prevention of cardiovascular disease (AHA, 2011), obesity (Ryan, & Joseph, 2010), and other complications often associated with obesity (Garber et al., 2011). While it is not the place of this review to outline the physiological benefits regular physical activity in great detail, it should be noted that a writing group for the American College of Sports Medicine concluded that "the scientific evidence demonstrating the beneficial effects of exercise is indisputable" (Garber et al., 2011, p. 1334).

Maintaining an active lifestyle into adulthood is not only important for one's physical health, but for sustained psychological well-being as well. For instance, an extensive meta-analysis conducted by Petruzzello, Landers, Hatfield, Kubitz, and Salazar (1991) suggested links between aerobic exercise and lower levels of state and trait anxiety. Aerobic exercise has also been associated with more positive affect (Reed & Buck, 2009), and may have a cumulative effect as cardiovascular fitness has been associated with a lower likelihood of depression (e.g., Galper, Trivedi, Barlow, Dunn, & Kampert, 2006; Goodwin, 2003). Physical activity might also promote higher levels of self-esteem and other self-perceptions (Fox & Corbin, 1989; Hagger & Chatzisarantis, 2005; Shavelson, Hubner, & Stanton, 1976; Sonstroem & Morgan, 1989), as well as greater state-level (vs. trait-level) satisfaction with life (Maher, Doerksen, Elavsky, Hyde, Pincus, Ram, & Conroy, 2013). Collectively, the psychological benefits of regular exercise could offer a valuable buffer for the emotional highs and lows that might present as emerging adults forge through Arnett's (2004) age of possibilities. Psychological well-

being, and one component of it in particular (personal growth), will be expanded upon in the next section.

<div align="center">Physical Activity, Psychological Well-Being, and Personal Growth</div>

Traditionally, two broad forms of psychological well-being are distinguished. Hedonic well-being entails comfort and positive affect along with the absence of discomfort and negative affect (e.g., Kahneman, Diener, & Schwarz, 1999). Conversely, eudaimonic well-being stems from Aristotle's (trans. 2002) *Nicomachean Ethics* and reflects a continual striving for the fullest attainment of one's unique potential regardless of the affect therein (Ryan & Deci, 2001; Ryan, Huta, & Deci, 2008; Ryff & Singer, 2008; Waterman, 1993). Put differently, eudaimonic well-being can be characterized as a process of living well, and hedonic well-being as a positive outcome/affective state. Self-determination theory (SDT) (Deci & Ryan, 1985; 2000) is one theoretical framework that has been put forth to explain intra- and inter-personal factors that tend to facilitate (or constrain) hedonic and eudaimonic well-being. Further, SDT has demonstrated how various contextual factors specifically within one's physical activity experiences can promote these forms of well-being. The next sub-section will focus on this line of research.

Self-Determination Theory, Well-Being, and Physical Activity

One of SDT's most fundamental distinctions is that between intrinsic and extrinsic motivation. When intrinsically motivated, one engages in a behavior solely for the sense of enjoyment, interest, challenge, or novelty derived from it (Ryan & Deci, 2000). Conversely, an extrinsically motivated individual performs a task as a means to some end (Deci & Ryan, 1985). Deci and Ryan (1985) proposed the term

"internalization" to describe a "shift from [behavior] regulation by external factors to self-regulation by internal factors" (p. 129), and "the process through which an individual acquires an attitude, belief, or behavioral regulation and progressively transforms it into a personal value, goal, or organization" (p. 130). This shift was conceptualized as an active process; one may need to adjust tendencies, improve abilities, or even modify personal perspectives or values. Passivity or resistance will forestall internalization. The authors acknowledged that while some behaviors may never be intrinsically motivated, one can come to value them and experience some sense of autonomy in their completion. Deci and Ryan (2008, p. 17) presented a continuum to illustrate the varying degrees by which a behavior can be internally or externally regulated. Through their basic psychological needs theory (Deci & Ryan, 2000; Ryan, 1995), Deci and Ryan pointed to one's perceptions of competency, autonomy, and relatedness as facilitative of intrinsic motivation and internalization; and further still as essential psychological needs that must be satisfied for well-being and optimal development. Put differently, social conditions can draw out or suppress humans' natural propensities for growth (i.e., actualizing tendencies; Maslow, 1954; Rogers, 1963) by the extent to which they satisfy the psychological needs of feeling competent, autonomous, and related (Ryan, 1995). This was said to be the case regardless of whether or not one is aware of or striving to meet these needs (Ryan, 1995).

These theories have received much support within the domain of physical activity. Intrinsic goals and autonomous motivation have also been positively correlated with exercise behavior (Ingledew, Markland, & Ferguson, 2009; Sebire, Standage, & Vansteenkiste, 2009; Standage, Sebire, & Loney, 2008; Vansteenkiste, Simons, Soenens,

& Lens, 2004). Conversely, exercisers expressing extrinsic, non-autonomous motives tend to report higher levels of general anxiety, lower levels of global and physical self-esteem, and less pleasant exercise affect (Edmunds, Ntoumanis, & Duda, 2008; Frederick & Ryan, 1993; Kwan, Caldwell Hooper, Magnan, & Bryan, 2011; Lutz, Lochbaum, & Turnbow, 2003; Sebire et al., 2009; Wilson & Rodgers, 2002). Based on these findings, it appears that different motives and behavioral regulations have different implications for one's exercise experience. External motives and controlled regulation may be enough to sustain short-term exercise behavior; but in the off-chance that they sustain long-term exercise adherence, that adherence is unlikely to be authentic or enjoyed (Vansteenkiste, et al., 2004). Conversely, intrinsic motives and autonomous regulation might encourage more authentic exercise adherence, and an overall better experience.

The influence of motives shows similarity across sport and exercise. For example, Frederick and Ryan (1993) found a link between extrinsic, body-related motives (e.g., exercising in an effort to improve one's physical appearance) and depression for both athletes and exercisers. Also, low perceived autonomy has been negatively correlated with sport persistence (e.g., Pelletier, Fortier, Vallerand, & Briere, 2001; Sarrazin, Bioché, & Pelletier, 2007); and intrinsic sport aspirations have been positively correlated with well-being (Chatzisarantis & Hagger, 2007). Bartholomew, Ntoumanis, Ryan, Bosch, and Thøgersen-Ntoumani (2011) found that athletes' perceived psychological need satisfaction predicted more positive affect and higher subjective vitality, while the suppression of psychological needs tended to predict more negative outcomes like depression, burnout, or eating disorders. Ultimately, SDT presents a strong theoretical foundation to understanding how personal goals interact with the social climate to

influence one's physical activity experiences and overall psychological well-being. Several core tenants of SDT will also be reflected in the well-being literature that follows.

<u>Personal Growth: A Key Component of Psychological Well-Being</u>

In her review of life-span development theories and broader mental health literature, Ryff (1989b) conceptualized psychological well-being as encompassing several components (several of which align with SDT): self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Drawing from the work of Maslow (1968), Rogers (1961), and others (e.g., Allport, 1961), Ryff (1989b) claimed that "optimal development requires not only that one achieve [the other five components of well-being mentioned above], but also that one continue to develop one's potential, to grow and expand as a person" (p. 44). As such, this notion of personal growth appears to be central in psychological well-being and optimal development. However, personal growth is an extensively broad construct that has not been precisely defined (Bauer & McAdams, 2010). For example, one review in humanistic psychology found 23 different constructs that have been used to describe personal growth (Levitt, Stanley, Frankel, & Raina, 2005). In light of these ambiguities, the following paragraphs are devoted to outlining various conceptualizations of personal growth and empirical findings from several key research groups in this area of study.

Ryff (1989b) conceptualized personal growth as including a sense of continual expansion and development, openness to experience, and the improvement of self-knowledge and behavioral effectiveness. Conversely, those lacking personal growth were presumed to lack a sense of improvement or expansion over time; they feel stagnant,

bored, disinterested, and see themselves as unable change their attitudes or behavior. From this framework, Ryff (1989a) developed an inventory for her six components of well-being, and compared it with existing measures of psychological well-being. Both the new and old measures were completed by cross-sectional samples of young, middle-aged, and older adults. Several key findings emerged with the personal growth construct.

First, item-to-scale correlations revealed moderate to strong relationships between the personal growth items and the other well-being scales, most notably purpose in life, positive relations with others, and self-acceptance (r = .72, .57, and .48, respectively; p < .001). Offering a potential link to SDT, personal growth was also related to autonomy and environmental mastery (r = .39 and .46, p < .001). While personal growth seemed highly similar to other the components of well-being, Ryff (1989a) argued that it is indeed empirically distinct from the other variables given that (a) the personal growth items correlated more with the personal growth scale than to the other scales, (b) the personal growth scale showed different patterns of association than other related scales, and (c) personal growth showed different factor loading and age profiles than the related scales. Second, comparison of Ryff's (1989a) personal growth subscale to pre-existing well-being inventories did not yield any correlations beyond small to moderate strength, indicating that existing measures have largely failed to consider personal growth as an element of psychological well-being. Third, the experience of personal growth was found to significantly decrease with age. Finally, from the small effect sizes, individuals' health, education, and finances did not appear to consistently predict the experience of personal growth. In a later study, Ryff and Keyes (1995) also found personal growth to decline with age. Taken as a whole, Ryff's work demonstrated a high degree of overlap between

personal growth and other elements of psychological well-being, but also that empirical distinctions can be made amongst those variables.

Though not defining personal growth per se, Robitschek (1998) developed an inventory for an important component of it. She explained that growth can occur outside an individual's awareness of the growth process, with an individual's awareness of and resistance to the process, or as a result of intentional efforts to attain to it. Her construct of personal growth initiative (PGI) reflected the latter of these scenarios, defined as an "active, intentional, engagement in the process of personal growth" (p. 184). As the preparation stage of the transtheoretical model (Prochaska & DiClemente, 1983) was characterized by a readiness for behavior change, PGI was conceptualized as indicating a readiness to grow across life domains. Robitschek (1998) presented three sequential studies (in one article, as cited) that outlined how the PGI construct was established.

Robitschek's (1998) first of three studies outlined the development of the PGI scale (PGIS), which was initially developed to evaluate a growth-oriented wilderness program. After administration to adults who completed the wilderness program, the scale was narrowed to nine items representing the constructs of transitions, purpose, self-confidence, and balance. More specifically, PGI was characterized by understanding and accepting the process of life transitions, a sense of purpose and direction in life, believing in oneself, and the perception that the elements of one's life are in balance. The scale's results were not significantly influenced by gender, age, income, or education. Her second study examined correlations with other psychological constructs and found that higher PGI was moderately and positively associated with assertiveness, instrumentality, and internal locus of control (PGI was negatively related to chance locus of control and

unrelated to social desirability or Scholastic Aptitude Test scores). Robitschek's third study found college students' PGIS scores to remain stable over 8 weeks. In her discussion, she reported that converting data from the three studies to a common metric revealed that college students exhibited higher PGI than middle-aged adults, despite the fact that the adults completed the PGIS after finishing a wilderness program specifically designed to provide a growth experience. As a result, Robitschek speculated that inherent components of the college experience might stimulate deliberate efforts for growth (e.g., trying new roles and relationships).

A more recent study by Robitschek and Keyes (2009) found that individuals with higher PGI scores tended to show higher levels of positive affect and social well-being, as well as higher levels of psychological well-being as measured with Ryff's (1989a) inventory. It should be pointed out that Robitschek and Keyes (2009) removed Ryff's personal growth subscale prior to running the main statistical analyses "because of conceptual overlap with PGI" (p. 325). However, their descriptive statistics indicated that PGI only showed small correlations to personal growth ($r = .38$ for men and $r = .33$ for women, $p < .000$). Though not addressed by the authors, it appears that an active intention to grow was not necessarily associated with experiencing a sense of growth and improvement. Perhaps participants that were striving to grow did not feel they had met their desired outcome of growth.

Bauer and McAdams (2010) pointed out that the well-being literature has not definitively shown whether or not one's intent to grow actually yields perceived growth. In their studies of the construct, they appeared to agree with Robitschek's concept of PGI by reserving the term personal growth only to describe intended growth (Bauer &

McAdams, 2004a). In their narrative approach to research, Bauer and McAdams (2000) classified personal growth as including several SDT-based themes. First, resembling SDT's basic need of competence, an agentic theme was said to be present in life stories that emphasized mastery and achievement. Second, a communal theme was likened to the SDT need for relatedness, and was used to characterize life stories that placed value on caring for and connecting with others. The authors maintained that SDT's third basic need – autonomy – was displayed in life stories that congruently integrated one's characteristics, experiences, and actions. This integrative theme was also said to be present when one's story expressed learning and understanding new perspectives of oneself or others (Bauer & McAdams, 2004a).

In one particular study, Bauer and McAdams (2010) examined the influence of growth goals on eudaimonic growth in college freshman and seniors. Participants completed inventories at baseline and 3.5-year follow up. Eudaimonic growth was operationally defined as "increases in psychosocial maturity and subjective well-being (SWB) over time" (p. 761). SWB was assessed via measures of positive affect, negative affect, and life satisfaction; and psychosocial maturity via Loevinger's measure of ego development (ED; Hy & Loevinger, 1996). Growth goals were measured through a brief writing narrative. To address the gap between growth goals and growth experienced, results suggested that participants with more growth goals were more likely to have experienced eudaimonic growth at follow up. That being said, ED was found to significantly increase for the freshman cohort, but not the older, senior cohort. The authors argued that since the seniors had been out of college for 3 years by follow up, their social environment was less likely to have placed the same emphasis on learning

and development as that of the younger cohort. Bauer and McAdams ultimately concluded that, "At some point in the period of emerging adulthood (our data say after the college years, at least for those who go to college), individuals seem to be on their own when it comes to cultivating eudaimonic growth" (p. 768).

Other authors have conceptualized personal growth more as of an enduring value than a specific goal per se. Braithwaite and Law (1985) drew from Rokeach's (1973) Value Survey to include some of the values measured therein to fit under their umbrella term of personal growth. These values included inner harmony (freedom from inner conflict), self-respect (self-esteem), a sense of accomplishment (lasting contribution), and wisdom (a mature understanding of life). To extend Rokeach's (1973) vision of personal growth, Braithwaite and Law (1985) also included additional components in their definition: self-knowledge or self-insight (being more aware of what sort of person you are), the pursuit of knowledge (always trying to find out new things about the world), and self-improvement (striving to be a better person). From Braithwaite and Law's (1985) conceptualization of personal growth, the construct could also be seen as a valued long-term outcome that guides behavior across the many domains of one's life.

The Adolescent's Experience of Personal Growth

While the literature above has worked towards the conceptual definition and measurement of personal growth, it has not done much to show what types of experiences lend to personal growth or how individuals derive a sense of personal growth from their endeavors. Larson (2000) pointed out that a large number of youth report "high rates of boredom, alienation, and disconnection from meaningful challenge," and that these reflect "a deficiency in positive development" (p. 170). He outlined initiative as a key

construct in positive development, which stems from the sense of agency/autonomy outlined in SDT. Similar to Robitschek's (1998) PGI, Larson stipulated three conditions that an experience must provide for the development of initiative: (a) intrinsic motivation and autonomous action; (b) a concerted engagement in the environment, specifically an "exertion of constructive attention in a field of action involving types of constraints, rules, challenge, and complexity that characterize external reality" (p. 172); and (c) a temporal arc, that is, persistence over time and through "setbacks, re-evaluations, and adjustment of strategies" (p. 172). He argued that schoolwork and unstructured leisure activity do not consistently lend to the development of initiative, but structured leisure activity (e.g., sports, arts, music) can.

To examine Larson's (2000) contentions, Dworkin, Larson, and Hansen (2003) conducted focus group interviews to explore adolescents' experiences of personal growth in extracurricular activities. Their analysis found youths' growth experiences to fall under six major headings: exploration and identity work, development of initiative, emotional self-regulation, peer relationships, teamwork and social skills, and adult networks/social capital. Almost all the participants' reports suggested perceived autonomy in their exploration of different activities. Also, while autonomy, intrapersonal growth, and relatedness were reflected in youths' accounts of growth experiences, competency in terms of outcomes (e.g., improved musical talent) was not.

In a follow up study Hansen, Larson, and Dworkin (2003) constructed the Youth Experiences Survey (YES) from the themes and sub-themes found in the study above. The questionnaire was administered to diverse high school students in a small city. Consistent with Larson's (2000) argument, Hansen et al. (2003) found that

extracurricular activities encouraged initiative development, identity reflection and exploration, as well as learning basic physical and emotion regulation skills. Teamwork and leadership skills were also more likely to be developed with extracurricular involvement. Of particular interest to this review, those involved in sports were more likely to experience self-knowledge, emotional regulation, and physical skill development, but not teamwork or social skills. It was suggested that these findings may have resulted from a sub-optimal coaching environment or a strong focus on competition and social comparison. As such, it also bears mentioning that youth were more likely to report experiences of negative peer interaction and inappropriate adult behavior (e.g., perceived as controlling or manipulative) in sport than other extracurriculars.

More recent work with the YES survey has been conducted exclusively within the domain of sports. Gould, Flett, and Lauer (2012) administered the YES-2 (Hansen & Larson, 2005) to underserved youth participating in baseball and softball leagues. Results found common growth experiences to include the development teamwork and social skills, basic skills, and initiative. Stress was the most common negative experience. Further analysis revealed that when coaches created a team climate that was both caring and mastery-oriented, positive growth experiences were more likely to occur. Conversely, negative sport experiences were best predicted by an ego-oriented climate. These results were consistent with a previous study using the YES-2 (Gould & Carson, 2010).

The studies above suggested that sport may be a medium through which youth acquire life skills (i.e., skills learned in sport that are consciously and deliberately employed in other life domains). In line with the above, various authors have also cited

the structure and psychosocial climate of youth sport programs as key determinants of developmental gains, highlighting that an over-emphasis on outcome can be especially problematic for growth experiences (Danish, Petitpas, & Hale, 1993; Fraser-Thomas, Côté, & Deakin, 2005; Gould & Carson, 2008). Thus, it appears that adults – particularly those in youth sport coaching role – can either positively or negatively impact youths' growth experiences. Taken together, the studies above shed some light on how youth and adolescents experience personal growth; and further, how sport participation and the psychosocial environment therein can contribute to that growth. However, they do not address the experience of personal growth for young or middle-aged adults.

<u>The Adult's Experience of Personal Growth</u>

Ryff and Singer (2008) suggested a decline of personal growth with age. The authors suggested a generally positive association between socioeconomic standing and psychological well-being, but other cited studies (e.g., Markus, Ryff, Curhan, & Palmersheim, 2004; Ryff, Singer, & Palmersheim, 2004) also suggested that resiliency through adversity (e.g., low socioeconomic standing) can promote personal growth. O'Connor and Wolfe (1991) pointed out that midlife transitions can provide growth opportunities for adults by presenting adversity in the form of internal and external changes, a questioning of self, and the deliberate efforts to resolve that questioning. To explore these ideas, O'Connor and Wolfe used a mixed-methods study to examine whether or not adult (ages 35-50) growth occurs in light of transitions, and if so, under what conditions. Data was collected at baseline and a 1.5-year follow-up. To conceptualize personal growth, the authors presented the idea of a personal paradigm shift. As they saw it, one's paradigm is comprised of the "system of assumptions,

perceptions, expectations, feelings, beliefs, and values organized to understand an extensive range of situations and events" (p. 325). It dictates the sense of meaning one derives from life's events. They proposed that a paradigm shift (i.e., alteration of the fundamental structure of one's paradigm) may occur as a result of inevitable internal and/or external changes presented in mid-life.

O'Connor and Wolfe's (1991) analysis presented a variety of different paradigm shifts, but several common themes emerged. Shared experiences of paradigm shifters included an increased sense of autonomy and responsibility, a transition from rigidity to flexibility, coming to favor spontaneity in interpersonal relationships over role-bound interactions, and efforts to broaden a compartmentalized sense of self to one that integrates several life domains. Paradigm shifters also sought to develop new skills and ideas more often than non-paradigm shifters. O'Connor and Wolfe asserted that "a growthful transition inevitably involves the person in new learning ventures, directed both outwards and inwards" (p. 334); that is, "finding and expressing one's inner self, as well as managing some scope of real world change" (p. 336).

However, not all mid-life transitions were followed by the experience of personal growth. Paradigm shifts were less likely to follow life transitions that were only minor in scope, which bolsters the previous suggestion that resiliency through adversity can stimulate growth (Ryff & Singer, 2008). O'Connor and Wolfe (1991; also drawing from Wolfe, 1980) asserted that structured programs could also encourage personal growth through the provision of educational lectures, opportunities for application of learned material, performance feedback, and interpersonal contact, as well as by encouraging reflection on personal experiences and the development of a personal identity that

integrates all of one's life domains. The authors presented these suggestions from an organizational standpoint, but they seem applicable to sport and exercise contexts as well: sport and exercise often entail structured practices and exercise regimes, as well as opportunities for learning, application, feedback, and interaction with others.

Work by Kashdan, Rose, and Fincham (2004) also helped to clarify the experience of personal growth. They posited that the process of personal growth (personal growth per se was not defined) begins with curiosity and entails (a) allocating one's attention to new, challenging endeavors, (b) cognitive and behavioral exploration of intrinsically motivated activities, (c) a flow-like engagement therein, and (d) integration of one's experiences through this process. The authors did not elaborate on temporal progression through the stages. Their model has been included in this section for two reasons: first, while the model was not said to pertain solely to adults, it was not said to pertain solely to youths either; and second, for its concordance with the above work. Similar to O'Connor and Wolfe's (1991) findings with paradigm shifts, deliberate persistence and self-reflection were said to permeate this model of growth. Kashdan and colleagues' (2004) model also concurred with O'Connor and Wolfe's (1991) as both acknowledged that not everyone will experience growth when the opportunity presents itself. Ultimately, Kashdan et al. (2004) saw the experience of growth to yield an expanded sense of self and an increased sense of environmental mastery. Further, they underscored the importance of flow stating that experiences of optimal challenge "result in an inevitable sense of personal growth from the 'stretching' of skills and confidence in using those skills" (p. 292).

Bauer and McAdams (2004a) also examined adults' stories of significant mid-life transitions; specifically, the transition of changing one's career or religion. They found that growth seemed to be most salient for participants that focused on what they had learned from meaningful events or meaningful relationships. Thus, it seemed as though some deliberate reflective effort was needed to walk away from life transitions with a sense of growth. Bauer and McAdams' (2004a) study suggested that adults' experience of personal growth was influenced by the specific manner in which they interpreted their lives. Other research (Bauer & McAdams, 2004b) extended those contentions by adding that adults' experience of personal growth might also be influenced by the manner in which they plan for the future.

Planning for the future can entail outlining specific goals. Sheldon, Kasser, Smith, and Share (2002) argued that personal growth does not necessarily need to follow experiences of significant life transition (as above) or trauma (see below); but rather, can occur in a relatively short span of time as a result of progress toward personal goals. The authors pointed out that "personal goals represent individuals' sometimes tentative and usually difficult attempts to achieve new levels of positive adaptation," (p. 6) and that the movement toward change found in goal striving could be a key precursor to growth. Given its challenges and opportunities for goal setting, physical activity could present a pathway to the experience of personal growth.

In one of the few studies that has explored relationships amongst physical activity, goal setting, and personal growth, Morgan, Tobar, and Snyder (2010) conducted a 15-week intervention aimed at helping sedentary adults ($N = 29$, $M_{age} = 59.8$) increase their daily step counts. Relative to control group members, intervention group

participants were prescribed the goal of reaching 10,000 steps/day, and received weekly encouragement. Both groups fell shy of meeting the 10,000 steps/day goal; however, while the control group only increased daily steps by 6.6% (to 6,300), the intervention group increased daily steps by 37.3% (to 7,958). Using Ryff's (1989a) measure of psychological well-being, a significant group by time interaction was found for personal growth. Intervention group participants displayed a 2.53% increase in personal growth scores relative to a 7.63% decrease for control group members.

It seemed curious that control group members' sense of growth decreased, but this decline was not addressed in the discussion. Perhaps control group participants anticipated an opportunity to learn and expand themselves upon their initial recruitment (they volunteered by responding to a newspaper ad), only to be disappointed after not receiving any positive support and not being asked to make any positive changes in their routine. Interestingly, the (albeit) small increase in personal growth for intervention group members occurred in light of a 10% decrease in exercise self-efficacy from baseline. For one potential explanation, the authors remarked that baseline measures of exercise self-efficacy were high, perhaps reflecting the sample's inexperience with exercise, and that post-test scores probably indicated more accurate perceptions. However, there may be another explanation that Morgan and colleagues (2010) did not appear to consider. Six (of 14) intervention group participants completed the program despite falling short of the 10,000 steps/day goal and experiencing a lower sense of exercise self-efficacy. Perhaps the intervention group's sense of personal growth could have derived from the completion of the program as a whole, regardless of their exercise-

specific sense of self-efficacy or meeting the prescribed goal (which participants may or may not have autonomously valued).

Ultimately, Morgan and colleagues' (2010) study can be seen as contributing two key ideas to this review. First, modest increases in physical activity, or simply completing an encouraging physical activity program, may facilitate a sense of growth for adults. Second, the relationship between situation-specific perceptions of self-efficacy and personal growth may be less clear than originally thought. Maybe the assessment of growth in physical activity needs to examine broader measures of confidence/mastery, themes that surfaced in the next study to be reviewed.

Crust, Keegan, Piggott, and Swann (2011) interviewed long distance walkers (M_{age} = 39.6) that completed multi-day (6-11 days) back-country hikes and found that participants experienced a sense personal growth (personal growth per se was not defined) through enhanced self-perceptions and developing new perspectives. Especially pertinent to this review, participants also experienced a post-walk sense of well-being that was categorized as thematically distinct from their sense of growth. This finding will be discussed below.

Crust et al. (2011) suggested that participants experienced self-determination theory (SDT) need satisfaction through their long-distance walks: they autonomously chose to go on the walks, felt a sense of relatedness through camaraderie and shared experience, and perceived competence through successfully navigating challenges and gaining fitness. Crust and colleagues' (2011) participants also found their hikes to create a so-called "bubble" in which they were immersed in nature and detached from the hassles of everyday life. This bubble afforded participants a unique opportunity for

reflection and introspection. It was also likely that this detachment contributed to the flow experiences, enjoyment, and sense of vitality (all reflective of intrinsic motivation and SDT need satisfaction) reported by a number of participants. Causal relationships between experiences and outcomes were not discussed, but it seems plausible that SDT need satisfaction could have contributed to participants' sense of post-walk well-being. Specifically, participants reported a general "feel good factor" (felt more alive; uplifted), psychological well-being (clear and relaxed mind, positive attitude), physical well-being (increased sense of fitness), and social well-being (improved or new relationships).

Crust and colleagues' (2011) hikers reported experiencing a sense of post-walk personal growth that was categorized as thematically distinct from well-being. Participants recalled facing a number of challenges over the course of their walks (e.g., getting lost, muscle soreness, inclement weather) and, in agreement with literature above, remarked that these hardships contributed to their post-walk sense of meaning and growth. Overcoming challenges lent to the core personal growth theme of enhanced self-perceptions, which included self-esteem, self-efficacy, and self-confidence. Though enhanced self-efficacy was specific to hiking, participants indicated that their sense of improved self-esteem and confidence transferred to other, broader life domains. The second core theme of personal growth was developing new perspectives, with lower order themes of new life perspectives (making other life challenges seem more achievable, looking at things differently than before) and self-discovery (learning about oneself and what type of person one is).

From Crust and colleagues' (2011) report it seemed as though post-walk well-being only contributed partially to the experience of personal growth (recall Ryff's

[1989b] contention that optimal development requires both well-being and a sense of self-expansion). While positive affective states and increased well-being were reported post-walk, only those gains that were transferable to other life domains (self-esteem, global self-confidence, forming new perspectives on other aspects of life, and learning about oneself) were categorized as specifically reflecting personal growth. Further, it seemed that deliberate reflective effort was imperative for this broader transfer (in line with Kashdan et al., 2004; O'Connor & Wolfe, 1991). For instance, Crust et al. (2011) portrayed participants' as intrinsically wanting to push through challenges. Pushing through then contributed to a sense of achievement for having overcome those challenges. This sense of achievement appeared to be a state of affective well-being (perceived achievement was categorized as a bittersweet post-walk feeling), but only when this sense of achievement lead participants to reappraise the difficulty of other life challenges (through reflective effort) was it categorized as reflecting personal growth. Similarly, participants reported a deep sense of enjoyment, lowered stress, and awe of the environment while in the detached bubble of their walks. These themes were categorized as reflecting well-being. This sense of well-being and refreshed mental state afforded participants the opportunity and energy to ponder and reflect on other life matters. The new perspectives generated therein (not simply the experience of mental well-being or the act of reflecting) were categorized as specifically signaling personal growth. For one final example, perceived increases in fitness were categorized as contributing to the theme of physical well-being, but only the broader changes in self-perceptions and confidence that followed were categorized as personal growth.

Ultimately, Crust and colleagues' (2011) work depicted trends from the growth literature above, and interpretation of their findings adds further detail to both the distinctions and relationships between well-being and personal growth. Crust et al. (2011) did, however, point out that single day walks are not likely to facilitate the same experiences and gains as the multi-day walks completed by the participants in their study. As such, it remains to be seen if less concentrated forms of daily physical activity, even if adhered to over the course of months or years, would provide the same personal growth benefits for young to middle-aged adults.

Adversarial and Post-Traumatic Growth

Before moving on, one final pathway to personal growth may exist: growth through extremely stressful or traumatic life events. This can also be thought of, in King's (2001) terms, as "the hard road to the good life." This area of personal growth literature also lacks an agreed-upon conceptualization of growth (Lechner, Tennen, & Affleck, 2009). In their review, Lechner et al. (2009) suggested that some 40-90% of people faced with stressful life events feel they have benefited in some way from the experience. However, they cautioned researchers to be wary of "pseudogrowth" (a term coined by Park & Lechner, 2006), a socially desirable indication that growth has followed traumatic events when it actually has not. Bauer, McAdams, and Pals (2008) would appear to agree as they underscored the value that American culture places on stories of personal redemption and enhancement through hardship.

Without going into extensive detail, one proposed model of post-traumatic growth (PTG) will be reviewed to illustrate conceptual overlap with models cited above. Tedeschi and Calhoun (2004; Calhoun & Tedeschi, 1998) presented the metaphor of an

earthquake: some traumatic and distressing "seismic event" prompts the shaking or destruction of the cognitive schemas that guide one's understanding, decisional processes, and meaning making (compare to O'Connor & Wolfe's [1991] paradigm shift). They likened the mental processing and rebuilding that follows to the physical reconstruction that takes place following an earthquake. It was emphasized that the traumatic event does not directly prompt growth, but rather one's active struggle with and processing of the event (in line with Bauer et al., 2008; King, 2001). This processing included changing or completely rebuilding long-held beliefs, schemas, and goals (note similarity with Davis & Nolen-Hoeksema, 2009; Park, 2010). Support for this model can also be found in Joseph and Linley's (2005) Organismic Valuing Theory, which suggested post-stress meaning-making is crucial for growth; and further, that SDT need satisfaction facilitates the PTG process.

Returning to the context of physical activity, PTG may be relevant in certain sport and exercise contexts. For athletes, especially those who base their identity largely around sport, injury and forced time away from sport can be very difficult experiences (Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998; Williams & Scherzer, 2010), but may be ripe opportunities for growth. For example, Udry, Gould, Bridges, and Beck (1997) found that elite US ski team members (21 young adults, $M_{age} = 23.9$) reported both emotional upheaval and personal growth in response to season-ending injuries. Thematic elements of growth included gaining perspective, personality development, developing aspects of life outside of skiing, and learning time management. Psychologically-based performance enhancements also followed their injuries, but were categorized as distinct from personal growth despite congruence with literature reviewed above. These included

increased skiing confidence, a broader belief that one can recover from injury, stronger mental toughness, enhanced motivation, time to recharge, and developing more realistic expectations.

Wadey, Clark, Podlog, and McCullough (2013) employed a novel approach to study stress-related growth (SRG) following sport injury by interviewing coaches about short- and long-term changes they observed in their athletes following serious injury, rehabilitation, and return to play. The interview probed into coaches' perceptions of their athletes' SRG, as well as observable behavioral indicators that seemed to reflect the athletes' SRG. Four dimensions of growth surfaced in their analysis. First, personal growth included higher-order themes of stronger beliefs (e.g., hard work pays off), clarified priorities and personal values (e.g., value talking openly with others), better attitudes, deeper knowledge (of self, sport, etc.), broader/more positive outlook, and improved general qualities (e.g., being more reflective, organized, mature). Second, psychological growth stemmed from two higher-order themes of sporting qualities (motivation, confidence, focus) and cognitive coping (managing stress, reappraising situations). Third, social growth emerged from themes of extended social networks and strengthened relationships (particularly the coach-athlete relationship). Finally, physical growth was noticed through enhanced strength and conditioning upon return to play relative to pre-injury levels.

Wadey and colleagues' (2013) technique of probing into observable behavioral markers of SRG was reportedly challenging for coaches, but yielded some insightful responses. Personal growth was observed through athletes' general demeanor (more relaxed, positive), health (cessation of risky behaviors, more time devoted to injury

prevention), behavioral coping, deeper empathy, and enhanced tactical ability. Psychological growth was observed through improved sport performance, and physical growth through increased toughness (higher effort and less fatigue). Social growth was observed as athletes were often more open to and receptive of others after recovering from injury. Ultimately Wadey et al. (2013) offered vivid details on SRG that can follow sport injury, and the holistic person-athlete development that can take place.

Physical activity as part of a rehabilitation plan for adults recovering from a severe event/condition would seem plausible ground for the experience of PTG. Sherrill (1997) pointed to sport as a potential medium for growth among individuals coping with a physical disability (congenital or from traumatic injury), and suggested growth could occur through bolstered senses of strength, confidence, and internal locus of control that transfer to other life domains. Holahan, Holahan, and Suzuki (2008) found purposiveness (assessed via Ryff's [1989a] subscales of purpose in life and personal growth) to predict higher levels of physical activity and better perceived health among cardiac rehabilitation patients. Sabiston, McDonough, and Crocker (2007) conducted a grounded theory study of breast cancer survivors' involvement in dragon boating programs, and found experiences of personal growth to surface therein. Themes of growth included perceiving new possibilities and opportunities, closer relationships, psychological strength, and an appreciation of life. Like Crust et al. (2011), their analyses pointed to the transferability of dragon boating experiences to other life domains. A more recent study of dragon boating for breast cancer survivors (McDonough, Sabiston, & Ullrich-French, 2011) found similar PTG themes, plus new themes of personal strength and spiritual growth.

Within the context of physical activity, injury and rehabilitation are not the only forms of major adversity that can arise. Tamminen, Holt, and Neely (2013) conducted a qualitative study exploring elite female athletes' (ages 18-23) experiences of major stress. Reported forms of adversity ranged from performance slumps to eating disorders, sexual abuse, and bullying. Experiences with these incidents often yielded isolation/withdrawal, emotional disruption, and questioning one's ability/identity as an athlete. Some athletes reported walking away from these adverse experiences with a sense of personal growth; but to do so, they tended to (a) search for and find meaning related to the role of sport in their lives, and/or (b) develop new perspectives of social support available to them. Thematic elements of growth were realizing mental/physical strength, gaining perspective on their problems within the broader context of their lives, and gaining a desire to help others. In short, Tamminen and colleagues' (2013) study echoed trends reviewed above by emphasizing that personal growth followed the active processing of one's adverse experiences, finding new meanings and perspectives, and drawing upon available social support.

Synthesis of Personal Growth Literature and Segue to the Current Study

The review above illustrates the overwhelming breadth of a single construct called personal growth. From the extant research (outlined in table format in Appendix B), a few consistent thematic elements of personal growth have emerged. These included the SDT-based needs of competency, autonomy, and relatedness; new, broadened, or enhanced self-perceptions; new, broadened, or enhanced understanding or perspective of concepts, events, and the world that exists outside oneself; an increased openness to experience; and a conscious, deliberate intent to grow or expand oneself. It should be

pointed out that these elements of the literature look as if they would be best used to define personal growth. Other thematic elements also emerged from the literature, but seemed to contribute more to conceptualizing the process of personal growth (that is, the process of growing) than the outcome of personal growth. These included challenge, some form of structured leisure-time endeavor, the experience of a life transition, an autonomy-supportive psychosocial climate or intrinsic motivation, and reflection or introspection (see Appendix C).

Presented in this light, personal growth might be better thought of as a construct with two distinct, yet highly interdependent components. To clarify, consider a yard-stick – or any ruler or tape measure for that matter. It has both tick-marks delineating certain units of length as well as spaces in between those tick-marks. Similarly the construct of personal growth seems to entail both growth, a "tick-mark" state or outcome that can be defined (as one can, in theory, be "grown" or "un-grown" just as a measured distance can be long or short), and a process of growing (a "space" in which one's experience is moving the individual towards a higher "tick-mark" of growth). In the absence of unified, congruent approaches to the study of this construct to date, it appears that a deeper understanding is needed of both the outcome of personal growth and the process of growing and expanding oneself.

In summarizing this section, it should be emphasized that many of the reviewed studies offered support for the link between basic psychological needs theory and growth. These studies might also broaden an SDT-based conception of personal growth by shedding more light on intrapersonal changes that can occur with a sense of growth. Another key takeaway from this section should be that adolescents and college students

appear to have myriad opportunities for the experience of personal growth; and, though to a lesser extent, so do middle-aged adults. However, several studies have suggested that emerging adults may lack opportunities for a sense of growth. The review above suggests that physical activity could provide a potential avenue to personal growth; but research exploring positive development through physical activity has neglected this age-group, focusing instead on adolescents, young/middle-aged adults, or elite athletes (who form a small minority of emerging adults). Ultimately, a better understanding of if or how emerging adults experience growth through sport and exercise could inform applied work aimed at facilitating growth experiences for an age-group that might otherwise lack them. Concurrently, this line of work could also begin to address the marked decline in regular physical activity behavior (and associated health ramifications) that the emerging adulthood years often present.

Filling this gap in the literature, however, presents a caveat. The intuitive approach of asking emerging adults if they feel they have grown through their physical activity experiences would be likely to yield biased and forced responses because of the social desirability of personal growth/redemption within American culture (Bauer et al., 2008; Park & Lechner, 2006). As a result, an open-ended, descriptive study (that simply explores emerging adults' physical activity experiences without directly investigating perceptions of personal growth) appears to be a necessary first step in the line of research seeking to investigate a potential link between personal growth and physical activity within this developmental time frame. Studies employing such an open-ended design are relatively sparse in physical activity research to date (exceptions include Crust et al., 2011; Darker, Larkin, & French, 2007; Sabiston et al., 2007; Sebire, Standage, Gillison,

& Vansteenkiste, 2013; Tamminen et al., 2013; Udry et al., 1997), as the overwhelming majority of research has utilized rigid, highly structured paper-and-pencil inventories or theory-driven interview guides (e.g., Gillison, Osborn, Standage, & Skevington, 2009 and 47 other physical activity studies cited in the present research alone; a brief database search would quickly reveal hundreds of studies using only structured pencil-and-paper inventories). As such, conducting an open-ended exploratory study of emerging adults' physical activity experiences has the potential to move beyond taken-for-granted assumptions and illuminate subjective intricacies that have been overlooked by the largely positivistic research paradigm to date. The study that follows sought to address these gaps in understanding.

Chapter 3

METHODS

<u>Introduction</u>

This section outlines the research question and design, as well as participant criteria and recruitment strategies. Data collection procedures and analysis strategies are also delineated.

<u>Research Question</u>

As chapter 2 illustrated, previous research has not thoroughly examined the impacts of sport and exercise on emerging adults. In a preliminary attempt to fill this gap, the current study's research question was: for emerging adults, what is the perceived impact of physical activity on their lives? Smith, Flowers, and Larkin (2009) suggested outlining objectives that will signal when open-ended research questions like this have been answered. Subsequently, objectives for this study were to (a) describe the idiosyncratic impacts that emerging adults have perceived to follow their physical activity experiences; (b) outline themes that transcend and link each participant's unique experiences; and (c) contextually situate central themes within the broader social, cultural, and developmental lives that young adults describe.

<u>Research Design</u>

A qualitative research design best fit the author's interest in the experiential impact of physical activity. One approach, in particular, that promotes the study of individuals' lived experience is Interpretative Phenomenological Analysis (IPA; Smith, 1996). IPA research does not seek to test specific hypotheses, but inductively explore the meanings that individuals ascribe to their experiences (Reid, Flowers, & Larkin, 2005;

Smith, et al., 2009). In a dual-natured fashion, IPA aims to produce both description and analysis. Thus, IPA outcomes include detailed experiential accounts (offering an "insider's perspective" [Conrad, 1987; Smith, 1996]) as well as cautious, clearly outlined interpretations that illustrate "the initial 'description' in relation to a wider social, cultural, and perhaps even theoretical, context of those accounts" (Larkin, Watts, & Clifton, 2006, p. 104).

Within the qualitative research process, inconsistency between one's philosophical assumptions and the methods employed can yield low quality results (Birks & Mills, 2011; Weed, 2009). This study was conducted using post-positivist assumptions. For transparency and elaboration, Appendix A provides a more detailed discussion. The author also drew from three branches of philosophy that are central in IPA: phenomenology, hermeneutics, and idiography. In line with prominent phenomenological work (e.g., Heidegger, 1962; Husserl, 1927), the researcher made efforts to bracket preconceived notions regarding the experiential impact of physical activity so as to more closely attend to participants' experiences (Smith et al., 2009; Willig, 2008). Data collection and analyses were conducted with sensitivity to contextual factors in participants' lives and physical activity experiences. This task used what has been referred to as a double hermeneutic (i.e., attempting to make sense of how participants have made sense of their experiences; Smith, 1996; 2004) and a hermeneutic circle (iteratively examining the whole by looking to its parts, and vice-versa; Smith et al., 2009). Finally, informed by idiography, this study did not seek to produce broad explanations about the experience of physical activity at a global, population level; rather, results yielded cautious and contextualized descriptive generalizations about the selective

group of emerging adults that participated in this study (Smith et al., 2009). In summary, the philosophical underpinnings of IPA fit the present research as they have the potential to illuminate taken-for-granted assumptions about emerging adults' subjective experiences of physical activity. This approach viewed participants as the experts of their own experiences by offering them space to openly share what has been significant to them, and to do so in their own words.

<div align="center">Participants and Recruitment Strategies</div>

Within IPA research, participants are not selected with the stipulation that they represent a population at large, but based on the extent to which they can offer rich, detailed accounts about a particular phenomenon (Smith et al., 2009). Subsequently, for the idiographic detail required, suggested sample sizes range from 3 to 10 (Smith, 2004; Smith et al., 2009). Further, recruited samples should be fairly homogenous (Smith et al., 2009). In adherence to the above recommendations, the author recruited six physically active young adults. Participants varied in their primary form of physical activity, but were relatively homogenous in age and level of physical activity. Ultimately, this study utilized purposive sampling (Patton, 2002) to recruit emerging adults that felt their physical activity experiences have impacted them in a meaningful way.

<u>Recruitment Criteria</u>

Six emerging adults were recruited based on the following criteria. First, all participants were between the ages of 23 and 29. All participants engaged in some form of physical activity on four or more days per week for at least 40 min/bout (assessed using an abbreviated version of the Godin Leisure-Time Exercise Questionnaire; Godin & Shephard, 1985), and had done so for at least six months prior to recruitment. These

criteria were set with the thought that a significant level of physical activity involvement would be necessary for that activity to exert a notable impact on the participants' lives (for this reason individuals exceeding these criteria were recruited before those closer to the minimum requirements). The six-month criterion was set as it often distinguishes those adhering to long-term regular physical activity from those that are not (Prochaska & DiClemente, 1983). While individuals struggling to adopt a physically active lifestyle may be impacted greatly by their efforts, it is unlikely that they would be able to speak to the same range of experiences as a long-term adherer. During recruitment, participants' physical activity could have entailed sport and sport-specific training (at varying competitive levels), non-competitive exercise (in varying modes and intensities), as well as other activities that did not fall within these two categories (e.g., action sports, outdoor pursuits, etc.). Participants were also free to report other physical activity (e.g., occupational activity, walking for transportation, etc.) that did not fall within their primary forms of recreational physical activity. Formal physical activity guidelines (e.g., Garber et al., 2011) were not used as selection criteria because they would have excluded various individuals of potential interest.

One final, purposive recruitment criterion was the degree to which the participant perceived physical activity to have impacted his or her life. Potential participants were asked, "On a scale of one to five, to what extent do you feel your physical activity experiences have impacted you as a young adult" (1 = a strong negative impact, 5 = a strong positive impact). Interested individuals that responded with a rating of five were recruited for participation.

<u>Recruitment Strategies</u>

Given the breadth of physical activity, various groups of active emerging adults were considered. First, highly competitive athletes were contacted through local sport clubs. Other athletes were contacted through intramural sports programs at community recreation centers. Exercise and other physical activity enthusiasts were contacted through local fitness centers. Flyers about the study were also posted at local coffee shops and recreational retail stores (with permission). Further, coaches in post-collegiate athlete development programs were emailed about the study, and asked if they knew of any potential candidates for participation. Personal trainers and fitness class leaders were contacted in a similar fashion. Networking was also used to identify potential participants through mutual friends and acquaintances.

The aforementioned flyers and emails outlined the basic premise of the study, and general participant criteria that were being sought. They contained the author's email address, and a request that interested individuals contact him. The author followed up with interested individuals and emailed them a link to the online recruitment survey (Appendix D) if they still wished to participate. After the author determined whether or not an individual would be a good fit for the study, he or she was notified accordingly via email. If selected for the study, this email contained an informed consent document, and inquired about a time and place that would be convenient for the interview. The option of a telephonic interview was extended to interested individuals that did not live within a convenient driving distance of the author's academic institution. Recruitment efforts yielded low rates of response, but all individuals that responded met or exceeded minimum recruitment criteria.

Interview Script and Script Development

Qualitative interview questions shape the content and context of qualitative inquiry, and ought to explore, not interrogate (Charmaz, 2002). Thus, the researcher must enable participants to share their experiences in their own words (Charmaz, 2002). Drawing from symbolic interaction (Blumer, 1969), efforts were made to understand the subjective meanings that participants individually ascribed to their physical activity experiences (Charmaz, 2002; Hatch, 2002).

Appendix E outlines the interview questions. Smith et al. (2009) suggested using six to ten open-ended questions with probes that allowed participants to talk about and explore their experiences at length. Initial questions were aimed at facilitating rapport and getting a sense of how physical activity fits within the context of the participant's life. Objectives for the remainder of the interview were to gain an understanding of (a) perceived impacts, both positive and negative, of physical activity on participants' lives as emerging adults, and (b) what interpretive processes contributed to those impacts.

Procedures and Analyses

Procedures

Human Subjects Review approval was obtained prior to any recruitment efforts, and all recruited participants were provided with an informed consent document. The researcher conducted two pilot interviews under the guidance of his two thesis committee members. Pilot interviews provided an opportunity for the researcher to familiarize himself with the interview process and make minor adjustments to the interview guide.

After the pilot interviews, the researcher began recruiting participants as outlined above. Interviews were conducted face-to-face, or over the phone when geographic

distances did not permit for a convenient face-to-face meeting. Interviews lasted between 40 and 115 minutes, were audio recorded, and then transcribed verbatim. After each interview was fully analyzed, the researcher emailed the participant to verify the conclusions. Participants were sent a copy of the interview transcript, a hierarchical table outlining all codes and labels derived from the interview, and a two-page summary of key conclusions (all summaries can be found in Appendix F). Participants were given the opportunity to expound on, revise, or retract any of their statements or any of the researcher's conclusions. Follow-up probes were sent to one participant via email for supplemental detail prior to member-checking the conclusions. No participants submitted additions or revisions to the researcher's emailed conclusions.

Analyses

Transcribed data were analyzed using methods outlined by Smith et al. (2009). With IPA's idiographic emphasis, each interview was treated as a single case and fully analyzed before proceeding to subsequent interviews (which were also treated as separate cases). That being said, preliminary analysis of each case began with reading and re-reading the transcript in an effort to enter the participant's subjective world. Notes were taken to help the researcher bracket assumptions and develop a structural understanding of the interview.

Initial coding (Smith et al., 2009) followed, and this second step of analyses was aimed at drawing out the important ways in which an issue or event was talked about, thought about, and understood by the participant. Smith et al. (2009) suggested that descriptive, linguistic, and conceptual comments could be made during this process. These authors pointed out that conceptual comments should move beyond the

participant's specific words, but must be grounded in and inspired by the data (as opposed to the researcher's theoretical knowledge or experience). Several critical thinking techniques were used during this stage, such as deconstruction (Smith et al., 2009), free association of potential meanings (Smith et al., 2009; Strauss & Corbin, 1990), asking questions of the data, looking for "red flag words," exploration of properties and dimensions (Strauss & Corbin, 1990), and the use of in-vivo codes (Glaser, 1978; Strauss, 1987).

The third step of the analyses moved to the development of emergent themes that reflected core elements of a participant's experiences (Smith et al., 2009). This stage was aimed at reducing the volume of the text (to develop concise results suitable for report) while maintaining its rich complexity. To balance the descriptive and interpretative elements of IPA, themes "contain[ed] enough particularity to be grounded [in the data] and enough abstraction to be conceptual" (Smith et al., 2009, p. 92).

In the fourth step of the analyses, emergent themes were grouped and linked. This was done by looking for super-ordinate themes, oppositional relationships, and thematic connections to cultural, contextual, or other narrative elements in the data (Smith et al., 2009). This, and the aforementioned steps, was repeated for each interview.

The final task of the analyses was to identify higher-order themes that linked the idiographic data as a whole. The final results reflect how thematic content was uniquely presented in each case, as well as how higher-order trends emerged to link all cases collectively. Throughout the entire analytic process the researcher wrote memos to provide an audit trail of decisions made, and to document personal reflections and observations (Birks & Mills, 2011; Charmaz, 2002; Gordon-Finlayson, 2010; Smith et

al., 2009; Strauss & Corbin, 1990). In addition to maintaining an audit trail and member-checking (via the follow-up email mentioned above), trustworthiness was obtained by maintaining a sensitivity to context, commitment to closely following participants' stories, sufficient engagement with the data, rigorous adherence to IPA's philosophical underpinnings, and transparency in the final results write up (Yardley, 2000).

<u>Summary of Analyses</u>

To summarize, analytic procedures were conducted in the following order.

1. The first interview was read and re-read. Notes were taken to help process the interview.

2. Initial codes were developed to summarize the key ways in which the participant talked about, thought about, and understood specific issues or events.

3. Emergent themes were developed to categorize similar initial codes.

4. Sub-themes were generated to group and link similar emergent themes.

5. A higher-order theme was developed to summarize and link the sub-themes, ultimately reflecting the core content of the interview as a whole.

6. Steps one through five were repeated for each subsequent interview until all six interviews had been analyzed.

7. Initial codes and emergent themes from all six interviews were reviewed and a second tier of emergent themes was developed to summarize the core elements of all six interviews collectively.

8. Similarly, a second tier of sub-themes was developed to group and link the main trends in the collective data set.

9. One overarching higher-order theme was developed to reflect the core content of all six interviews collectively. (Note that Chapter Four reports conclusions from these steps; Appendix F provides a hierarchical outline of steps seven through nine)

Chapter 4

RESULTS

<u>Introduction</u>

The author sought to explore the question: for emerging adults, what is the perceived impact of physical activity on their lives? Subsequent objectives for the analysis were to (a) describe the idiosyncratic impacts that young adults have perceived to follow their physical activity experiences; (b) outline themes that transcend and link each participant's unique experiences; and (c) contextually situate central themes within the broader social, cultural, and developmental lives that young adults describe.

<u>Demographic Overview</u>

Sixteen individuals completed the recruitment survey and consented to be interviewed. Six participants were selected and interviewed based on how well they met the inclusion criteria outlined above. Interviews lasted, on average, 68 min (range = 44-115 min) and verbatim transcription yielded 97 single-spaced pages of text. Table 1 presents demographic information on each interviewed participant.

Table 1. Demographic data for each of the six interviewed participants.

P	Age	Education*	Strenuous PA (hrs/wk)	Moderate PA (hrs/wk)	Mild PA (hrs/wk)	Total PA(hrs/wk)	Adherence (years)
1	24	In grad school	9.2	0.8	2.0	11.9	6.0
2	28	Future edu.	14.0	0.0	1.5	15.5	2.5
3	27	Done	2.0	4.0	1.0	7.0	1.5
4	25	Future edu.	5.0	6.7	10.0	21.7	0.8
5	26	Done	3.0	25.0	3.0	31.0	4.0
6	23	In grad school	6.0	1.0	20.0	27.0	8.0

*Note that participants had either completed their education ("Done"), were currently completing their education ("In grad school), or had completed their education but considered the possibility of more in the future ("Future edu.").

Table 2 summarizes participants' primary forms of physical activity, and outlines basic contextual information gathered throughout the interviews.

Table 2. Participants' primary forms of physical activity and contextual backgrounds.

	Primary activities	Contextual background
P1	Running, walking, easy cycling, moderate weightlifting, core strengthening	Participant #1 is in her third year of an environmental engineering Ph.D. program. After competing for an NCAA Division I team, she continues to run post-collegiately. The context of her running is different now than it was in college, but she has come to be excited about it in new ways and is enjoying the unique opportunity that the current context of her life affords. She draws a great deal of support and energy from her training partners.
P2	Triathlon (running, cycling, swimming), easy walking, yoga/stretching	Participant #2 competed as a track and field athlete (sprints/jumps) for an NCAA Division III team. After graduating she took up triathlon, and has now been involved with the sport for 4.5 years. She is married, works as a chemist, and is considering a master's degree in the future. Her involvement in triathlon has yielded significant learning and self-expansion (e.g., increased mental and physical strength), as well as meaningful social connections that have extended beyond her involvement in the sport.
P3	Lifting, cardiovascular exercising	Participant #3 played varsity football in high school and pick-up basketball in college. Before graduate school, he moved home and was less active on a regular basis. He now works as an exercise and wellness specialist and has reestablished a pattern of regular exercise. For him, long-term optimal health is a key motive for sustained, regular exercise. Speaking to a number of mood/energy outcomes, he has come to realize the crucial "momentum" for maintaining an active lifestyle through life transitions.
P4	Crossfit, lifting, running, mobility, work (standing on feet), "chasing my 5 year old," walking	Participant #4 lives alone with her 5.5 year-old son and works as a barber. She is developing a Paleo Diet cookbook, and dreams of one day opening a gym that offers nutrition education and life guidance. Her crossfit participation has stretched her comfort zone. In conjunction with the motivation and support she received through crossfit, her strength and fitness gains have facilitated a process through which she now allows her true, authentic self to shine through in ways she previously had not.
P5	Skiing, hiking, climbing, basketball, walking	Participant #5 works for a marketing team at a large mountain resort. During the winter he skis extensively and does so across varied, challenging terrain. Exploration and mobility were strong themes in his interview as he has actively linked his passion for skiing and travel with his career pursuits. Structuring his life and work in such a way as to afford continued pursuit of his recreational passions yields a regular sense of energy and excitement, which appeared to foster a broader sense of well-being over time.
P6	Powerlifting, crossfit, ice hockey, surfing	Participant #6 works as a physical therapy aid (contributing 20 hours of mild activity weekly), and will begin graduate school next year. Ice hockey played a significant role in his adolescence, and after earning a unique opportunity to play at the Division-I level, he was forced to quit after a serious concussion. He felt a deep void in his life, which he came to fill with powerlifting. His training (and anticipated competition) affords him an opportunity to continue striving toward his full athletic potential.

<u>Overview of Thematic Structure</u>

In light of the subjective idiosyncrasies that emerged from each interview, the overall, highest-order theme transcending and linking all six interviews was identified as, *An Outlet for Continued Goal-Striving and Self-Change*. This reflected 3 overlapping sub-themes, 12 emergent themes, and 561 initial codes. Figure 1 presents a visual representation of this thematic structure. Appendix F summarizes each individual interview, as well as the individual sub-themes that surfaced therein. The following pages will outline the three major sub-themes, as well as the emergent themes from which they were constructed.

<u>Sub-Theme #1: Context of Life and Physical Activity</u>

Sub-theme #1 was comprised of contextual themes that emerged from the interviews. Participants' physical activity backgrounds shared similar narrative elements, reflected in the emergent themes of 1A *Active Since a Young Age / Other Impacts on Identity*; 1B *Managing Self and Situation: Sustained Activity Through Transitions*; and 1C *Barriers, Struggles, and Stressors within Physical Activity*. In describing the current context of their lives, participants spoke to similar experiences within the developmental period of emerging adulthood. Common experiences of emerging adulthood were reflected in the emergent themes of 1D *Variations in Daily Life and Work*; 1E *Life is Currently Focused on a Few Key Tasks*; and 1F *Aspects of Exploration, Mobility, and Emerging Adulthood*.

<u>Sub-Theme #1, Emergent Theme A – *Active Since a Young Age / Other Impacts on Identity.*</u>

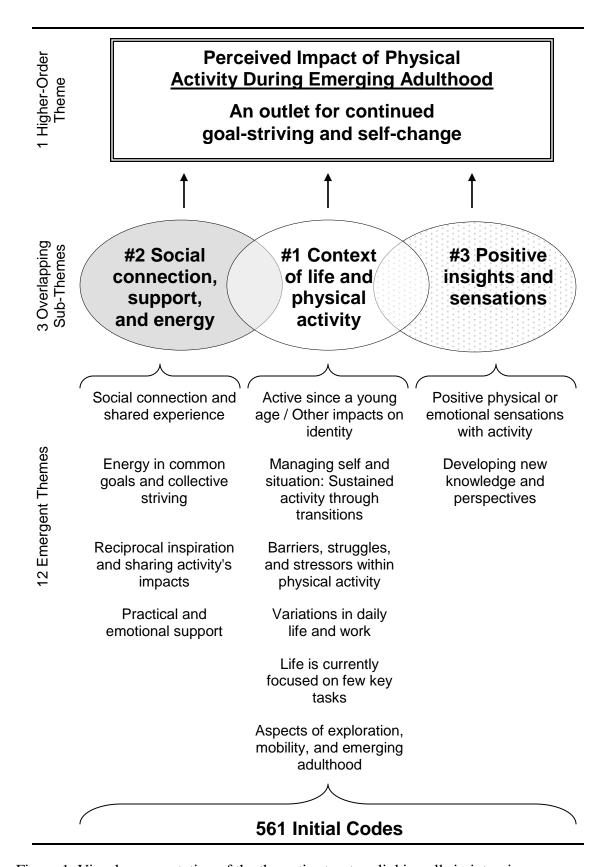A key narrative element that emerged from the data was that all six participants

Figure 1. Visual representation of the thematic structure linking all six interviews.

had been immersed in physical activity since a young age. In varying degrees, it appeared

that physical activity was integrated into participants' personal and/or social identities.

Participant 1 articulated this clearly in the following excerpt:

> [Running] certainly had a[n] impact on me as an individual and I think that was shaped a little earlier and it's just continued in grad school and I've been happy that I was able to do that. I didn't have to redefine, I mean, running is a huge part of my life and I was able to keep it that way, um, and find a group of friends that had…it [as] a similar huge part of their lives. So I don't know if anything shaped me specifically during grad school. (P1)

For Participant 3, exercise was not so much an element of his identity per se, but a crucial

piece of his personal value for sustained health. He shared,

> I didn't necessarily realize, "oh man, I realized that I just love exercise"…it wasn't like this is part of me, like "I'm [Name] the exercise guy," it wasn't anything like that, it was more or less like how can I not become the person who is out of shape, ya know, how can I not become the person who looks back and is saying, "man I should have been exercising for the past 10, 20 years." (P3)

Sub-Theme #1, Emergent Theme B – *Managing Self and Situation: Sustained Activity*

Through Transitions.

This theme reflected how maintaining an active lifestyle into emerging adulthood

tended to occur in light of contextual transitions. For example, Participant 4 entered the

workforce at a relatively young age in comparison to the other participants. After being

immersed in sports at an early age, she shared how this contextual change in her life

presented a concurrent shift in her physical activity:

> I got out of sports because I wanted to go to [trade school] and I started working so I…really wasn't playing sports but I was at that point starting to, I was probably 15, 16 years old, that's when I started going to the gym because I wasn't doing sports, so I joined at the Y and…I just, I really liked it. I mean it was no where near the intensity or the caliber that I'm doing now but it was just being active and it was a fun thing to do with my friends. (P4)

Speaking on her experiences of competing in triathlon training (relative to track and field during college), Participant 2 illustrated how post-collegiate athletics demanded more of the individual, but also yielded a unique element of connection to one's competitors:

> I feel like…getting to the start line for a triathlon has cost me more than…it cost me in college; in college life was so much easier, right? Like, I just went to classes, someone else cooked my food (chuckles), my coach told me what to do…someone drove me to the event, I didn't pay for it…someone gave me clothes to wear…I just did my thing…but here…getting to the start line just costs me so much, like…that time management, the personal management, managing my budget…and the person who is standing next to me at the start line has experienced much of the same of that…so I think that we're…connected in a different sort of way… (P2)

Sub-Theme #1, Emergent Theme C – *Barriers, Struggles, and Stressors within Physical Activity.*

As reflected in this theme, sustaining an active lifestyle through contextual transitions was not always easy. All six participants could identify some form of barrier or stressor within their physical activity experiences. These struggles appeared in varying degrees, from general annoyances (e.g., constraining work schedules, needing to do extra laundry) to significant injuries or illnesses. For instance, Participant 6 was forced to miss an anticipated powerlifting competition after losing 15 pounds due to a bout with mononucleosis. In the excerpt below, his use of the word "devastating" appeared to underscore the magnitude of this barrier:

> I definitely had lost a lot of muscle during [my bout with mono]. I never really had a high body fat percentage, so losing 15 lbs was, there was definitely a lot of muscle involved there and that was pretty devastating in regards to my strength. (P6)

Participant 2 also spoke to this theme when she described the week or two of her peak training volume for a triathlon:

When I get up to…that amount of training…there are just so many
hormones that are released due to…impact and intensity [and] pure training
volume. [So] in order to…sustain my body weight during that…I have to
eat so much food…so there's just like constant fluctuations [and] a bit of
just genuine fatigue…maybe a little bit of resistance to wanting a slight bit
more freedom…in a day…and…I think…the constant stress that I might
not get it all done (chuckles). (P2)

Sub-Theme #1, Emergent Theme D – *Variations in Daily Life and Work.*

This theme was used to group contextual elements of the interviews that

illustrated variations amongst participants' current life contexts. For instance, Participant

1 had a relatively flexible schedule while Participants 3 and 4 spoke to tightly packed

daily schedules. Participant 2 talked about variations in her daily schedule based on

training fluctuations and Participant 5 indicated variations in his daily schedule based on

seasonal employment responsibilities. Further, Participant 5 described a unique "winding

road" as he had held several adventure-based jobs that provided opportunities for him to

travel around the world. He recognized that, for him, this was the "right" path:

I think…especially going in the non-traditional route of not getting a nine
to five job…I think I kind of have a different life perspective and…I think
I'm happier than a lot of my good friends (chuckles) who are working nine
to five, and I think that being happy is a really good sign that you're doing
something right…but everyone kinda has their own path and for some
people they would hate to do the stuff that I've been doing and they'll love
being more stable and having more security…I'm just kind of on the other
end of that spectrum. (P5)

Sub-Theme #1, Emergent Theme E – *Life is Currently Focused on a Few Key Tasks.*

Several participants (four of six) had a narrow focus on a few key tasks in their

lives (e.g., career development, physical activity pursuits, friendships/relationships). For

these participants, these tasks reflected areas of significant energy, attention, and meaning

within their emerging adulthood years. Graduate school and running were areas of

significant focus for Participant 1. When asked if there were other things she was

devoting a lot of energy to at this point in her life, she chuckled and replied, "That's primarily it!" (P1)

Sub-Theme #1, Emergent Theme F – *Aspects of Exploration, Mobility, and Emerging Adulthood.*

This theme was strong and richly detailed. Each participant shared examples of ways in which their emerging adulthood had been or would be filled with mobility and exploration. Participants' mobility and exploration tended to revolve around education and/or career development. Participant 3, for example, did not feel confined to his current field of employment, and even considered changing fields some day. He elaborated,

> I'm fine with having options. I'm probably glad that I have a question mark…like 20 years from now I'll probably, ya know, if I was a teacher, I'm sure people are like, "well I'll probably try to be a principal," and ya envision your entire life. I don't know man maybe I'll be on a beach, who knows. (P3)

Participant 5 spoke to his recognition of the unique opportunity for exploration at this time in his life:

> Just like talking to a lot of people…that are older and do have careers … some of them are more traditional and they'll say, "oh you need a job." But a lot of them are telling me, "like, ya know what, you're in your twenties…this is when you should be doing what you're really passionate about and when you should travel and get into adventure and things that you can't do as much if you have a family and a full-time job," and so I'm definitely taking advantage of that, I definitely enjoy it and…I think it just keeps my life exciting and keeps me happy. (P5)

Conversely, Participant 2 indicated how a commitment to marriage might constrain mobility:

> A lot of mental energy is taken up by…some career choices that my husband and I are faced with right now…He was offered a job out of the area…so in order for us to make the move, I have to find a job out of the area…and it's difficult to find a job two states, three states away…so it's something…that has been taking…up a lot of energy…and it's…actually

forced a bit of sacrifice because it's not something that we can really openly talk about…at this point. (P2)

In summary, emergent themes 1A, 1B, and 1C each reflected similarities in participants' physical activity backgrounds. Participants have been active since a young age and have maintained their active lifestyles through transitions and other stressors. Emergent themes 1D, 1E, and 1F each reflected contextual factors in participants' lives as post-college aged emerging adults. While the content of daily life varied across participants (emergent theme 1D), they all seemed to be narrowly focused on a few key tasks within a mobile and future-focused time in their lives (emergent themes 1E and 1F).

<div align="center">Sub-Theme #2: Social Connection, Support, and Energy</div>

The second sub-theme of *Social Connection, Support, and Energy* reflected the role that other people played in the participants' experiences with sport, exercise, and recreational activity. Participants generally expressed a sentiment of social connectedness and shared experience with others when describing their physical activity (emergent theme 2A, *Social Connection and Shared Experience*). Through these shared experiences, significant others often infused participants' physical activity narratives with a sense of energy and inspiration (emergent themes of 2B, *Energy in Common Goals and Collective Striving* and 2C, *Reciprocal Inspiration and Sharing Activity's Impacts*) and provided much-appreciated forms of support (emergent theme 2D, *Practical and Emotional Support*).

Sub-Theme #2, Emergent Theme A – *Social Connection and Shared Experience.*

As mentioned above, participants' experiences with physical activity often reflected connection and shared experience with others. Participant 2, for instance,

offered a clear example of how connections formed within triathlon extended into other

aspects of her life:

> I like to…look at the pieces of the puzzle…You can think back…if this one thing… happened in life and then you realize all of a sudden, "well through that one thing I met this person, and then that person introduced me to that person, and it's that person who I got a job through," or something like that…Triathlon is an early piece of my puzzle by way of my professional career…that has…had these…point contacts on the way that have led me down a path to exactly where I am today…that has nothing to do specifically with me training and doing triathlon but more so…the people that triathlon has brought into my life, the connections, the networking…So I mean I'm a 100% confident in saying that without triathlon I would not be where I am professionally [or] socially… (P2)

While social connection and shared experience through physical activity was less of a

factor for Participant 3 in his lifting and exercise, he spoke to this theme while describing

his experiences with pick-up basketball during college:

> My best friend in college and roommate was a big basketball player...he got me kind of playing more because…it's always nice to go up [to a court] with a buddy, ya have a little bit more…street cred when you have someone, like you already kind of have a team… (P3)

However, Participant 3 lacked fit, age-group friends looking to participate in high-

intensity sports within his current community. He spoke to a desire for this element of

social connection:

> It's really frustrating sport-wise…especially in a smaller community like this and…being an in-betweener [in terms of my age]…I'm not gonna go all the way down to [Local Park] to play in a soccer game where I don't know anyone, I'm not trying that, I don't want to play sports that [badly] to just go and play with complete strangers…I think there is an enjoyment aspect of playing with people you know and the social aspect. (P3)

Sub-Theme #2, Emergent Theme B – *Energy in Common Goals and Collective Striving.*

This theme encapsulated social conditions that tended to facilitate positive

physical activity experiences and encouraged participants to push themselves to improve

within their respective activities. This was a salient theme for Participant 1. In the

following excerpt she discussed her transition to a Division-I team and how training with

talented others pushed her to improve:

> It was pretty competitive. Like…when I started my [college] freshman year…I wasn't in our top 12 …but…I improved a lot and found myself getting more into it…And having people to do workouts with, which I didn't have in high school, was definitely a big help...[They] were much better than I was, so I had people to try to catch. (P1)

Participant 5 shared a similar sentiment. When he initially moved to the mountains for a

job with a large ski resort, skiing with friends that were more talented pushed him to

improve as a skier:

> I mean everyone was better than me when I got here…they were a lot better than me, and …we all wanted to ski together because we were friends, and so that kind of forced me to just try to play catch up and try to keep up with them and do everything they were doing, and by the end of that first winter I was…basically as good as all of them because that's who I was skiing with. (P5)

Participant 6 spoke to the motivation he found in the social environment at his gym:

> I mean just seeing other people doing the same things is also kind of motivating…like the other day we were all deadlifting and even though you're all friends it kinda brings us into competition ya know, I wanna hit a new weight, whatever, so, it's definitely nice…At my other gym I didn't have that. There [was] maybe one or two people you'd see with good form actually powerlifting and at [this] other place it's everybody so, it's a nice energy level [here], I like it. (P6)

Sub-Theme #2, Emergent Theme C – *Reciprocal Inspiration and Sharing Activity's*

Impacts.

Several participants talked about a deeper level of connection with others, one

stemming from "reciprocal inspiration" (i.e., inspiring others while also being inspired by

them) or sharing physical activity's most meaningful personal impacts with others.

Participant 2 offered a vivid contribution to this theme when discussing how she shared

triathlon with others by getting them involved:

To see them go from [struggling] with training to…extreme nervousness about a race…to self-doubt during a race, and then to overcoming everything by crossing that finish line…and then coming on the other side of that and…recognizing that in some way or another this has changed them … and whether or not they do another triathlon…or they pursue something else…they've become a slightly different person…So I like to pull people into triathlon [because] that's what it did for me…it changed me, it made me a different person…a better person…and I think…the joy I get from that is just something…I want other people to have. (P2)

Similarly, Participant 3 highlighted the importance of sharing what he has learned

through his physical activity experiences with others. After experiencing a period of

relative inactivity, and the struggle to regain a pattern of regular exercise, he realized the

importance of avoiding long-term dips in activity levels. He now emphasizes this to

clients in his professional role as an exercise clinician:

The barriers that I went through, or the pitfalls…that I went through…many people go through…[So] my biggest takeaway with my profession is…how do I ensure that these people whether they're forty and they're starting to get into pitfalls or…I notice that one of the [interns] doesn't exercise anymore because they're stressed out, ya know, I'm gonna have to sit him down and have a conversation with him and be like, "look, whatever you think you're gaining by putting it aside to do schoolwork, you're losing more…because you can do all that schoolwork while you exercise too." (P3)

Participant 4 contributed to this theme by offering insight to the experience of reciprocal

inspiration she shared with her son. Reflecting a crossfit workout, she recalled,

We were doing a [workout] and I brought my son with me at six o'clock in the morning (chuckles) and he's sitting on the couch watching me, we're doing this one workout and...I'm climbing ropes…I was at the top of the rope, I was exhausted…and I look back and I see my son, and he's staring at me like…(gasps) "oh my gosh…my mom" like I'm wonder woman…and it was like, that's my inspiration right there, to show him strength…and to show him you can do this, you can do anything you want, ya know nothing can take you down, and I think…[Crossfit's] changed both of our lives. (P4)

Sub-Theme #2, Emergent Theme D – *Practical and Emotional Support.*

Participants also found themselves on the receiving end of others' support and

encouragement. Support that participants received sometimes came in the form of informational guidance and mentoring. For example, Participant 6 initially started lifting in high school to develop sport-specific size and strength. He talked about the valuable insight that he received from a friend:

> One of my good friends…didn't play any sports but he did MMA and he was very big in strength and conditioning, and his form was impeccable, and he really got me going in terms of working out and heading in the right direction with that because…I've always looked at form and proper programming first, and I think I really have him to thank for that because obviously if you look at most kids they don't really know what they're doing. (P6)

Participant 1 also spoke to the emotional support reflected in this theme. She discussed a unique, in-group mentality that enabled her fellow runners to provide an appreciated level of understanding and empathy that other non-runners were not able to offer:

> Understanding what a bad race feels like and what is a bad race. Like my parents, if I finish a race…they don't really know what I'm going to be happy with or not so they say, "how do you feel about that?" [versus having] someone who knows immediately how you're gonna feel about that…because…they're actually following how you're doing, they know what you're hoping to do, what your capable of doing…and then they've been in that situation before where they know what they're capable of doing and they don't [meet that expectation]…so they…understand it in that respect, and it's not just getting happy because they're happy it's because they feel like they kind of went through it with you. (P1)

Participant 2 also echoed this sentiment with regards to the support she received from her husband, who was a talented endurance athlete himself:

> I'm lucky in the sense that…he knows what it means to be dedicated and to work hard to achieve goals…so he's…very supportive of me…(P2)

In summary, emergent themes 2A (*Social Connection and Shared Experience*) and 2B (*Energy in Common Goals and Collective Striving*) reflected elements of shared experience and shared goal-striving within participants' experiences. Emergent theme 2C (*Reciprocal Inspiration and Sharing Activity's Impacts*) illustrated ways in which

participants supported others' physical activity participation, and emergent theme 2D (*Practical and Emotional Support*) demonstrated ways in which participants received support from others.

<u>Sub-theme #3: Positive Insights and Sensations</u>

Sub-theme #3 encapsulated other positive or enjoyable elements of participants' experiences with physical activity. Several participants spoke about enjoying the kinesthetic sensations of their sport or exercise, as well as the positive emotions experienced therein (emergent theme 3A, *Positive Physical or Emotional Sensations with Activity*). Participants' physical activity experiences also prompted learning new information or considering new perspectives (emergent theme 3B, *Developing New Knowledge and Perspectives*).

<u>Sub-Theme #3, Emergent Theme A – *Positive Physical or Emotional Sensations with Activity*.</u>

As reflected in this theme, participants derived positive sensations from their sport or exercise. For some, enjoyment was found in the movement and kinesthetic sensations inherent to their primary forms of physical activity. Elaborating on his experience with skiing, Participant 5 shared,

> I just always thought of [skiing] as...for pure fun's sake, just one of the funnest things that you could do…I mean…it's just one of those simple pleasures where you're gliding on top of snow and it's just [a] unique feeling. (P5)

Similarly, Participant 2 shared details about her experiences of training sessions in which her mind and body fused to produce an optimal effort and experience:

> On…specific really hard training days…I like to say that…sometimes our body shows up and sometimes our mind shows up, and the days that we really really make progress are the days that both show up…I love it when

just my body shows up, I love it just when my mind shows up, and…you feel like you're floating above the ground when they both show up. (P2)

Several participants also remarked on positive cognitive/emotional sensations derived from their sport or exercise (e.g., excitement, enjoyment, accomplishment). Oftentimes, these sensations transferred from the physical activity into other aspects of life. Participant 3 described the experience of "on-the-spot motivation" that he derived from his exercise:

> I think [regular exercise] teaches you to on the spot be motivated, at least for me…sometimes I'll walk in [at the gym] and I'll be like, "oh God I gotta warm up"… The more and more you do it [though] the more you're like, "alright I've come to this facility, boom, what do I gotta do? I gotta warm up, like alright" and then you just get used to…getting in the frame of mind, so…when I go out to do…yard work [I think], "alright, boom, lets rake these leaves out," rather than every single thing being like, "ehhh I gotta do this again," ya know, I think it makes your attitude a lot, a lot better generally. (P3)

Participant 4 shared a similar experience. The language she used at the conclusion of the following excerpt offers a striking sense of the impact these positive sensations had on her:

> [Crossfit]'s just really helped me…I had to shovel my grandmom's driveway, it was really long, and I'm like, "oh my gosh I have to be somewhere, I have my son here with me, how am I gonna get this done? Ok, look at it like a WOD (workout of the day). I got 20 minutes, lets get it done in 20 minutes, we're gonna go…just chip away at it and get it done" and, I'll tell ya, I got the driveway done ya know! (chuckles) But it's just, it helps you with that positive mindset, that drive, that ambition, the energy levels, I just think…fitness [has] impacted me in all positive, ya know, all across the board in multiple ways. Sorry, I get really passionate about it because it's really changed my life. (P4)

Sub-Theme #3, Emergent Theme B – *Developing New Knowledge and Perspectives.*

Participants learned new information from their peers and social connections. Additionally, as reflected in this theme, maintaining a physically active lifestyle into emerging adulthood also engaged participants in their own, self-directed learning and

introspection. For instance, learning more about nutrition was a key factor enabling

Participant 4 to achieve her desired results in strength training and crossfit. Reflecting on

this, she shared,

> I eat better now than I ever have and I'm makin' stuff that I've never made
> …Like, you look at some of my meals, it looks gourmet almost…it's
> beautiful, it's real food…it's all natural…and my body feels great, my body
> looks great, I'm fueling the muscle, I have the energy like I've never had
> before, and I think that is where a lot of people go wrong with fitness and
> that's where I was going wrong too… (P4)

Similarly, as Participant 2 began to immerse herself in triathlon, she became a "student"

of the sport. She learned about training principles, and also found a new appreciation for

human capability in learning about what elite triathletes have accomplished in the sport.

This knowledge, in conjunction with her own progression as a triathlete, sparked a vivid

shift in perspective for her. She shared that,

> You realize all of a sudden that…running five miles a day actually isn't that
> far and that there are people who run ten miles a day, and then…your
> understanding of what is physically possible starts to grow, you understand
> that…swimming 1000 yards for a swim workout actually isn't that much,
> that people oftentimes swim 4000 yards…I started with this small picture of
> what it meant to train for a triathlon, which was very appropriate for me,
> and then as I got more involved…in training for those events…I kinda
> became a student of it…I started to understand what it meant to be good at
> them…what times are actually fast…what distances are actually far…and
> …it makes you realize that the world's bigger than what you had previously
> thought…which opens up some more possibilities I think. (P2)

In summary, emergent theme 3A reflected participants' sense of kinesthetic

enjoyment with their activities, as well as positive cognitive/affective elements of their

experiences. Emergent theme 3B illustrated ways in which participants' ongoing physical

activity guided them to learn new factual information and develop new perspectives.

<u>Higher-Order Impact of Physical Activity During Emerging Adulthood</u>

The higher-order theme that emerged to transcend and link all six participants was

identified as, *An Outlet for Continued Goal-Striving and Self-Change*. Ultimately, this

higher-order theme described the perceived experiential impact of physical activity in the

lives of emerging adults interviewed for this study. Elements of the sub-themes outlined

above were reflected, in varying degrees, within the higher-order themes of the individual

interviews that contributed to this single highest-order theme.

As Brocki and Wearden (2006) highlighted a widespread lack of attention to

researchers' analytical thought within IPA research, I have provided my own thoughts

and reasoning that led me to label the higher-order theme as I have (See Appendix G). To

begin, I would like to outline each participant's higher-order theme (see Table 3).

Table 3. Higher-order themes drawn from each participant's individual interview.

	Higher-order theme
P1	Enjoy it while it lasts: Running's impact and current life context fuel continued involvement
P2	Finding a finish line is only the beginning: Self and social expansion through triathlon
P3	I'm still molding myself into the person I want to be: Goal-driven pursuits through transitions
P4	Me finding myself as a woman: Strength, learning, and energy from others
P5	Being happy is a good sign you're doing something right: Aligning recreational passions with the pursuits of emerging adulthood
P6	An opportunity to be the best I can: Lifting within the pursuit of athletic and career potential

The higher-order themes from each participant reflected a process. Each theme

included personalized verbs and a sense of continuity; an on-going experience (e.g.,

"continued involvement," "still molding"). Each participant spoke to unique ways in

which physical activity was an outlet for continued striving towards meaningful goals or self-change. Participants also spoke to ways in which they integrated their physical activity experiences with their pursuit of long-term life aspirations. The examples below illustrate these idiosyncratic details, but also illustrate the emergence of the higher-order theme from the participants' words and stories.

For Participant 1, running at a high-level was an exciting and motivating goal. Approaching the age at which she would reach her physiological peak, she felt a limited amount of time to pursue her fullest athletic potential:

> Switching to post-collegiate was more running for myself … figuring … your mid to late twenties is when you peak so why not run as fast as you can while you have the chance. I mean, we'll see if I keep going after but I'd like to just keep bringing down times as long as I can. (P1)

Looking back on exciting and successful races, Participant 1 spoke to the higher-order theme's sense of process and continued striving as she reflected,

> I guess [those races] just made me greedy for more (chuckles)…[they were] certainly exciting…and I when I get excited about one thing I just get excited for the next thing so, like, 'oh I improved by this much, how much more can I go?' (P1)

She spoke of a "merge of context and impact," as her continued involvement with running seemed to be a product of the positive impact she derived from the sport (e.g., energy and social support) and the finite opportunity that her current life context afforded her to train at a high level. When asked about this point in her life, she said,

> I'm just trying to enjoy it while it lasts (chuckles). I like…being able to make my own schedule and not having a nine to five job, but…I feel less stressed now than I did in undergrad. Grades don't matter as much anymore … the focus is more on your individual research and…I like it right now (laughs). I'm fine with it, that's why I'm…fine with my program taking six years instead of five, I'm enjoying it so… (trails off). (P1)

As an endurance athlete, Participant 2 also talked about a finite time for high-level performances before reaching her physiological peak. She seemed intrigued to pursue her full athletic potential in triathlon, and is also thinking longer-term past her athletic prime:

> I understand that with age…it's not possible to get faster forever…so for right now…part of the joy in triathlon is just seeing…how fast I can conquer the distance…but…as…I continue…years down the road … I … hope to continue to build…my aerobic base and become more of an endurance athlete…and maybe considering moving up in distance or…just taking a different approach to it… (P2)

In her training and development as a triathlete, she spoke to a sense of process as reaching new levels of fitness created new "bases" that continued gains could be built upon. Describing her experience of training sessions in which both her mind and body "show up" and are "fused" to facilitate optimal effort she shared,

> I'm overcome by a sense of strength…I think we're always making small growth…but when they both show up…I think you're more aware of it. It's almost like you've been training…for the last six weeks to become a little bit faster and on that day you kind of step into being that faster person … you've been kind of putting on the clothes, but now you're actually that person…and now you have a new place from which is your base…so you'll continue to go up from there. (P2)

Through her experiences with triathlon, Participant 2 discovered new sources of strength (physically and mentally/emotionally); and with the time and energy she invested into her training, she deliberately and actively reflected on what she continued to take from triathlon:

> I just think that…the strength and courage that you find by learning how to become proficient at three sports, put them back to back, and then find a finish line…I think that we learn so much about ourselves…Clearly, I'm not gonna win all the time…and I certainly am not talented enough to win …a bigger stage triathlon…so I mean something I'm trying…to figure out is what is my motivation for doing triathlon?…I love the way it makes you feel…I love learning how strong I can be, I love being able to manage my time… (P2)

Improved fitness provided Participant 4 with a similar sense of self-expansion; one facet of which was found in the excitement of continued goal-striving:

> Once I hit a goal I can immediately set another one, so that's another thing that I love about [Crossfit]…it's never gonna get boring because … you can always get better at [other aspects of it]… (P4)

Participant 4 described societal pressure to appear "feminine" as once fueling self-criticism. Having developed new mental and physical strength, however, she slowly and cautiously came to embrace herself for who she truly was – a self that now "shines through for the world to see." She spoke about how she used make-up to cover herself up, both literally and figuratively, as well as the role that crossfit played in allowing her authentic self to shine through:

> I always used to wear a ton of make-up, ton of make-up, I mean it makes me sick now when I think about how much I used to put on…It never felt like I was good enough…I always felt like that's why I was so critical of myself and…I credit crossfit as a huge part of me finding myself as a woman…because I don't wear make-up anymore, I don't, I'm comfortable in my skin now and I've learned hey, I'm a woman and I don't care if you think I'm pretty, I don't care if you think I should lift weights, I don't care if you think my arms are too big, I like it, I'm very comfortable with the way that I am, and I'm now at the point where…I'm [name] I'm funny, I'm [name] I'm a great cook, I'm [name] I'm a great mom, not I'm [name] I'm pretty… (P4)

The following excerpt echoed a sense of process, and further, added a source of external evidence suggesting that her "true self" had begun shining through:

> I'm still learning every day but I mean ultimately I learned that…there was a whole other person inside of me that I never knew (chuckles)…and I like her, I like her a lot! (laughs)…And fitness has just really brought out me, and helped me be me…goofy me…My coach even says, "hey [name] when you first started here…we all thought you were kind of a snob, ya didn't really talk to anyone…you were nice, but ya kind of-" he was like, "and then we find out you're just this big klutz, this big goofball, and like that's what we all love about ya!" And here this whole time I'm trying to not let that out because I didn't think that that's what people like, and now I'm like, "No! I'm me! Unapologetically, this is me!" and ya know fitness and Crossfit specifically, it helped me find that. (P4)

Participant 6 seemed to find his true self in hockey and striving towards his

aspirations of playing for an NCAA Division I team. Despite the positive team

experiences he had with high school hockey, he did not seem to feel that he had

actualized his potential. This realization was a key factor driving his continued pursuit of

playing Division I athletics. He shared,

> When I got to school I wanted to walk onto the D1 team to prove to myself
> that I could play at a high level. In high school I played on a team that had,
> for the most part, never played hockey before and some never skated
> before, so needless to say I had given up many goals as a goalie that I had
> no help defending against. So I wanted to prove to the people I played with
> and against that I could play. I...made final cuts for the team which had only
> a spot for a third goaltender with 12 goalies trying out. It felt good just to
> get a callback as most of these players had played at a much higher level
> recently than I had. (P6)

His story took an unfortunate twist. He sustained a serious concussion at the end of his

high school career, the symptoms of which extended to affect his short-term memory and

executive functioning during his college freshman year. For his long-term health, a

neuro-psychologist indicated that he could no longer play hockey. Without discounting

that it was incredibly difficult for him to leave the game of hockey, he found competitive

powerlifting as a new venue for his energy and reaching his full athletic potential:

> [After being forced to stop playing] it felt like I had lost a huge part of my
> life, I had devoted most of my time to hockey and getting better and better.
> When it was suddenly stripped away I had a space in my life that I filled
> with exercise. Being able to compete with myself in terms of strength
> numbers and still feel like I was participating in something gave me a
> replacement for playing competitive hockey. (P6)

Reflecting the sense of process, he elaborated on how his competitive energy fueled his

continued training and became a "lifestyle":

> [Training]'s basically become like a…lifestyle for me, I can't really picture
> myself not working out, you know what I mean…But it's really…that drive
> to compete still…I guess since losing hockey and not being able to compete

there, and I still have that drive in me to compete so…[powerlifting] definitely took over and…I'm looking forward to competing, I just haven't been able to yet, so, taking that into account and just looking forward to that I think has really pushed me, getting me going. (P6)

Participant 6 also spoke to an integration or fusion of his physical activity with the pursuit of his long-term career goals:

Basically any time I go into the gym I try to look at it through the scope of …physical therapy. [I'll] go in and I'll look at someone's movement pattern …and so…every time I go to the gym I try to focus on how it's relevant to what I do…So it's almost a chance for me to study a little at the same time… (P6)

Participant 3 spoke to striving for his fullest potential as a person. He was focused on and driven by goals, not only in exercise, but also in every aspect of his life:

Everything in my life has some sort of a goal, I'm at no point in this stage of my life where I do things just to puttz around and enjoy it…I view this whole point in my life as…I'm still molding myself into the person that I want to be... (P3)

Long-term health was an important motivating factor for Participant 3, and his continued exercise was a primary venue through which he maintained his health and optimal functioning. He developed an increased awareness of the effort he would need to maintain an active lifestyle through the transitions of emerging adulthood. After a period in which he found himself less active for the first time in his life he recognized, "…I'm not gonna have optimized health, I'm not gonna optimize my life in a healthy way if I keep on with this kind of lifestyle that I'm doing." He elaborated on how exercise had become a priority instead of a choice, despite not always enjoying all aspects of it:

Instead of it being more or less like I realized this is one of my core values, I realized that it needs to be one of my core values…and it wasn't [that] I didn't value it before…but I didn't put the effort in to make it a core value…I think my…opinion of how important exercise is…probably hasn't changed for a long long time…but how important is it to me or how important should I make it and following through with doing it…needs to be a high level priority. (P3)

Like Participant 6, Participant 3 connected his continued exercise with his continued

professional learning and development as an exercise clinician. He shared,

> In conjunction with stuff I'm reading…I'm more interested in…power
> training so usually…I wanna work out that way, but you also wanna test out
> your own workouts…on yourself…My ideas of…like if I ever owned my
> own business or if I was ever a trainer somewhere, if I had this kid and I
> told him I'd make him the best athlete ever…"how would you go about
> doing that," it's kind of in my mind when I train myself… (P3)

> Lastly, Participant 5 found skiing highly enjoyable and was internally motivated

to continue improving as a skier. He shared that, "I'm always trying to push myself and I

always want to make myself a better skier whenever I'm skiing." However, his career

development appeared to be the key area in which he was still "molding" himself into the

person he wanted to be. He added,

> I am just [skiing] for fun and…when I'm pushing myself it's simply
> personal. If I was trying to become a pro skier, then I would have to push it
> a lot more and [put] myself in situations where I would be prone to injury
> more…but [because] my goals are more professionally related…I just don't
> have to worry about that… (P5)

Participant 5 clearly articulated that he was deliberately selective in his career and

residential planning so as to afford continued opportunities to pursue his recreational

passions (i.e., skiing, climbing, and hiking). Projecting into the future, he thought,

> I mean I don't see myself…where I'm active…five to seven days a week
> but I still see myself, even…if I get this job that I interviewed for last week
> then…I would be working five days a week but it's also a company that …
> does value the work-life balance…and it's in the [Large Resort] valley and
> so…if it's a powder day…then I can come into work basically whenever I
> want and as long as I get my work done then it's fine…I definitely still see
> myself…in the summers after work…going to climb…or hike...and so even
> if I am working five days a week, a typical kind of office job, I'll still have
> a little bit more freedom than a typical one just based on the places I do
> wanna work and where I want to live so that I'll be able to do the things I'm
> passionate about…recreationally. (P5)

He described excitement and enjoyment as more immediate, daily impacts of having these recreational opportunities, but also elaborated how this shorter-term impact might have a long-term, cumulative effect on his overall sense of well-being. This appeared to underscore the value of his efforts to actively align the pursuits of emerging adulthood (e.g., career and residential planning) with his recreational passions:

> Waking up and knowing that I'm gonna ski or hike or whatever…I think you wake up excited…you know you're gonna have an amazing day. And …I think a lot of people…can get lost in life and…some people just aren't excited to wake up and I don't think I ever really have to worry about that because I almost always know that there's something I'm gonna do in my day or in my week that I'm gonna really, really enjoy, and so I think a big part of life is just having things to look forward to and…I'm never shy of that, there's always things I'm gonna look forward to…whether it's through the outdoors or whether it's a concert… (P5)

In summary, the excerpts above illustrated how the higher-order theme of *An Outlet for Continued Goal-Striving and Self-Change* uniquely surfaced in each interview. Although individual goals and self-changes varied from participant to participant, all six participants outlined a sense of process and ongoing progress. The emerging adults that participated in this study spoke to the impact of physical activity as an outlet more so than a finalized outcome. Whether it was the pursuit of one's fullest athletic potential or a long-term integration of recreational passions and career development, each participant spoke to the sentiment that Participant 3 articulated when he said, "I'm still molding myself into the person I want to be."

Review of Results

The higher-order experiential impact of physical activity in the lives of emerging adults was identified as *An Outlet for Continued Goal-Striving and Self-Change*. A sense of process and continued striving emerged from the interviews and contributed to this theme. Participants spoke to actively and deliberately integrating their physical activity

experiences with broader (often career-related) goals and pursuits in their lives. The commitment to idiographic detail further illustrated how the three sub-themes (i.e., *Context of Life and Physical Activity; Social Connection, Support, and Energy; Positive Insights and Sensations*) uniquely surfaced within the individual interviews.

Chapter 5

DISCUSSION

<u>Introduction</u>

Previous research has suggested declines in both physical activity and perceived personal growth during the developmental period of emerging adulthood (e.g., Bauer & McAdams, 2010; Zick et al., 2007). To date, however, the literature lacks a contextually-based description of how emerging adults think about and experience physical activity. In a preliminary effort to fill this gap, and guided by the model of positive psychology (Seligman & Csikszentmihalyi, 2000), the present research sought to explore the inductive question; for emerging adults, what is the perceived impact of physical activity on their lives?

In their seminal introduction of positive psychology, Seligman and Csikszentmihalyi (2000) argued that, "Psychology has, since World War II, become a science largely about healing. It concentrates on repairing damage within a disease model of human functioning. This almost exclusive attention to pathology neglects the fulfilled individual and the thriving community" (p. 5). With these words in mind, the present research did not seek to study those who were active in adolescence and have since slid into a sedentary, unfulfilling transition to adulthood. Rather, this study selectively focused on highly physically active individuals that experienced sport, exercise, and outdoor pursuits as an enriching element of their transitions to adulthood.

The results of this research generated the insight that the perceived impact of physical activity on the lives of emerging adults was an outlet more so than a said-and-done outcome; more specifically, as reflected in the higher-order theme, *An Outlet for*

Continued Goal-Striving and Self-Change. Within emerging adulthood, physical activity can provide an on-going venue for self-change and striving towards meaningful goals. Twelve emergent themes, three sub-themes, and one transcendent higher-order theme emerged to yield this conclusion. These themes will now be discussed in light of the existing literature.

<u>Sub-Theme #1: Context of Life and Physical Activity</u>

Contextual elements that emerged in this study showed a high degree of similarity to empirically-based conceptualizations of emerging adulthood. The emergent themes *Life is Currently Focused on a Few Key Tasks* and *Aspects of Exploration, Mobility, and Emerging Adulthood* are congruent with Arnett's (2000, 2004; Arnett & Fishel, 2013) description of emerging adulthood as being a time of mobility, exploration, and focused career planning. Additionally, the un-coded contextual information presented in Table 2 (and to a lesser extent, the emergent theme of *Variations in Daily Life and Work*) is supported by Cohen and colleagues' (2003) finding that emerging adults tend to undergo demographic changes (e.g., marriage, completing education, childbirth) at varied ages.

Narrative elements of participants' physical activity experiences are also supported by existing research. As indicated by the emergent theme of *Active Since a Young Age / Other Impacts on Identity*, all six participants had been immersed in physical activity since a young age. This finding would concur with previous suggestions that childhood physical activity is crucial for sustained physical activity engagement through adulthood (Robertson-Wilson, Baker, Derbyshire, & Côté, 2003). With the identity formation that takes place during adolescence (Erikson, 1950, 1968), perhaps the participants' physically active lifestyles came to be engrained as important components

of their individual identities. Though Robertson-Wilson et al. (2003) found parents to play a critical role in shaping children's activity levels, participants in this study did not speak to a high level of parental involvement in their early physical activity experiences. However, this study's interview protocol did not probe deeply into participants' childhood experiences.

Another narrative element of participants' physical activity experiences was captured in the emergent theme of *Barriers, Struggles, and Stressors Within Physical Activity*. Previous research has suggested that the experience of trauma or extreme adversity through physical activity could stimulate positive self-change and/or a sense of personal growth (McDonough et al., 2011; Sabiston et al., 2007; Sherrill, 1997; Tamminen et al., 2013; Udry et al., 1997; Wadey et al., 2013). Tamminen et al. (2013) found that athletes who experienced a sense of personal growth through extreme adversity tended to search for and find meaning related to the role of sport in their lives. While only Participant 6's experiences (with a severe concussion and forced sport termination) could be categorized as extreme adversity, several participants spoke to reflecting on the role of sport in their lives. However, participants' reflective efforts were not necessarily prompted by the experience of stress or extreme adversity. Rather, participants' active reflection on the role of physical activity in their lives seemed to be prompted by challenges found within the contextual transitions occurring in their lives.

O'Connor and Wolfe (1991) found personal growth for middle-aged adults to be prompted by the experience of challenging internal and external changes, a questioning of self, and persistent efforts to resolve that questioning. Similarly, Bauer and McAdams (2004a) found that adults experienced a sense of growth through mid-life transitions

when they reflected on and learned from meaningful events and relationships. Self-reflection was also a central component of the Kashdan et al. (2004) model of the growth process; which included cognitive and behavioral exploration of new, challenging, and intrinsically motivated activities. The emergent theme of *Managing Self and Situation: Sustained Activity Through Transitions* echoes these processes, and suggests that these conditions and reflective efforts can be present within the transitions of emerging adulthood. This finding makes a unique contribution to the literature as these models (Bauer & McAdams, 2004a; Kashdan et al., 2004; O'Connor & Wolfe, 1991) have yet to receive support specifically within the experiential domain of physical activity, or within the distinct developmental period of emerging adulthood.

<div align="center">Sub-Theme #2: Social Connection, Support, and Energy</div>

Broadly speaking, the sub-theme of *Social Connection, Support, and Energy* appears closely tied to self-determination theory's basic psychological need for relatedness (Deci & Ryan, 2000). Positive relationships with others has been indentified as a core component of psychological well-being (Ryan, Huta, & Deci, 2008; Ryff, 1989b). Further, as previous authors have suggested a positive association between psychological need satisfaction and more enjoyable, persistent sport (Bartholomew et al., 2011) and exercise (Edmunds et al., 2008; Sebire et al., 2009) behavior, participants' sense of relatedness within their physical activity may have contributed to their sustained adherence and positive experiences.

The emergent themes of *Energy in Common Goals and Collective Striving*, *Practical and Emotional Support*, and *Social Connection and Shared Experience* can all be supported by previous authors that have found elements of social support and shared

experience to be meaningful components of individuals' physical activity experiences. Crust et al. (2011) found that long distance walkers experienced a sense of camaraderie, shared experience, and social well-being during their backcountry excursions. Social growth (e.g., new perspectives on available social support, strengthened relationships) has been observed in athletes' experiencing injury and stress (Tamminen et al., 2013; Wadey et al., 2013), as well as breast cancer survivors' experiences with physical activity programs (McDonough et al., 2011; Sabiston et al., 2007). Research with adolescent populations has also suggested that social skills and relationships can be fostered through recreational sports and physical activity (Dworkin et al., 2003; Gould & Carson, 2010; Gould et al., 2012). The emergent theme of *Reciprocal Inspiration and Sharing Activity's Impacts* also echoes trends from the literature. For example, Bauer and McAdams (2000) classified personal growth as including a component of caring for and connecting with others; and Tamminen et al. (2013) observed that athletes who experienced personal growth tended to develop a desire to help others.

<div align="center">Sub-Theme #3: Positive Insights and Sensations</div>

Within the emergent theme of *Positive Physical or Emotional Sensations with Activity*, several participants described experiences that hinted at the attainment of a flow state (Csikszentmihalyi, 1990). With a suggested link between intrinsic motivation/psychological need satisfaction and the experience of flow (Kowal & Fortier, 1999), it could be possible that participants' physical activity was intrinsically motivated. Previous research has suggested that intrinsic motivation can be facilitative of long-term adherence to and enjoyment of physical activity (Vansteenkiste, et al., 2004). As such, participants' presumably intrinsic motives may have contributed to their sustained

physical activity behavior during emerging adulthood. The flow experiences and optimal challenges that participants spoke to within this emergent theme may have also contributed to the meaningful forms of self-change that they spoke to in their interviews (see Table 3; Appendix F). This potential contribution would concur with Kashdan and colleagues' (2004) assertions that experiences of optimal challenge "result in an inevitable sense of personal growth from the 'stretching' of skills and confidence in using those skills" (p. 292).

Participants' development of new perspectives and experiences of factual learning through physical activity contributed to the emergent theme, *Developing New Knowledge and Perspectives*. Several authors have included aspects of developing new understanding or perspectives in their empirical conceptualizations of personal growth (Bauer & McAdams, 2004a; Braithwaite & Law, 1985; Levitt et al., 2005; O'Connor & Wolfe, 1991; Tedeschi & Calhoun, 2004). Authors have also found that the development of new knowledge or perspectives can be stimulated through physical activity (Crust et al., 2011; Sabiston et al., 2007; Tamminen et al., 2013; Udry et al., 1997).

<u>Higher-Order Impact of Physical Activity During Emerging Adulthood</u>

The higher-order theme that emerged to transcend and link all six interviews was identified as *An Outlet for Continued Goal-Striving and Self-Change*. This theme was drawn from a sense of process and ongoing pursuit of meaningful goals that emerged from the interviews; examples of which included increasingly authentic self-expression through crossfit (Participant 4), continued pursuit of one's athletic potential (Participants 1, 2 and 6), and aligning physical activity with effortful career development and pursuit of one's ideal future-self (Participants 3 and 5).

Previous authors have contended that goal-driven pursuits and a sense of continual striving can be important precursors of personal growth (Braithwaite & Law, 1985; Levitt et al., 2005; Sheldon et al., 2002). This higher-order theme could extend the legitimacy of those contentions into the arena of sport, exercise, and physical activity. This higher-order theme also concurs with the emphasis that Ryff (1989b) placed on continual self-expansion within her conceptualization of personal growth. Ultimately, the sense of process in this higher-order theme hints at a fulfilling engagement in continued striving for the attainment of one's fullest potential (i.e., the experience of eudaimonic well-being; Ryan & Deci, 2001; Ryan et al., 2008; Ryff & Singer, 2008; Waterman, 1993). Ryan (1995), Maslow (1954), and Rogers (1963) suggested that humans have an intrinsic desire for this striving, often referred to as "natural propensities for growth" or innate "actualizing tendencies." For participants in this study, physical activity was an outlet for the expression of these actualizing tendencies. Physical activity was also a medium through which participants expressed their emotions and talents. The specific word *outlet* works well to summarize these sentiments in this higher-order theme, having been defined as "something that people use to express their emotions or talents," and "a place or opening through which something is let out" ("Outlet," n.d.; see Appendix G).

The phraseology of this higher-order theme also captures participants' active and deliberate efforts to integrate their physical activity experiences with broader (often career-related) goals and pursuits in their lives. These efforts echo Deci and Ryan's (1985) concept of organismic integration, a developmental process in which new internal and external experiences are added to and aligned (i.e., integrated) with one's preexisting mental structures – in turn yielding more refined and elaborate structures. These efforts

are also supported by several other authors (Bauer & McAdams, 2000; Kashdan et al., 2004; O'Connor & Wolfe, 1991), all of whom conceptualized personal growth as including an active integration of one's characteristics, experiences, and actions.

Bauer and McAdams (2010) suggested that, "at some point in the period of emerging adulthood (our data say after the college years, at least for those who go to college), individuals seem to be on their own when it comes to cultivating eudaimonic growth" (p. 768) as their social environment places less emphasis on learning and development than it had through the years of their primary, secondary, and post-secondary education. Results from the present study of post-college age emerging adults present a marked contrast to this sentiment. Sustained physically active lifestyles have offered participants in this study exactly what Bauer and McAdams (2010) saw to be absent for so many emerging adults: a venue through which to pursue a sense of eudaimonic well-being and strive toward reaching their full potential. Through their continued physical activity, participants had their comfort zones stretched (emergent theme of *Barriers, Struggles, and Stressors Within Physical Activity*), identified and worked towards meaningful goals and self-change (emergent theme of *Managing Self and Situation: Sustained Activity Through Transitions*; higher-order theme of *An Outlet for Continued Goal-Striving and Self-Change*), sought out energizing social climates (sub-theme of *Social Connection, Support, and Energy*), learned new factual information and developed new perspectives (emergent theme of *Developing New Knowledge and Perspectives*), and actively integrated their physical activity experiences with broader goals and personal development in other domains of their lives (emergent theme of

Reciprocal Inspiration and Sharing Activity's Impacts; higher-order theme of *An Outlet for Continued Goal-Striving and Self-Change*).

<u>Summary and Transitional Remarks</u>

Taken together, the rich contextual details presented in this study fill a void within the existing emerging adulthood research. To this point, no research has been conducted to specifically explore how physical activity fits into and is experienced within the transition to adulthood. This study has provided some preliminary insight in that physical activity can be enjoyed and valued through this transitional period even though sustained adherence is often challenging. Participants in this study experienced positive social connections and support through physical activity, as well as positive insights (factual learning, self-awareness) and sensations (kinesthetic enjoyment, focus, accomplishment), all while actively maneuvering barriers (finances, time, fatigue, injury, etc.) and contextual transitions (e.g., new responsibilities, committed relationships, residential change).

Previous research suggesting physical activity as a potential medium for personal growth has drawn from adult (Crust et al., 2011; Morgan et al., 2010), adolescent (e.g., Gould et al., 2012), and elite athlete (Tamminen et al., 2013; Udry et al., 1997) samples. Despite its decidedly open-ended and indirect approach, this study makes another unique contribution in that it is the first to suggest physical activity as a potential pathway to experiential components of personal growth specifically for emerging adults that do not fall within an elite athlete population. Crust et al. (2011) found that multi-day backcountry hikes facilitated experiences of personal growth, but indicated skepticism that less immersive, daily physical activity experiences could produce the same benefits.

This study's higher-order theme and the contextual data from which it was drawn suggest that a sense of self-expansion and/or continued eudaimonic striving can arise from cumulative, short-duration (relative to multi-day hikes) bouts of physical activity.

To be clear, the results of this study do not claim that participants experienced a sense of personal growth through their physical activity experiences, only that their experiences echoed components of this ambiguous, subjective construct (outlined in table format in Appendix B). Insights gleaned from this research may, however, influence applied practices aimed at facilitating growthful, physically active transitions for emerging adults.

<u>Suggestions for Applied Practice</u>

The literature points to declining physical activity and perceived personal growth as key issues for applied practitioners to address with emerging adult populations. Before proceeding, it may be worth noting that a variety of professionals may be well-positioned to conduct this work. First, given the high level of mobility and residential change emerging adults tend to display (Arnett, 2000; Arnett & Fishel, 2013), applied practitioners might do well to help emerging adults plan and prepare for growthful, physically active transitions before they leave institutions of secondary, vocational, or post-secondary learning. Literature on athletic career transitions has suggested that pre-transition preparation and planning can help minimize emotional disruption during the transition (Stambulova et al., 2009). Ideal practitioners for this approach would include academic and career counselors, as well as sport and exercise psychology consultants or psychologists working in high school or college settings. Second, with emerging adults' entrance into the workforce and focus on career development (Arnett, 2004; Arnett &

Fishel, 2013), corporate wellness professionals might also be well-positioned to help emerging adults sustain physically active lifestyles, as well as an ongoing sense of well-being. Third, personal trainers and professionals in public health or other community organizations might also be able to contribute to these applied efforts with emerging adults. However, as emerging adults could struggle to locate affordable fitness centers or community recreation opportunities (Calfas et al., 2000), these professionals may need to exert greater outreach efforts to connect with this population. Having identified these professionals, the following are suggestions for applied practice.

Ryan and Deci (2007) asserted that sport and exercise motives may not be readily apparent to athletes and exercisers. Further, Shulman et al. (2006) suggested that emerging adults can become distracted from reflecting on inner values and meaningful long-term goals by their impetus to act, progress, and assert their independence. The present higher-order theme suggests positive experiential impacts of physical activity to be dependent on participants' recognition of their most meaningful goals, and/or their integration of physical activity with broader life goals. As such, practitioners might guide emerging adults to take a step back from the pressures and pulls they might feel (e.g., societal, parental) to ponder their true underlying motives, and what they most genuinely want to pursue within this exploratory and mobile time in their lives. A humanistic approach (Rogers, 1951, 1961) may be ideally suited here. Reflective writing (Mankad, Gordon, & Wallman, 2009) or imagined future self exercises (Murru & Martin Ginis, 2010) could also be used in this capacity. Group counseling or focus-group discussions (Pain & Harwood, 2009; Rejeski, Brawley, Ambrosius, Brubaker, Focht, Foy, & Fox, 2003) could provide additional benefits by connecting emerging adults (who can

sometimes feel like "in-betweeners" within their communities; Arnett, 2004) with other age-group peers.

It may also be the case that emerging adults have a strong self-awareness of their long-term goals and values, but simply have not made the connection as to how regular physical activity ties into (or could tie into) their longer term aspirations. The results of this study suggest that this integration and connectivity may be crucial determinants for sustained physical activity during emerging adulthood. Thus, applied practice could seek to facilitate emerging adults' awareness of what they take from their (perhaps mundane) everyday physical activity, and further, how the impacts of that activity transfer to other aspects of life. Ravizza (2010) suggested journaling, psychological questionnaires, and group discussion as effective interventions for the development of self-awareness. Further, authors have suggested that active integration of one's experiences is best facilitated by psychological need satisfaction and intrinsically motivated behavior (Kasser, 2002; Ryan, 1995). Thus, interventions could be designed to offer emerging adults opportunities for physical activity within an autonomy-supportive climate. Such interventions could be modeled after, for instance, the framework used by Edmunds et al. (2008).

In this study, the sub-theme of *Social Connection, Support, and Energy* underscored the value that participants placed on positive relationships with others through their ongoing physical activity experiences. As such, applied practitioners could seek to promote social connection by providing opportunities for emerging adults to come together and collectively develop and strive towards common physical activity goals (Widmeyer & Ducharme, 1997). Fitness centers, sport clubs, and

community/corporate recreation initiatives could do so by developing programs specifically for emerging adults to connect through shared exercise, recreational outings, or sport-specific training programs. With the sub-theme of *Developing New Knowledge and Perspectives* in mind, personal trainers, corporate wellness professionals, or other sport/exercise professionals could also encourage emerging adult clients to develop factual knowledge by guiding them to identify an interesting aspect of their physical activity that they would like to learn more about (e.g., physiological, psychological, or nutritional aspects) and encouraging independent study. The provision of some initial materials (popular magazine articles, video clips, examples in the media, etc.) could potentially spark this independent study.

Physical activity is by no means the only medium through which one might experience a sense of personal growth. Literature summarized in Chapter 2 and Appendix C suggested the following experiential factors that tend to facilitate a sense of growth: challenge or adversity, structured activity, transitions, autonomy supportive context or intrinsic motivation, and self-reflection. These experiential factors could undoubtedly be experienced in any number of life domains and pursuits. Whether in physical activity or other life pursuits, emerging adults might experience more growthful transitions to adulthood by developing an awareness of these experiences in their lives. Physical activity served as the specific outlet for participants' goal-striving and self-change in this study, but a number of other outlets for goal-striving and self-change could present themselves to emerging adults – if they are only able and willing to see them as such. Carefully generalizing from participants' authentic enjoyment of physical activity, as well as the literature in Appendix C, a broader suggestion for the facilitation of growthful

experiences and transitions could be simply stated: Do what you love; love and learn from what you do.

<div align="center">Limitations</div>

Given this study's contributions, it is not without its limitations. This study used a homogenous, purposefully selected sample. Participation in this study was completely voluntary, and so, individuals that ultimately responded to recruitment efforts may have done so with more interest and investment in the topic of study than individuals that received but declined invitations to participate. Additionally, as a result of the homogenous sample and idiographic study design, results are not likely to describe the population at large. Further, as this study was not designed to produce broad generalizations, the limited amount of demographic data collected (age and education, as well as mode, duration, and intensity of physical activity participation) would further complicate the issue of generalizing results. Cultural and socioeconomic descriptors were not collected. Ultimately, richer details and insights are likely to be gleaned from the inclusion of a deliberately multicultural sample.

Interviews drew from participants' current and retrospective physical activity experiences. Participants' retrospective accounts may have been influenced by the passage of time or perhaps, through a social desirability to produce useful or acceptable data. Though Participant 4 shared an example of a third-person perspective that could speak to observing her self-change through physical activity, this study did not incorporate objective third-person triangulation of data to verify participants' experiences (the approach used by Wadey et al., 2013).

Lastly, the primary researcher was well versed in self-determination theory and empirical conceptualizations of personal growth prior to conducting the interviews. This theoretical knowledge may have biased the researcher's interviews or analyses. At the time of the study, the researcher was a highly active emerging adult, so his own personal experiences may have also influenced his interviews and analyses. Efforts were made to bracket preconceived notions, personal experiences, and theoretical knowledge so as to adhere closely to participants' language and lived experiences. Bracketing was done primarily through writing reflective memos, avoiding the use of theory-based language within the interviews and analyses, drawing heavily upon in-vivo codes (i.e., codes that incorporated participants' verbatim language), and through member-checking to verify the accuracy of conclusions drawn. No participants chose to make any changes to the interview transcripts or conclusions. That being said, it is still possible that the researcher was not able to bracket 100% of his pre-study theoretical knowledge or personal experience.

<u>Concluding Remarks and Recommendations for Future Research</u>

Ultimately, for participants in this study, it appeared that physical activity provided a venue for eudaimonic striving and well-being as a result of their ability to (a) recognize meaningful, positive impacts of their physical activity experiences that extended to influence other areas of their lives, and/or (b) identify long-term intrinsic goals and integrate their physical activity experiences into their movement toward those goals. Deliberate reflective efforts and self-awareness seemed to be important precursors to developing these insights. Future research might focus on exploring the role of self-

reflection and self-awareness in facilitating positive, growthful physical activity experiences.

This study did not distinguish participants' time spent with occupational physical activity from time spent with deliberate sport or exercise. Thus, future research might take more care in categorizing participants' frequencies, intensities, durations, and modes of physical activity. This avenue of research could potentially illuminate specific patterns of physical activity engagement that tend to spur a sense of growth. This study also assessed participants' relationship statuses indirectly; only by attending to if/how participants spoke about their relationships during the interviews. Future research could also take greater care to assess emerging adults' relationship statuses more directly. This approach could generate new information about the influence of relationship status on physical activity during this developmental period, particularly with the emphasis that emerging adults tend to put on developing long-term romantic relationships (Arnett, 2000). Additionally, this study did not probe deeply into participants' experiences with physical activity during childhood or adolescence. Following in the footsteps of Robertson-Wilson et al. (2003), future research might consider exploring the role of early physical activity experiences as they relate to future physical activity involvement.

As mentioned previously, this study does not assert that participants experienced a sense of personal growth through their physical activity, only that their experiences aligned with suggested components of the personal growth construct. It appears that future research is still needed to develop a more unified, internally and externally valid conceptualization of this construct. Only when that objective has been achieved can the field more specifically examine the experience of personal growth through sport,

exercise, and recreational physical activity. However, this line of research should not be limited exclusively to personal growth through physical activity. Rather, future studies might also explore other ways in which personal growth can occur within the developmental period of emerging adulthood.

While the present results provide some preliminary insight, the study of sport and exercise within the transitory developmental period of emerging adulthood appears to be in its infancy, and ripe with opportunities for further research. Future studies might explore how other specific transitions (e.g., moving back home, marriage, childbirth, beginning graduate school, and/or entering the workforce) influence emerging adults' participation in and experience of physical activity. Research on athletic career transitions offers limited insight to these ends, but has focused on collegiate and elite athletes while neglecting the transitional experiences of more "average" exercisers and recreational sport participants. Further, as arguments have been made that the inherent nature of the college experience might readily facilitate the experience of personal growth (Robitschek, 1998), future research might explore physical activity as a medium for growthful transitions in the lives of emerging adults that have not attended college.

To conclude, this study has found that the maintenance of a physically active lifestyle through the transitions of emerging adulthood is very possible; and further, that continued physical activity pursuits can be deeply meaningful and impactful within this developmental period. Self-awareness and deliberate reflection appeared to facilitate such positive experiences for participants in this study. Scholars and practitioners alike are encouraged to continue facilitating and exploring the role of this reflective awareness

within emerging adults' physical activity experiences. In this light, Seligman and Csikszentmihalyi's (2000) words resound:

> Perhaps, however, people are blinded to the survival value of positive emotions precisely because they are so important. Like the fish who is unaware of the water in which it swims, people take for granted a certain amount of hope, love, enjoyment, and trust because these are the very conditions that allow them to go on living. These conditions are fundamental to existence, and if they are present, any number of objective obstacles can be faced with equanimity and even joy. (p. 13)

The author of this study interviewed emerging adults that are both highly physically active and vividly empowered with a sense of eudaimonic well-being through their continued physical activity. In light of public health findings that physical activity and perceived well-being tend to decline during emerging adulthood, the results of this study encourage promoting the survival value of positive emotions and meaningful goal-striving through physical activity for emerging adults.

Chapter 6

SUMMARY, CONCLSUIONS, AND RECOMMENDATIONS

Summary

This study was conducted using Interpretative Phenomenological Analysis (IPA) to inductively explore the experiential impact of physical activity within the transition to adulthood. Six highly physically active (M_{PA} = 19 hrs/wk; range = 7-27 hrs/wk) emerging adults (3 male, 3 female; M_{age} = 25.5 years, range = 23-28) participated in semi-structured interviews that were audio-recorded. Interviews lasted, on average, 68 min (range = 44-115 min) and were transcribed verbatim (yielding 97 single-spaced pages of text). Analyses were conducted from an IPA framework (Smith et al., 2009), ultimately generating 561 initial codes, 12 emergent themes, 3 overlapping sub-themes, and 1 overall higher-order theme that transcended and linked all 6 interviews.

Sub-theme #1 (Context of Life and Physical Activity) generally described the stories that participants shared to explain their physical activity experiences, as well as the contextual background they offered about this time in their lives. The emergent themes *Active Since a Young Age / Other Impacts on Identity*; *Managing Self and Situation: Sustained Activity Through Transitions*; and *Barriers, Struggles, and Stressors within Physical Activity* show participants to have actively maneuvered barriers and life-transitions to sustain physically active lifestyles. Their active lifestyles generally began at young ages, and self-reflection appeared to play a key role in maintaining those active lifestyles through transitions and contextual changes. Contextual information surrounding this point in their lives was summarized in the emergent themes of *Variations in Daily*

Life and Work; *Life is Currently Focused on a Few Key Tasks*; and *Aspects of Exploration, Mobility, and Emerging Adulthood*.

Sub-Theme #2 (*Social Connection, Support, and Energy*) described the roles that other people have played within the participants' physical activity experiences. The emergent themes of *Social Connection and Shared Experience* and *Energy in Common Goals and Collective Striving* captured the general sense of interpersonal relationships that participants found within their physical activity experiences. Several participants remarked on the energy they found in striving towards common goals with peers in their respective activities. Reflected in the emergent theme of *Practical and Emotional Support*, participants shared ways in which others' support facilitated their involvement in their primary forms of physical activity. They also spoke to ways in which they tried to facilitate others' physical activity involvement in the emergent theme, *Reciprocal Inspiration and Sharing Activity's Impacts*.

Sub-theme #3 (*Positive Insights and Sensations*) was comprised of two emergent themes. *Developing New Knowledge and Perspectives* reflected ways in which participants' continued physical activity involvement guided them towards factual learning and generating new perspectives. *Positive Physical or Emotional Sensations with Activity* summarized the sense of kinesthetic enjoyment that participants found within their primary forms of activity, as well as positive emotions like a sense of accomplishment or a motivated determination that could transfer into other aspects of life.

The higher-order theme that emerged to link all six interviews and describe the experiential impact of physical activity within emerging adulthood was labeled as *An*

Outlet for Continued Goal-Striving and Self-Change. Participants' interviews all reflected a sense of process as their ongoing physical activity participation enabled them to continue striving towards meaningful goals. Some participants' goals included the development of their athletic potentials. Other participants' goals included broader forms of self-change; for instance, an increasingly authentic self-expression. Participants also spoke to ways in which they integrated their physical activity participation with other, often career-related, aspects of their lives.

The results of this study make a novel contribution to the literature by contextually describing how emerging adults engage in and think about sport, exercise, and recreational physical activity within their transitions to adulthood. The higher-order theme also presents a fascinating contradiction to previous research finding post-college age emerging adults to lack opportunities for eudaimonic striving and well-being (Bauer & McAdams, 2010). Physical activity appears to promote eudaimonic striving as a result of participants' ability to (a) recognize meaningful impacts of their physical activity experiences that extended to influence other areas of their lives, and/or (b) integrate their physical activity experiences with their pursuit of long-term, intrinsic life aspirations. Self-awareness and self-reflection appear to be crucial for the development of these insights. Physical activity is, however, only one of many potential outlets for goal-striving and self-change that might be present during emerging adulthood. Thus, a cautious generalization from this study's findings is, very simply stated and broadly speaking, "do what you love; love and learn from what you do."

<div align="center">Conclusions</div>

The results of this study yielded the following conclusions:

1. Physical activity may offer emerging adults a venue for eudaimonic striving and well-being,

2. Sustaining an active lifestyle during emerging adulthood may be facilitated by recognizing how positive impacts of physical activity experiences extend to influence other aspects of life, and how they can be integrated with long-term life aspirations, and

3. Deliberate reflective efforts and self-awareness may be important precursors to developing the insights necessary to sustain a physically active lifestyle through the transitions of emerging adulthood.

<div align="center">Recommendations</div>

The following recommendations are made for future studies. Future research might:

1. Explore how specific transitions (marriage, childbirth, beginning graduate school, etc.) influence emerging adults' participation in and experience of physical activity,

2. Pursue a more unified conceptualization of personal growth,

3. Explore the roles of self-reflection and self-awareness more closely as they relate to facilitating positive, growthful physical activity experiences,

4. Inquire about other mediums through which emerging adults can experience a sense of personal growth or self-change,

5. Examine physical activity experiences during childhood and adolescence and if/how they relate to sustained, growthful physical activity participation during emerging adulthood, and

6. More closely explore physical activity as a medium for growthful transitions in the lives of emerging adults that have not attended college.

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PHILOSOPHICAL APPROACHES TO QUALITATIVE RESEARCH AND
PERSONAL THOUGHTS

The purpose of this appendix is to unpack the philosophical assumptions that underpin this study in greater detail. To briefly define some of the jargon below, *ontology* is a branch of philosophy concerned with questions surrounding reality like, for instance, "what exists?" or "what is real?" (Hatch, 2002; Sullivan, 2010). *Epistemology* on the other hand entails philosophical questions about knowledge, truth, and beliefs; for example, "what is truth?" or "how is knowledge distinguished from belief?" (Hatch, 2002; Sullivan, 2010).

Positivist Research Paradigm

Researchers subscribing to the positivist paradigm hold a *realist* ontological perspective. That is, they see reality to exist apart from individuals' perceptions of it (Hatch, 2002). In other words, realists believe that things exist in the world (i.e., "entities;" be they tangible, like a tree, or intangible, like personality), and that individuals' perceptions (i.e., "representations") of them can be either accurate or inaccurate (Sullivan, 2010). A *positivist* epistemology maintains that there are universal laws explaining how the world works, and that these laws can be discovered only through direct observation and purely objective research (Sullivan, 2010). Further, it is assumed that reality consists of components that can be broken apart, examined individually, and reconstructed (Hatch, 2002). Here, the researcher exerts no influence on what is being studied and presumes that, as Willig (2008) puts it, "there is a straightforward relationship between the world (objects, events, phenomena) and our perception, and understanding, of it" (p. 2).

The methodological assumptions that coincide with this approach to qualitative research are as follows: (a) participants can and will share significant facts from experience, (b) the researcher is wholly separate and distinct from participants and their experiences, (c) the researcher represents participants' experiences as an external authority, and (d) that the subsequent report on the data offers participants a useful analysis of what they've shared (Charmaz, 2002). These methods can be seen, for example, in the work of grounded theory researcher Barney Glaser. Critics of this approach see it as being somewhat removed, impersonal, and neglectful of the true meanings participants ascribe to their experiences (Charmaz, 2000). A snippet of Glaser's heated defense is included below (Glaser, 2002):

> [Charmaz]'s quest is not to take the data as it comes, but to be sure it is accurate, so she gets to mutual interpretation as the answer. When I say that some data is interpreted, I mean the participant not only tells what is going on, but tells the researcher how to view it correctly—his/her way. I do not mean that they are mutually built up interpretations. Adding his of her interpretations would be an unwarranted intrusion of the researcher (pp. 2-3) … Using constructivism as a justification in reverse Charmaz engages in a recidivism which makes the researcher's interactive impact

on the data more important than the participant's. Constructionism is used to legitimate forcing. It is like saying that if the researcher is going to be part of constructing the data, then he/she may as well construct it his way (p. 5).

<u>Personal thoughts and disputes</u>

Dispute of direct observation: A positivist framework does not seem appropriate for the study of the experiential impacts of physical activity. Physiological impacts (i.e., "responses" or "adaptations") to physical activity can be directly measured, but we cannot directly observe perceived impacts. Instead, we must rely on participants' accounts of their experiences and the sense they've made of them. Even with quantitative surveys measuring narrowly defined constructs, participants would still be reporting their perceptions.

Dispute of external reality and componential approach: Personally speaking, it seems as though our perceptions of any given experience cannot be isolated, broken down, and accurately represented without considering the sum of our previous experiences to that point. To try for an example, my experience (as a track athlete) of any given race cannot be fully understood without considering my previous races and my perceptions of them, as well as the context (and my perception of it also) surrounding the race in question. Racing probably does not mean the same thing to me as it does to a young girl participating in her first race ever, nor is it likely to be perceived in the same way. She, in all likelihood, has different ideas about racing and a different contextual perspective. As such, yes, perhaps there is a "reality" of racing in that races all over the world are run over specifically measured distances and according to the same standardized rules; but individual conceptualization of the experience of that "reality" seems (to me) to be so heavily influenced by subjective perceptions that any "external or independent reality" would seem of questionable relevance.

Dispute of methodology: Can we experimentally induce a specific experiential impact of physical activity? No, we could try, but full control is not possible. It would be impossible to fully control or manipulate individuals' perceptions. I believe that interventions can stimulate certain impacts, but even if a given experiential impact was successfully imparted, it still cannot be directly observed apart from one's perceptions of it.

<div align="center">Social Constructionist Research Paradigm</div>

Drawing from previous work, Patton (2002) suggests "that the human world is different from the natural, physical world and therefore must be studied differently" (p. 96). Patton continues, "Because human beings have evolved the capacity to interpret and *construct* reality – indeed, they cannot do otherwise – the world of human perception is not real in an absolute sense, as the sun is real, but is 'made up' and shaped by cultural and linguistic constructs" (p. 96, emphasis original). Further, Patton cites what has been termed Thomas' Theorem which states that "what is defined or perceived by people as real is real in its consequences" (Thomas & Thomas, 1928, p. 572).

Thus, on the ends of the ontological and epistemological continuums (see figures 3 & 4 in Weed, 2009) opposite of the positivist approach lies constructivist qualitative research. Prominently adopted by Charmaz (e.g., 2000, 2002), this approach follows a *constructivist* ontology: absolute, universal reality cannot be known, but individual perceptions or "constructions" of reality can (Hatch, 2002). Multiple realities are said to exist because any one person's perceptions of reality are constructed based on their experiences as well as the socio-cultural lenses through which they see and live those experiences (Hatch, 2002). Researchers subscribing to this paradigm also gravitate towards an *interpretivist* epistemology: direct, objective knowledge of a phenomenon is thought impossible (Hatch, 2002); instead, knowledge is gained indirectly through interpretation of individuals' accounts of the world (Weed, 2009). Constructivists assume that people choose how to talk about things, and further, that how they talk about them can be influenced by the interview context (who's asking the questions, what questions are being asked, how the participant wants to be perceived, etc.; Hugh-Jones, 2010). So given the interactive nature of interviewing (Hugh-Jones, 2010), meanings and perspectives are shared between researcher and participant ultimately yielding data that are said to be co-constructed (Charmaz, 2002). As above, Glaser (2002) adamantly criticizes constructivism and its premise of co-construction, arguing that it "is an epistemological bias" (p. 3).

A compelling argument presented by Hughes (1990; cited in Sullivan, 2010) highlights the importance of considering social meaning. To paraphrase (albeit, less eloquently), studying cars at traffic lights from a positivist perspective would yield the conclusion that red lights stop cars. However, this is merely a description. Red lights do not stop cars (there is no force field!), but rather, the socially constructed meaning ascribed to them guides the driver to stop the car by pushing down on the brake. Crotty (1998, p. 43) offers a similar argument for a social constructivist philosophy of ontological relativity:

> What the 'commonsense' view commends to us is that the tree standing before us is a tree. It has all the meaning we ascribe to a tree. It would be a tree, with that same meaning, whether anyone knew of its existence or not. We need to remind ourselves here that it is human beings who have constructed it as a tree, given it the name, and attributed to it the associations we make with trees. It may help if we recall the extent to which those associations differ even within the same overall culture. 'Tree' is likely to bear quite different connotations in a logging town, an artists' settlement and a treeless slum.

Personal thoughts and disputes

Taking a second to apply the above examples to sport/exercise seems to make sense. If I were to ask the following people to express what "sport" means to them, I would likely receive different, socially constructed answers: Tim Tebow, Kobe Bryant, 5 year old Jimmy, 16 year old Jenny, Pat Summit, Bob Knight, a U16 soccer player in an elite development program, and so on. Similarly "exercise" could mean different things to a white-collar CEO, a farmer whose day is filled with demanding physical labor, a middle-aged cardiac rehab patient, an adolescent struggling his with weight, and a senior citizen

in a retirement home. Conversely, if I ask those people to define "exercise," they all might (or might not) say something to the extent "planned, structured, and repetitive, bodily movement for the purpose of improving physical fitness." Thus, there seems a need to distinguish definitions and meanings (i.e., personal significance). To illustrate, one might define their physical activity as "going to the gym 4 times per week at 75 minutes per session," even though the expression of this definition can be socially constructed (via the types of words, emotions, and energy used to describe it). However, getting to the personal meaning and significance of this definition would seem to require some deeper exploration.

Post-Positivist Research Paradigm

The post-positivist paradigm, prominently displayed in the works of Anselm Strauss (e.g., Strauss & Corbin, 1990), bridges the two extremes outlined above by following realist ontology and interpretivist epistemology (Weed, 2009). In a somewhat contradictory fashion, "Post-positivists recognise that some aspects of the social world cannot be directly measured (and thus embrace some interpretivist assumptions), although they still believe in retaining an objective approach that is free from bias (thus contradicting some interpretivist assumptions)" (Weed, 2009, p. 508). Here it is assumed that reality exists, but can never be fully known; only approximated (Hatch, 2002). The researcher acts as an instrument of data collection, and strives to remain as objective as possible to ensure that observations are grounded in the data (Hatch, 2002). Techniques to aid in objectivity include constant comparison of categorized codes and reflection on one's potential biases (Hatch, 2002; Sullivan, 2010).

Personal thoughts and disputes

I'm still not sure that I buy the idea that a perceived impact of physical activity could be explained as an external "reality" (as above). Perhaps this means I have taken a critical realist perspective. However, I buy the idea that "realities" of physiological impacts exist: we can directly observe physiological (even chemical and neural) responses and adaptations, and we can directly observe factors or components that influence them (like physical activity or inactivity, nutrition, genetics, and so on). All that being said, I do find myself nodding in agreement with the post-positivist epistemology (though I wonder how much of this agreement stems from the fact that the "rigorously disciplined" methodology simply makes sense to me based on my largely positivistic education). I do, however, value participant perceptions and perspectives, so much so that I might be led to say that they constitute the closest thing to the reality of an experiential impact (if that exists) that can be observed. I believe that in an interview (or even in the construction of a survey) I am a data collection instrument. I do not think I can be wholly separate and objective in this process, but I do think I can strive to be as objective as possible.

The Philosophy of Interpretative Phenomenological Analysis

Within IPA specifically, three further branches of philosophy are particularly important, and align with these post-positivist assumptions: phenomenology,

hermeneutics, and idiography. Phenomenology is the study of experience, particularly experiences of personal significance (Smith et al., 2009). Husserl (1927) emphasized studying experiences as they present themselves to the individual, and outlined the importance of putting aside (i.e., "bracketing") what the researcher thinks is known about the phenomenon in question (Smith et al., 2009; Willig, 2008). Heidegger (1962) furthered this and called for contextually situating a studied experience with sensitivity to cultural factors in its occurrence.

Drawing from hermeneutics, the theory and practice of interpretation, IPA researchers try to enter participants' subjective worlds, but acknowledge that this is never fully possible. Thus, IPA reflects a double hermeneutic: researchers attempt to make sense of how participants have made sense of their experiences (Smith, 1996, 2004). Utilizing a hermeneutic circle, IPA iteratively examines the whole by looking to its parts, and vice-versa (Smith et al., 2009). IPA research reports include numerous interview excerpts so that researchers can illustrate how their interpretations are grounded in the data (Smith et al., 2009).

In contrast to the 'nomothetic' approach of empirical science, which seeks broad theories to explain phenomena at the population level, idiography is an approach to science that focuses on 'the particular' (Smith et al., 2009). IPA research does not strive for generalized explanations, but yields cautious and contextualized descriptions about a selective group of research participants. Smith et al. (2009) clarify the rationale for this:

> We must recognize that the particular and the general are not so distinct, however. In a quote which echoes the hermeneutic circle, Goethe states: 'The particular eternally underlies the general; the general eternally has to comply with the particular' (quoted in Hermans, 1988: 785). Thus Warnock (1987) makes the important point that delving deeper into the particular also takes us closer to the universal. (p. 31)

Ultimately, a commitment to idiography will yield research results that offer a richly detailed illustration of each participant's uniquely perceived experiences, and outline the common thematic elements that transcend and link each case (Smith, 2004; Smith et al., 2009).

Final Thoughts & Defense of Personal Assumptions

In this study I will operate from a blend of assumptions that most align with the post-positivist paradigm of qualitative research and an IPA methodology. Perhaps I will be criticized for my contentedness to "sit on the middle of the fence," but I find myself agreeing with arguments presented by both Glaser and Charmaz. An externally "real" experiential impact of physical activity may well exist (though, as above, I am skeptical), but I do not think it can be accurately examined without considering the lived experiences and individually constructed meanings that contribute to it. Thus, I think I will need some of Charmaz's "descriptive capture" and willingness to subjectively enter participants' described experiences (much to Glaser's likely disdain). However, I will also carefully adhere to suggested IPA methods of qualitative analysis to avoid, to the greatest extent possible, co-constructing data with participants (thus evoking Charmaz's disdain as well!). I do not believe that I can remain entirely objective and wholly un-influential in

this research process, but my goal will be to exert as little bias as possible. My goal is to remain as a conduit through which emerging adults' descriptions can generate a rich, grounded (in the data), interpretative phenomenological analysis of the experiential impact of physical activity within this developmental period of their lives.

REVIEW OF CONTRIBUTIONS TOWARD A DEFINITION OF PERSONAL GROWTH

Competency/behavioral effectiveness:

Bauer & McAdams (2000, 2004a, 2010):	Agentic growth (mastery, achievement, influencing one's environment); acquiring personally meaningful skills
Braithwaite & Law (1985):	Sense of accomplishment
Crust et al. (2011):	Sense of overcoming challenge
Dworkin et al.(2003):	Learning to set realistic goals; learning effort & perseverance; learning to manage time; emotional self-regulation
Gould & Carson (2010):	Develop emotional regulation skills; develop cognitive skills; learning to set realistic goals; learning effort & perseverance; learning to manage time; basic sport skills
Gould et al. (2012):	Basic sport skills; learning to set realistic goals; learning effort & perseverance; learning to manage time
Levitt et al. (2005):	Increased creativity
Morgan et al. (2010):	Environmental mastery over situation-specific competence
O'Connor & Wolfe (1991):	Effortful perseverance over time
Ryff (1989b); Ryff & Singer (2008):	Improved behavioral effectiveness
Sabiston et al. (2007):	Psychological strength
Tamminen et al. (2013):	Realizing mental/physical strength
Udry et al. (1997):	Learning time management
Wadey et al. (2013):	Physical growth (improved strength/conditioning) & toughness; enhanced sport performance (due to psychological growth); observable behaviors of personal growth (health, tactical ability, behavioral coping)

Relatedness:

Bauer & McAdams (2000, 2004a, 2010):	Communal growth (one values intimacy; caring for/connecting with others); learning & understanding new perspectives of others; enhanced understanding of others; developing personally meaningful relationships; learned from meaningful relationship; contributing to society or future generations
Braithwaite & Law (1985):	Sense of lasting contribution
Dworkin et al. (2003):	Interacting with peers outside one's social circle; experience loyalty & intimacy with peers; learning teamwork; learning leadership; learning to give & take feedback; learning communication skills
Gould & Carson (2010):	Learn pro-social norms; develop ability to give feedback; develop perceived link to community; teamwork/social skills; learning leadership

Relatedness, continued

Gould et al. (2012):	Teamwork & social skills
Levitt et al. (2005):	Feeling connected to stories or events
O'Connor & Wolfe (1991):	Favoring less role-bound interactions
Sabiston et al. (2007):	Closer relationships
Tamminen et al. (2013):	Gaining a desire to help others
Wadey et al. (2013):	Social growth through social support; observable growth in exchanges with others

Autonomy:

Bauer & McAdams (2000, 2004a, 2010):	Integrative/social cognitive growth (integrates one's characteristics, experiences, actions into congruent whole)
Dworkin et al. (2003):	Taking responsibility for oneself; autonomous decision making
Gould & Carson (2010):	Taking responsibility for oneself
Levitt et al. (2005):	A sense of freedom; sense of unique identity
O'Connor & Wolfe (1991):	Increased sense of autonomy & responsibility (i.e., increasingly inner-directed)
Sherrill (1997):	Internal locus of control

Self-perceptions (beliefs, perspectives, awareness):

Bauer & McAdams (2000, 2004a, 2010):	Learning & understanding new perspectives of oneself; enhanced understanding of self
Braithwaite & Law (1985):	Inner harmony (freedom from inner conflict); self-respect (self-esteem); self-knowledge or self-insight
Crust et al. (2011):	Enhanced self-esteem; enhanced self-efficacy; enhanced global self-confidence; self-discovery
Dworkin et al. (2003):	Identity work (gaining self-knowledge)
Gould & Carson (2010):	Identity work (gaining self-knowledge)
Levitt et al. (2005):	Accessing of dormant parts of self; developing a new story about self; self-awareness; awareness of one's value; the resolution of conflict within the self; the resolution of self-criticism; strength of insight, or being in touch with oneself; understanding one's self; understanding of one's feelings
Morgan et al. (2010):	Enhanced global self-perceptions
O'Connor & Wolfe (1991):	Broadened & more integrative sense of self
Robitschek (1998):	Self-confidence
Ryff (1989b); Ryff & Singer (2008):	Improvement of self-knowledge
Sherrill (1997):	Confidence; self-esteem
Udry et al. (1997):	Personality development

Self-perceptions (beliefs, perspectives, awareness), continued

Wadey et al. (2013):	Personal growth higher-order themes of beliefs, values, priorities, outlook; sport confidence

New understanding or perspective (of concepts, events, world, etc.):

Bauer & McAdams (2000, 2004a, 2010):	New meaning of event/endeavor derived from intrinsic values; increasing one's own knowledge or that of others; learning/conceptual exploration; enhanced experience (not understanding) of psychosocial life (vitality, etc.); something learned from meaningful event
Braithwaite & Law (1985):	Wisdom (a mature understanding of life); pursuit of knowledge (always trying to find out new things about the world)
Crust et al. (2011):	Life perspective; see other life challenges as more achievable; looking at things differently than before
Dworkin et al. (2003):	Increased empathy & understanding
Levitt et al. (2005):	Meaning making of past experience; meaning-making processes in general; increased wisdom; understanding one's illness (if present); understanding one's difficulties
O'Connor & Wolfe (1991):	Paradigm shift (alteration of the fundamental structure of one's perception, assumptions, and values)
Robitschek (1998):	Understanding and accepting the process of life transitions; a sense of purpose and direction in life; perception that the elements of one's life are in balance
Sabiston et al. (2007):	Appreciation of life
Tamminen et al. (2013):	Gaining perspective on problems within broader context of life
Tedeschi & Calhoun (2004):	Active struggle with & processing of event; changing/rebuilding long-held beliefs, schemas, or goals
Udry et al. (1997):	Gaining perspective
Wadey et al. (2013):	Personal growth through knowledge; observable empathy

Openness:

Dworkin et al. (2003):	Exploration (trying new things)
Levitt et al. (2005):	Increased toleration of ambiguity; spontaneity/flexibility
O'Connor & Wolfe (1991):	Transition from rigidity to flexibility; desire to develop new skills & ideas
Ryff (1989b); Ryff & Singer (2008):	Openness to experience
Sabiston et al. (2007):	New possibilities and opportunities
Udry et al. (1997):	Developing aspects of life outside sport

Intention:

Bauer & McAdams (2000, 2004a, 2010):	Growth must be intentional; deliberate striving or desire for improvement

Intention, continued

Braithwaite & Law (1985):	Self-improvement (striving to be a better person)
Levitt et al. (2005):	An ability to direct one's self-growth; self-actualization (desire for self-fulfillment)
Robitschek (1998):	Active, intentional, engagement in the process of personal growth
Ryff (1989b); Ryff & Singer (2008):	Well-being and sense of continual expansion and development; over-emphasis on growth detrimental

Table Summary

Competency/behavioral effectiveness:	29 total contributions from 17/18 articles.
Relatedness:	25 total contributions from 12/18 articles.
Autonomy:	8 total contributions from 8/18 articles.
Self-perceptions (beliefs, perspectives, awareness):	32 total contributions from 16/18 articles.
New understanding or perspective (of concepts, events, world, etc.):	27 total contributions from 14/18 articles.
Openness:	8 total contributions from 7/18 articles.
Intention:	8 total contributions from 8/18 articles.

REVIEW OF CONDITIONS FACILITATING THE EXPEREINCE OF PERSONAL GROWTH

Challenge

Crust et al. (2011):	Challenges contribute to meaning & growth
Gould & Carson (2010):	Taught competition strategy; effort exerted
Joseph & Linley (2005):	Adverse events (in that they disrupt long-held assumptions about the world)
Kashdan et al. (2004):	Allocating attention to new, challenging endeavors; flow & optimal challenge; self-regulation & deliberate persistence
Larson (2000):	Concerted engagement in environment (with rules, challenge, complexity); temporal arc (persistence through setbacks, adjustments)
Lechner et al. (2009):	Stressful life events
Morgan et al. (2010):	Completed walking program (regardless of meting goal); modest increase in physical activity for sedentary adults
Sherrill (1997):	Mastery challenge/stretched skills
Tamminen et al. (2013):	Adversity/extreme stress (specifically, performance slumps, coach conflict, bullying, eating disorder, sexual abuse, and athletic injury)
Tedeschi & Calhoun (2004):	Extreme stress or trauma
Udry et al. (1997):	Season-ending sports injury in elite athletes
Wadey et al. (2013)	Serious sport injury (> 6 wks out from play)

Structure

Bauer & McAdams (2010):	Growth goals (regardless of implementation or attainment); balance of intellectual & socioemotional goals
Dworkin et al. (2003):	Structured extracurriculars
Gould et al. (2012):	Caring & mastery-oriented team climate
Morgan et al. (2010):	Encouragement & support
O'Connor & Wolfe (1991):	Opportunity for application of learned material; performance feedback
Sheldon et al. (2002)	Progress towards personal goals

Transition

Bauer & McAdams (2004a):	Life interpretation or planning for future
O'Connor & Wolfe (1991):	Both internal & external changes; transition that is moderate in scope

Autonomy supportive context or intrinsic motivation

Crust et al. (2011):	SDT need satisfaction appeared to contribute partially to personal growth; only those gains transferable to other life domains contributed specifically to a sense of personal growth
Dworkin et al. (2003):	Autonomous exploration of activities; perceived relatedness; experiencing support from leaders/community members
Gould & Carson (2010):	Used goal setting; coach developed positive rapport
Joseph & Linley (2005):	Post-trauma social environment supportive of SDT needs will facilitate organismic valuing process (similar to actualizing tendencies) and personal growth therein
Kashdan et al. (2004):	Cognitive & behavioral exploration of intrinsically motivated activities
Larson (2000):	Intrinsic motivation & autonomous action
O'Connor & Wolfe (1991):	Opportunity for interpersonal contact

Reflection

Bauer & McAdams (2004a):	Deliberate reflective effort
Gould & Carson (2010):	Discuss how sport skills/lessons relate to life
Joseph & Linley (2005):	Active appraisal and processing of adverse events in the search for meaning (i.e., significance)
Kashdan et al. (2004):	Introspection/self-reflection
O'Connor & Wolfe (1991):	Opportunity for reflection on personal experiences; opportunity to develop integrative personal identity
Tamminen et al. (2013):	Searching for and finding meaning (surrounding role of sport in athletes' lives)

Table Summary

Challenge:	17 total contributions from 12/19 articles.
Structure:	8 total contributions from 6/19 articles.
Transition:	3 total contributions from 2/19 articles.
Autonomy supportive context or intrinsic motivation:	10 total contributions from 7/19 articles.
Reflection:	7 total contributions from 6/19 articles.

Appendix D

RECRUITMENT SURVEY

Please fill in the blank or select the response that is most accurate for you at this time.

1. Please state your age. _____

2. Are you currently completing your education?
A. Yes, I am completing my high school diploma or equivalent degree.
B. Yes, I am completing my undergraduate degree.
C. Yes, I am completing my graduate degree.
D. No, but I am considering furthering my education in the future.
E. No, I have completed my education.

3. During a typical <u>week</u>, how many <u>minutes</u> on average do you spend doing strenuous exercise (Examples include running, football, soccer, basketball, cross country skiing, vigorous swimming, or long distance bicycling)**? Please write the appropriate amount.**

4. During a typical <u>week</u>, how many <u>minutes</u> on average do you spend doing moderate exercise (Examples include fast walking, baseball, easy bicycling, volleyball, easy swimming, alpine skiing, or dancing)**? Please write the appropriate amount.**

5. During a typical <u>week</u>, how many <u>minutes</u> on average do you spend doing mild exercise (Examples include yoga, fishing, bowling, golf, snowmobiling, or easy walking)**? Please write the appropriate amount.**

6. For how long have you maintained the average weekly activity levels (roughly) that you listed above? Please respond in months or years.

7. "Physical activity" is a broad term that encompasses many different forms of activity. Examples could include sports or sport-specific training (at recreational or highly competitive levels)**, non-competitive exercise or fitness, or other activities like outdoor pursuits** (e.g., hiking, rock climbing, etc.) **or action sports** (e.g., skateboarding, snowboarding, freestyle skiing, etc.)**. Please list the form(s) of physical activity that you participate in most frequently.**

8. On a scale of one to five, to what extent do you feel your physical activity experiences have impacted you as a young adult?

1 (a strong, negative impact)
2 (a slight, negative impact)
3 (no significant impact)
4 (a slight, positive impact)
5 (a strong, positive impact)

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Appendix E

INTERVIEW GUIDE

Introductory Remarks: (After going over informed consent, and checking for participant's understanding/questions) "So, before we get started, I would just like to point out that I have a few questions prepared, but I want this to feel more like a conversation than an interrogation. As there are no 'right' or 'wrong' answers, I want you to feel free to share whatever feels most important to you… so tangents are totally OK! I would also like to emphasize that you can ask me questions at any point, especially if you need me to clarify something. I know this was on the informed consent document, but just to highlight it again, you can decline to answer any question and can stop the interview at any point. Does this sound good? Do you have any questions before we get started?"

Initial questions:
- "So first off, what's a typical day like for you right now?"

- *Potential probes are as follows…*
  → "Do you currently hold a job? Could you tell me about that?"

Physical activity questions:
- "Could you tell me about your experiences with _primary activity_?"

  → *Potential probes are as follows…*

    ▪ "Could you walk me through how you got started with_primary activity_?"

    ▪ "Do any milestones or meaningful memories stand out as you look back?"

    ▪ "How does _primary activity_ fit into your day now?"

    ▪ "What do you think you get from _primary activity_ on a day-to-day basis?"

- "Do you think your experiences with _primary activity_ have had any impact on you as a young adult? Could you talk about that a bit?

  → (*If participant struggles with wording…*) "Do you think your experiences have changed you at all?"

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- *Possible probes could include…*

- "From your perspective, how do you think those changes occurred?"

- "Have those changes transferred into other areas of life?"

→ (*If participant only lists positive impacts…*) "Have there been any negative impacts from your experiences with _primary activity_?

- "Is there anything else in your life right now that you feel like you're committing a lot of energy to?"

Possible "bank" of probes: These are not primary questions, but may be drawn upon if the participant appears to need more guidance.

→ Tell me more about …
→ Can you give me an example of …
→ When you say…..what do you mean?

→ Have you pursued any goals through _primary activity_?

→ Have you ever faced any barriers to meeting your goals? … How did you overcome them?

→ Have you learned anything through _primary activity_? … What experiences contributed to that?

→ What has been one thing that you've hated about _primary activity_?

→ Could you describe any influential others in your _primary activity_ experiences? (These could be positive or negative influences)

Concluding questions to close the conversation:

- "Ok, so to start winding down here, thank you so much for everything that you've shared so far. Is there anything that you would like to talk about that we haven't gotten the chance to cover yet?"

- "Do you have any questions for me?"

"So again, thank you so much for your time and for all that you've shared. Over the next week or so I will be going through our discussion and looking for some themes that stand out. Ideally, I would like to run these themes by you at some point to make sure that I'm on the right track and staying true to your ideas. Would you be open to arranging another brief meeting? … Can I email you to set that up?"

PARTICIPANT SUMMARIES AND SUB-THEMES

Participant 1, Summary of conclusions:

Participant #1 is a 24 year old female currently in her third year (5 or 6 years total) of an environmental engineering PhD program. On average, she engages in about 715 minutes of physical activity per week (120 min mild, 45 min moderate, and 550 min strenuous), and has maintained this approximate level of activity for 6 years. She began running competitively in 6th grade, and continued through high school. She ran for an NCAA Division I team through her undergraduate education, and continues to run competitively as a post-collegiate athlete.

The overarching theme of her interview was identified as, *Enjoy it while it lasts: Running's impact and current life context fuel continued involvement*; and this will be explained in greater detail below. This higher-order theme stemmed from 3 sub-themes (energy, socialization and support, and merge of context and impact) that encompassed 12 emergent themes and 71 initial codes. These thematic trends will now be summarized.

One recurring theme throughout Participant 1's interview was the energy that she derives from competitive running. For her, distance running has been a source of competency and efficacy. Her improvement over the years has stimulated a curiosity as to what further improvements might lay ahead, as well as an excitement to pursue the training that will hopefully bring those improvements to fruition. Reflecting on her most memorable races, she shared the following:

> [I]t was certainly exciting, uh, and I when I get excited about one thing I just get excited for the next thing so, like, oh I improved by this much, how much more can I go?

Participant 1 also derives positive energy from the collective striving she finds in running with motivated peers. This was illustrated, for one example, in the following interview excerpt.

> …I tried a lot of different sports but I never really felt that I was contributing to a team effort, and, but once I was actually, you know, having an impact on the cross country and track team I enjoyed-- I realized how I can thrive off of other people and we can work well together and that was something I never really experienced before but that was enjoyable.

Running is not, and has not always been easy for her though. Participant 1 remarked that running through fatigue can be a chore, and that poor performance can --at times-- have a negative influence on her mood. She has had to exert deliberate efforts to achieve a balance in her life and keep running in perspective. She spoke to how her

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friends, many of whom are runners as well, have been an invaluable source of support through the ups and downs of her competitive running.

As such, the second sub-theme of the interview was labeled "socialization and support." Running has been a social venue for Participant 1, and she has made a number of friends through it. In many ways, her social life appears intertwined with her running. A key feature of her running friends seems to be an in-group mentality that they share; that is, they truly understand the nuances of running and can empathize with its' ebbing highs and lows. In the following excerpt she spoke to this understanding and support.

Um, understanding what a bad race feels like and what is a bad race. Like my parents…it's got to the point where they don't really know what I'm going to be happy with or not so they say how do you feel about that [versus] someone who knows immediately how you're gonna feel about that, um, because they, you know they're actually following how you're doing, they know what you're hoping to do, what your capable of doing, um, and then they've been in that situation before where they know what they're capable of doing and they don't and or they do so they, um, understand it in that respect, and it's not just getting happy because they're happy it's because they feel like they kind of went through it with you.

The third sub-theme from the interview was labeled "merge of context and impact," as her continued involvement with running seems to be a product of the positive impact she has derived from the sport (e.g., energy and social support) and the finite opportunity that her current life context affords to training at a high level. When asked about this point in her life, she said,

I'm just trying to enjoy it while it lasts (chuckles). I like having being able to make my own schedule and not having a nine to five job, but, um, I yeah I feel less stressed now than I did in undergrad. Grades don't matter as much anymore, um, the focus is more on your individual research and I, yeah, I don't know I like it right now (laughs). I'm fine with it, that's why I'm ya know fine with my program taking six years instead of five, I'm enjoying it so… (trails off).

Later in the interview, she was asked about running's impact on her specifically as a young adult in graduate school. She replied,

Umm, maybe bef-, it certainly had a impact on me as an individual and I think that was shaped a little earlier and it's just continued in grad school and I've been happy that I was able to do that. I didn't have to redefine, I mean, running is a huge part of my life and I was able to keep it that way, um, and find a group of friends that had, you know, it was a similar huge part of their lives. So I dunno if anything shaped me specifically during grad school.

In many ways Participant 1 has found that running is different now than it was in college, but spoke to what seemed to be a pivotal insight/shift in perspective that was generated while out for a run the day after her last collegiate race.

> Before that run, ya know, I felt like running in that aspect was done. Um, like I wasn't going to have a team that I could get together with everyday and do workouts with. I wasn't going to be able to run in the college system. Uh, certainly it's easier when you have, you know, meets set up for you all the time and I just knew it was going to be different and it is different but I think when I did that run that one day I realized that being different doesn't necessarily have to be bad, um, you can get excited about this in new ways and enjoy it for what it is.

Ultimately, running has had a large and overwhelmingly positive impact on Participant #1. She is enjoying this time in her life, and has a streamlined focus on running and academics. The personal energy and social support she has found through running seem to drive her to make the most of the opportunity that she currently has to continue training and competing. For these reasons, the aforementioned higher-order theme seemed to fit well.

Participant 2, Summary of conclusions:

Participant #2 is a 28 year old female. On average, she engages in about 930 minutes of physical activity per week (90 min mild and 840 min strenuous), and has maintained this approximate level of activity for 2.5 years. During college, she competed as a track and field athlete (sprints/jumps) for an NCAA Division III team. After graduating from college she took up triathlon, and has now been involved with the sport for 4.5 years.

The overarching theme of her interview was identified as, *Finding a finish line is only the beginning: Self and social expansion through triathlon*; and this will be explained in greater detail below. This higher-order theme stemmed from 3 sub-themes (context of life and sport, self-learning and expansion, and influence of and on others) that encompassed 13 emergent themes and 89 initial codes. These thematic trends will now be summarized.

The first sub-theme that emerged from Participant 2's interview included contextual factors of her life and sport. Participant 2 is married and currently works as a chemist for a large corporation. She may consider a masters degree in the future. Her life can, at times, be a balancing act between work, training (and the other time commitments therein; e.g., planning routes, nutrition, etc.), and maintaining strong relationships with those close to her. Participant 2 offered some great insight to the "costs" of triathlon within this time of her life (relative to athletics during college), as well as a different sense of connection with her competitors (reflecting the "influence of and on others" sub-theme as well). For one example, she said,

I feel like, um, getting to the start line for a triathlon has cost me more than it, it cost me in college; in college life was so much easier, right? Like, I just went to classes, someone else cooked my food (chuckles), my coach told me what to do, um someone drove me to the event, I didn't pay for it, um someone gave me clothes to wear um I just, I just did my thing um but here a start line um for triathlon, getting to the start line just costs me so much, like, you know that time management, the personal management, managing my budget, um and the person who is standing next to me at the start line has experienced much of the same of that, um, uh so I think that we're, we're connected in a different sort of way…

Perhaps these "costs" have contributed to the second sub-theme of Participant 2's interview: "self-learning and expansion." This reflected emergent themes of learning/development as a triathlete, self awareness and reflection, increased mental and physical strength, and broader expansion of self. In the following excerpt, Participant 2 shared how she became a student of the sport, and further, how her newfound knowledge opened her mind to new perspectives of it:

I started with this small picture of what it meant to train for a triathlon, which was very appropriate for me, and then as I got more involved in them, um in training for those events um I, I kinda became a student of it. Um, I started to understand what it meant to be good at them, ya know, what times are actually fast, ya know, what distances are actually far, [and] it makes you realize that the world's bigger than what you had previously thought, um, which opens up some more possibilities I think.

Participant 2 demonstrated a high level of mental and physical self-awareness. For one example, she shared that, "I like to say that [on] like a hard training day sometimes our body shows up, and sometimes our mind shows up; and the days that we really really make progress are the days that both show up." When asked about the experience of training sessions when "both show up," her response illustrated a vivid sense of strength, a heightened awareness of progress made, and the establishment of a new base from which continued development could take place:

I'm overcome by a sense of strength…I think we're always making small growth, uh, but when they both show up, uh, you, I think you're more aware of it. Um, it's almost like you've been training ya know maybe for the last six weeks to become a little bit faster and on that day you kind of step into being that faster person. Um, ya know, you've been kind of putting on the clothes, but now you're actually that person. Um, and now you have a new place from which is your base um so you'll continue to go up from there.

To illustrate the broader sense of self-expansion that emerged from Participant 2's interview, and to segue into the influence of and on others sub-theme, she spoke to one of the key reasons that she likes to share triathlon with others. In a detailed account (abbreviated, regretfully, for space), she shared,

…To see them go from [struggling] with training to ya know extreme nervousness about a race, um, uh to self-doubt during a race, and then to overcoming everything by crossing that finish line, um, and then coming on the other side of that and like them recognizing that in some way or another this has changed them, um, and whether or not they do another triathlon, um, or they pursue something else um, uh, they've, they've become a slightly different person. Um so I like to pull people into triathlon, like, that's what it did for me, like it changed me, it made me a different person, um a better person, um and I think like, the joy I get from that is just something like I, I want other people to have.

Just as Participant 2 likes to positively impact others through triathlon, others have had a similar positive impact on her. For instance, she cited various friends and contacts that taught her the ins-and-outs of the sport. She also elaborated that the positive influence of other people through triathlon has extended far beyond her involvement with the sport.

…Triathlon is an early piece of my puzzle by way of my professional career, um, that has um had these kind of point contacts on the way that have led me down a path to exactly where I am today, um, that has nothing to do specifically with me training and doing triathlon, but more so, um, the people that triathlon has brought into my life, the connections, the networking. Um, uh, so I mean I'm a 100% confident in saying that without triathlon I would not be where I am professionally, socially, um, today.

Finally, Participant 2 seems to have drawn inspiration from learning about what professional triathletes have accomplished. Further, she spoke to a changed perspective of human capability. When asked what it felt like to develop that new perspective, she explained,

It's kind of like walking a line…the one side of it is, um, ya know invigorating, um I feel empowered, um I, I feel hungry, like I wanna find out what more my body can do, um, on the other side, um, uh I'm a very very small fish in a very very big pond…

In closing, and to reiterate, the higher-order theme of this interview was identified as *Finding a finish line is only the beginning: Self and social expansion through triathlon*. It was through the excerpts included above (as well as various others) that this was established.

Participant 3, Summary of conclusions:

Participant #3 is a 27 year old male. On average, he engages in about 420 minutes of physical activity per week (60 min mild, 240 min moderate, and 120 min strenuous), and has maintained this approximate level of activity for 1.5 years. During high school, he played varsity football. Participant 3's college years presented a transition out of

"formal" sport, but opened the door for him to get involved with high-intensity pick-up basketball. Between college and graduate school, Participant 3 moved back home and found himself active on a less regular basis, "riding the coat tails" of his fitness from school. Having completed graduate school, he now works as an exercise and wellness specialist and has reestablished a pattern of regular exercise.

The overarching theme of his interview was identified as, *I'm still molding myself into the person I want to be: Goal-driven pursuits through transitions*; and this will be explained in greater detail below. This higher-order theme stemmed from 3 sub-themes that encompassed 14 emergent themes and 89 initial codes. These thematic trends will now be summarized.

The first sub-theme that emerged from Participant 3's interview included contextual factors and outcomes associated with exercise. Generally, his active lifestyle is not motivated by others, and his social life is not highly interconnected with his exercise. He reported, "I'll workout by myself or I'll workout with somebody else, that's never been a deciding factor." He cited several health-related and mood/energy-related outcomes that he derives from regular exercise. Some of these outcomes transfer into other aspects of his life, for instance, "on-the-spot motivation." He shared, for example,

> I think [regular exercise] teaches you to on the spot be motivated, at least for me, it's like sometimes I'll walk in [at the gym] and I'll be like, "oh God I gotta warm up,"…it's like the more and more you do it the more you're like, "alright I've come to this facility, boom, what do I gotta do? I gotta warm up, like alright" and then you just get used to, like, getting in the frame of mind so ya know when I go out to do like yard work, "alright boom lets rake these leaves out," rather than every single thing being like, "ehhh I gotta do this again," ya know, I think it makes your attitude a lot, a lot better generally.

The second and most substantial sub-theme that emerged from Participant 3's interview was labeled as "Management of self & circumstance: Sustaining exercise in transition." During college, his cardiovascular exercise was built-in with his involvement in pick-up basketball, which was described as fun, competitive, intense, and social. The following excerpt illustrates:

> …If I played basketball for four hours that's running enough (both chuckle) …I've always found myself in environments where I was just exercising at such a high level that I didn't feel the need to exercise, to run distance for health reasons, and I have no personal interest in running any more than I have to…

Moving home after college, Participant 3 found himself active on a less regular basis. For the time, he had no regrets about this.

P3 – "…I wouldn't say I was completely sedentary but there was no sports, there was no activities, I didn't join a gym, um, I don't have any close friends who really exercise…"

WW – "And so what did that, noticing that transition feel like?"

P3 – "Felt lazy. Felt lazy. Felt great, I mean I was in, at no point was I like regretful…"

Transitioning to graduate school, and then beyond to his first "real job," Participant 3 spoke to exercise becoming a priority instead of a choice, and important even though he doesn't enjoy aspects of it. On prioritizing exercise, he shared that,

> …Instead of it being more or less like I realized this is one of my core values, I realized that it needs to be one of my core values…and I don't necessarily think that-- it wasn't I didn't value it before enough, but I didn't put the effort in to make it a core value. Ya know I think my, probably, my opinion of how important exercise is has, probably hasn't changed for a long long time ya know, but how important is it to me or how important should I make it and following through with doing it is, needs to be a high level priority.

Through this transition, he spoke to learning to schedule exercise. He now schedules it less, and sees it more as a "lifestyle." Participant 3 also demonstrated an awareness of both internal and external barriers to regular exercise. Currently, his goals are to develop broad, athletic fitness. Long-term health is a key motive for Participant 3, and he spoke to a momentum of sorts that facilitates a sustained healthy, active lifestyle. He indicated, "that's probably the biggest thing I take away from all of this, is that when you start to get lazy, you get used to getting lazy…" and later reflected that, "this is just generally for me thinking my health is gonna deteriorate…I'm not gonna optimize my life in a healthy way if I keep on with this kind of lifestyle that I'm doing."

The final sub-theme that emerged from the interview was identified as "Transitions in life and work." Participant 3's life is currently devoted to a few key tasks (namely learning and professional development, guitar, reading, and exercise), which are all goal-driven. He stated,

> ...Everything in my life has some sort of a goal, I'm at no point in this stage of my life where I do things just to puttz around and enjoy it. … I view this whole point in my life as ya know I'm still molding myself into the person that I want to be, not necessarily like I'm enjoying [it], ya know, I haven't …like, I haven't cashed my chips in yet...

Participant 3's regular exercise often goes hand-in-hand with his role as an exercise clinician. Through his active lifestyle he has developed credibility, empathy, and has tested workouts he could give to others. His role is demanding, but enjoyed. In some ways, Participant 3 feels like an in-betweener in the community with regards to his age

(with many others being either younger or much older). Finally, it is worth noting that this time in Participant 3's life is still one of mobility and exploration. He does not feel confined to staying in the field of exercise science, and might consider getting into business some day. On the subject, he said,

> I'm fine with having options. I'm probably glad that I have a question mark that I don't have like 20 years from now I'll probably, ya know, if I was a teacher I'm sure people are like, "well I'll probably try to be a principal," and ya envision your entire life. I dunno man maybe I'll be on a beach, who knows.

In closing, and to reiterate, the higher-order theme of this interview was identified as *I'm still molding myself into the person I want to be: Goal-driven pursuits through transitions*. It was through the excerpts included above (as well as various others) that this was established.

Participant 4, Summary of conclusions:

Participant #4 is a 25 year old female. On average, she engages in about 1,300 minutes of physical activity per week (600 min mild, 400 min moderate, and 300 min strenuous), and has maintained this approximate level of activity for 8 months. Participant 4 lives alone with her 5.5 year-old son and works as a barber. Her mild and moderate physical activity comes in the form of working on her feet, walking to/from work, stretching/mobility, and physical activity shared with her son. Her strenuous physical activity includes Crossfit, lifting, and running. She is currently developing a Paleo Diet cookbook, is considering further education in the future, and dreams of one day opening a gym that also offers nutrition education and life guidance.

The overarching theme of her interview was identified as, *Me finding myself as a woman: Strength, learning, & energy from others*; and this will be explained in greater detail below. This higher-order theme stemmed from 3 sub-themes that encompassed 12 emergent themes and 87 initial codes. These thematic trends will now be summarized.

The first sub-theme from Participant 4's interview included contextual factors of her life and personality. Immersed in sports at an early age, she shifted her focus to work at age 15 and maintained an active lifestyle by exercising with friends. After giving birth to her son at age 19, she "was completely out of the fitness world" and returned to "dabbling" in exercise over the following years. She lost weight, but was frustrated by the lack of toning she could achieve. After an introduction to Crossfit, her re-ignited motivation shifted from aesthetic goals to fitness goals. Crossfit has taken her out of her comfort zone and has stretched her confidence. Describing a breakthrough moment during her first ever Crossfit workout, she shared:

> My coach, um we were deadlifting, so first we used a piece of PVC pipe and ya know he showed me the motions with that. So started doing that, and then um got the barbell and…he said, "ok, pick this up."…I said, "I can't do that!" He looked at me, he said, "Not with that attitude. You see your

attitude? It sucks! Get it the f*** outta here!" (laughs) is what he said to me! And I looked at him, shocked, like holy crap, no one's ever talked to me like that before. He said, "You see this bar? Pick it up!" So I got down, I just picked it up and I said, "holy crap I just picked up 75 pounds off the ground!" (laughs) And so, ya know, as scary as it was, I was just like whoa, I just picked up 75 pounds, I never thought I could lift 75 pounds, the most I ever lifted was a couple grocery bags!

The second sub-theme from Participant 4's interview was labeled as "Energy/support for or from others." Participant 4 has a strong desire to help others, and has done so in part by (unintentionally) inspiring them through her own fitness gains. In one of several gripping descriptions, she shared (abbreviated, regrettably, for space):

…You never know who you're motivating…or who's looking up to you, so that's another thing that keeps me going…I've had customers that have joined different crossfit gyms…they've contacted me for recipes, for ya know um any tips, any kind of stretches, like, so yeah I mean, people look up to me and I don't even realize it ya know, that's inspiring to me (chuckles) ya know you're just trying to, here you are just trying to do well and you don't realize who you're inspiring (chuckles).

This reciprocal inspiration is deeply shared with her son as well, as she described,

...We were doing a [workout] and I brought my son with me at six o'clock in the morning (chuckles) and he's sitting on the couch watching me, we're doing this one workout and...I'm climbing ropes…I was at the top of the rope, I was exhausted…and I look back and I see my son, and he's staring at me like…(gasps) "oh my gosh, like, my mom" like I'm wonder woman…and it was like, that's my inspiration right there, to show him strength ya know and to show him you can do this, you can do anything you want, ya know nothing can take you down, and I think, I dunno, [Crossfit's] changed both of our lives.

One final facet of this sub-theme included Participant 4's description of Crossfit as a "family." In Crossfit she has found a source of unconditional support and encouragement that extend beyond fitness to other aspects of life. This was not something she found in other fitness programs.

The final sub-theme that emerged from the interview was identified as "Shining through & other impacts." Participant 4 has expanded her knowledge of both fitness and nutrition, and has found that both were necessary for desired results. One of the most moving impacts of physical activity on Participant 4's life was labeled as "Allowing her true self to shine through." She described societal pressure to appear "feminine" as once fueling self-criticism. However, in gaining physical strength, she found new mental strength as well. She has slowly, cautiously come to embrace herself for who she is – a

self that now shines through for the world to see. She spoke about how she used make-up to cover herself up, both literally and figuratively:

> I always used to wear a ton of make-up, ton of make-up, I mean it makes me sick now when I think about how much I used to put on. Um, ya know, nothing, it's just, I don't know, it never felt like I was good enough…I always felt like that's why I was so critical of myself and um I credit crossfit as a huge part of me finding myself as a woman um because I don't wear make-up anymore, I don't, I'm comfortable in my skin now and I've learned hey, I'm a woman and I don't care if you think I'm pretty, I don't care if you think I should lift weights, I don't care if you think my arms are too big, I like it, I'm very comfortable with the way that I am, and I'm now at the point where ya know I'm [name] I'm funny, I'm [name] I'm a great cook, I'm [name] I'm a great mom, not I'm [name] I'm pretty…

"Allowing her true self to shine through" is an on-going process for Participant 4. Another key excerpt contributed to this label, and further, added a source of external "evidence" suggesting that this process has taken place.

> I'm still learning every day but I mean ultimately I learned that there's, there was a whole 'nother person inside of me that I never knew (chuckles) ya know, um, and I like her, I like her a lot (laughs)! Um, and fitness has just really brought out me, and helped me be me, ya know goofy me…my coach even says, "hey [name] when you first started here ya know we all thought you were kind of a snob, ya didn't really talk to anyone, ya know, you were nice, but ya kind of-" he was like, "and then we find out you're just this big klutz, this big goofball, and like that's what we all love about ya!" And here this whole time I'm trying to not let that out because I didn't think that that's what people like, and now I'm like, "No! I'm me! Unapologetically, this is me!" and ya know fitness and Crossfit specifically, it helped me find that.

In closing, and to reiterate, the higher-order theme of this interview was identified as *Me finding myself as a woman: Strength, learning, & energy from others*. It was through the excerpts included above (as well as various others) that this was established.

Participant 5, Summary of conclusions:

Participant 5 is a 26 year old male. On average, he engages in about 1,860 minutes of physical activity per week (180 min mild, 1,500 min moderate, and 180 min strenuous), and has maintained this approximate level of activity for 4 years. Participant 5 works for a marketing and research team at a large mountain resort in Colorado. His physical activity includes walking, hiking, climbing, and occasional recreational sports (basketball, football). During the winter months he skies extensively and does so across varied, challenging terrain (moguls, park/pipe, big mountain).

The overarching theme of his interview was labeled, *Being happy is a good sign you're doing something right: Aligning recreational passions with the pursuits of emerging adulthood*. This stemmed from 5 sub-themes that encompassed 4 overlapping emergent themes and 64 initial codes. These themes displayed a unique, interrelated structure. Initially, four emergent themes were apparent as areas of significant focus and energy in Participant 5's life: work, skiing, travel, and (to a lesser extent) other activity. The five sub-themes are summarized below.

Participant 5 has held various adventure-based jobs with kids (in various countries), which often included physical activity through leading recreational activities. Feeling he has derived a broader understanding of different cultures and bolstered leadership skills, these experiences lent to the sub-theme of "expanded knowledge, skills, & perspectives." He elaborated on the perspective that has come from having taken this path for the time being:

> …I think I kind of have a different life perspective [and] I think I'm happier than a lot of my good friends (chuckles) who are working nine to five, and I think that being happy is a really good sign that you're doing something right…

Having aligned his passion for skiing with various employment positions, Participant 5 has also found unique job-related opportunities that directly spurred his improvement as a skier.

To illustrate the sub-theme "influence of / connection with others," Participant 5 shared how skiing with friends has not only pushed him to improve, but has also been a source of contagious energy. He described an instance in which he was going to ski a short while and then "go home and take it easy," only to be coaxed into joining his friends for some runs in the terrain park:

> …And I was like, "ok, ok I'll go do one run in the park," and I ended up doing like six or seven [and] had like a really really good time and did a couple things that I hadn't done in the park before. And so there's tons of examples of that where, [even] if you're having like a bad day or something…having friends there definitely pushes you and, and it usually ends up changing your mood and you usually end up, like, just having an awesome time.

Within the sub-theme of "motivation, identity, awareness," Participant 5's primary goal is career development, but he is also internally motivated to improve as a skier. Having developed a stronger awareness of his comfort zone, he spoke about striking a balance between pushing himself enough to improve while also staying within his limits:

> …I am just [skiing] for fun and only, when I'm pushing myself it's simply personal. If I was trying to become a pro skier, then I would have to push it

a lot more and [put] myself in situations where I would be prone to injury more, um, but [because] my goals are more professionally related, um, I just don't have to worry about that…

Participant 5's skiing is additionally motivated by the enjoyment and happiness he finds in it.

I just always thought of [skiing] as just one of, just for pure fun's sake, just one of the funnest things that you could do. [It's] just one of those simple pleasures where you're gliding on top of snow and it's just kind of unique feeling. Um, and then I think the more that I do it, the more that I like it just because I get to know more and more about it…

In the final and most prominent sub-theme, Participant 5 has actively linked his various interests and aligned his pursuits with his inner motives and values. This process was in motion as he was transitioning out of college. In an account of vivid self-awareness and insight, he said:

I was applying for some jobs but I wasn't really passionate about it…at one point I just realized that I didn't wanna get a job and that's why I wasn't really actively going for it, [I] really just wanted to go to Israel and then ski. And so I found a program where I was able to basically go to Israel all expenses paid…and I traveled a bit in Egypt, and then towards the end of that process, I started looking and talking to people about ski jobs.

As he now feels more motivated to focus on his long-term professional development, Participant 5 shared what seemed to be a very telling insight to the experience of emerging adulthood. What others could potentially mistake for avoidance, procrastination, or disinterest in securing full-time employment is, in his case, patience with long-term goals and values in mind.

I know that I wanna have a family and…I want to have a career, and that's not something I'm trying to run from, that's something I'm excited about, it's just, I'm just patient and I know that I wanna wait for the right one because if I [get] a job I'm really passionate about I'm gonna be happy there also, and I'll be excited about work [and] I won't have to worry about that getting in the way of other things.

Ultimately, Participant 5 is deliberately selective in his career and residential planning so as to afford continued opportunities to pursue his recreational passions. He described excitement and enjoyment as more immediate, daily impacts of having these opportunities, but also elaborated to illustrate how this shorter-term impact can have a long-term, cumulative effect on one's overall sense of well-being. This appeared to underscore the value of his efforts to actively align the pursuits of emerging adulthood (e.g., career and residential planning) with his recreational passions.

I mean waking up and knowing that I'm gonna ski or hike or whatever it is just, I think you wake up excited…you know you're gonna have an amazing day. And so I think day to day like that, it just, I think a lot of people kind of can get lost in life and like they're not, some people just aren't excited to wake up and I don't think I ever really have to worry about that because I almost always know that there's something I'm gonna do in my day or in my week that I'm gonna really, really enjoy, and so I think a big part of life is just having things to look forward to and I'm, I'm never shy of that, there's always things I'm gonna look forward to whether it, whether it's through the outdoors or whether it's a concert…

In closing, and to reiterate, the higher-order theme of this interview was identified as *Being happy is a good sign you're doing something right: Aligning recreational passions with the pursuits of emerging adulthood*. It was through the excerpts included above (as well as various others) that this was established.

Participant 6, Summary of conclusions:

Participant 6 is a 23 year old male. On average, he engages in about 1,620 min of physical activity per week (1,200 min mild, 60 min moderate, and 360 min strenuous), and has maintained this level of activity for 8 years. Participant 6 works as a physical therapy aid (contributing 1,200 min of mild activity weekly), and will begin graduate school for physical therapy next year. His moderate and strenuous physical activity includes powerlifting, crossfit, surfing, and hockey.

The overarching theme of his interview (and follow-up correspondence via email) was labeled, *An opportunity to be the best I can: Lifting within the pursuit of athletic & career potential*. This stemmed from 4 sub-themes that encompassed 10 emergent themes and 68 initial codes. These themes are summarized below.

Participant 6's interview can be best understood within the narrative context of the sub-theme labeled "pursuit of full potential through sport & exercise." He originally "fell in love" with hockey in elementary school, and invested a significant amount of time and energy into the sport. During his senior year, he played on his high school's first ever varsity ice hockey team. Despite the range of ability levels on the team, this experience provided a unique source of camaraderie.

Everyone I played with in high school turned into tight knit group as a team even though our record was atrocious. We only won one game during the first varsity season…and even though I had won games before, winning with them was different and felt like I had never won a game before.

Moving on to a large NCAA Division I university, Participant 6 started out playing club hockey. He then succeeded through several rounds of try-outs to find himself with an opportunity to walk on to the varsity team. A key motivating factor for him seemed to be a sense that he had not yet reached his full potential in hockey. To illustrate, he shared,

When I got to school I wanted to walk onto the D1 team to prove to myself that I could play at a high level. In high school I played on a team that had for the most part never played hockey before and some never skated before, so needless to say I had given up many goals as a goalie that I had no help defending against. So I wanted to prove to the people I played with and against that I could play. I...made final cuts for the team which had only a spot for a third goaltender with 12 goalies trying out. It felt good just to get a callback as most of these players had played at a much higher level recently than I had.

His story took an unfortunate twist. He sustained a serious concussion at the end of his high school career, the symptoms of which extended to affect his short-term memory and executive functioning during his freshman year of college. For his long-term health, a neuro-psychologist indicated that he could no longer play hockey. Understandably, this was an incredibly difficult experience. He shared, "It felt like I had lost a huge part of my life, I had devoted most of my time to hockey and getting better and better."

Initially, Participant 6 began weight-training for sport-specific size and strength. At this juncture in his story, lifting began playing a new role. He began lifting more, focusing on strength and power-based goals, and eventually transitioned to train specifically for competitive powerlifting. As a foundation for the emergent theme labeled "drive to compete & lifting as a new venue to develop/express potential," he reflected,

When [hockey] was suddenly stripped away I had a space in my life that I filled with exercise. Being able to compete with myself in terms of strength numbers and still feel like I was participating in something gave me a replacement for playing competitive hockey…And I would have to say it's just an opportunity to prove myself and be the best I can at my body weight that drives me each day to be better than the last day.

Finding an outlet for his drive to compete was, and is, a key motivating factor in his training. As a result of further setbacks (Mono and a knee injury) he has not yet had the opportunity to compete with optimal preparation, but is training hard so that he can do so next year.

During his sophomore year he transferred into his university's strength and conditioning program, and was certified through the NSCA that summer. This provided a unique link between his academic studies and his new primary form of physical activity. After personal experiences with physical therapy (his own and within his family), his interests were further refined to pursue PT credentials in graduate school. He continues to link his lifting and long-term career pursuits:

Basically any time I go into the gym I try to look at it through the scope of, you know, physical therapy. [I'll] go in and I'll look at someone's movement pattern…and so I always take, um, every time I go to the gym I try to focus on how it's relevant to what I do.

Further reflecting the sub-theme of "merging lifting & career pursuits within emerging adulthood," Participant 6 spoke to the difficulties of moving home for a gap-year before beginning graduate school. He had seen peers settle and discontinue pursuit of their long-term career goals when initial opportunities did not pan out. Having drawn a sense of transferrable motivation from his sport and exercise experiences, he said,

> Basically in regards to going after my goals with physical therapy, um, I had to take a year off and I feel like a lot of people don't really get back to school um after taking a year off, but I was able to go um fight through that and, I, I'm not sure if I would've been able to uh be as motivated without um having, going through the struggles I have with working out and everything else and still being motivated there. So I think that motivation kinda transfers over a little.

Moving home also presented a challenge to his training. Illustrating the emergent-theme of "constructive climates for lifting & other activity," he elaborated on the importance of a constructive training atmosphere:

> I had been going to a commercial gym called [Title] for a while and the atmosphere there was absolutely awful, um, people like messed around, just joking around, and it's just not very conducive to lifting…but I moved to this new place and everyone there is basically just there to lift so when you go in there it's very, almost constructive environment where um even within the first week I met everyone there who powerlifts and we all basically are pretty, pretty good friends now so you go in there and everyone's supportive, um, they're there to spot you, help you out, whatever you need.

In closing, and to reiterate, the higher-order theme of this interview was identified as *An opportunity to be the best I can: Lifting within the pursuit of athletic & career potential*. It was through the excerpts included above (as well as various others) that this was established.

Appendix G

INTERPRETATIVE REFLECTIONS CONTRIBUTING TO THE HIGHER-ORDER
THEME

After completing the interviews and individual analyses, I organized all six higher

order themes on a single sheet of paper. I began analyzing them in the same fashion as I

had begun with each interview, by reading and re-reading them. I was struck by the sense

of process that each reflected. I realized this was no accident. I had not forced this sense

of process on the data, and was now able to clearly see that, yes, in analyzing each

individual interview I was left with the impression that change and striving was on-going

for each participant. The reasoning that followed, I feel, is best summarized in one of my

more lengthy memos (5/21/14, Memo #26):

…I was reflecting on the interviews while I was out for a run. [My thinking was as
follows:]

"The clearest thing that jumps out to me as linking all 6 interviews is the process
reflected in the higher-order themes. The take-home point (with no notes on hand, just
my thoughts and impressions) is that each participant was, in some way or another,
striving for meaningful goals or engaging in continued self-change through their physical
activity pursuits."

And I was stuck there.

"Ok, process. Got it. Process, process, process… but what is the impact?! I can recall all
the contextual factors (context of emerging adulthood, barriers and negative experiences,
social connection, etc., etc.), but those don't seem to be "impacts" per se that connect
each participant? Process, yup, still got it… process, process, process; but what is the
impact?"

That's when it hit me, like a good slap in the face. THAT IS THE IMPACT!!

My initial interests started out in the concept of personal growth. Then I realized how
socially desirable the construct is. Ok, so I avoided the word like the plague. All of a
sudden I realized that somehow, subconsciously, 100% out of my awareness until just
hours ago, I was looking for an "outcome" as an impact [of physical activity
participation]. A finalized state. Sure, there were different impacts that were apparent in
each interview, but the main, higher-order theme that so clearly links them all is the

PROCESS! … In both the interviews and the analysis, I recognized "components" of growth (as suggested in the literature) that participants spoke to, but it never occurred to me (honestly) that the process of growing could be sitting right under my nose. For these emerging adults, continued involvement in sport, exercise, and physical activity seems to provide a venue for continued striving and self-change. The impact of physical activity, for them, appears to be an outlet more so than an outcome. I was thrust back into my literature review. I recalled studies suggesting the decline of personal growth with age, particularly so after the college years. Why? Because individuals seemed to be "on their own when it comes to cultivating eudaimonic growth" (Bauer & McAdams, 2010, p. 768). This all of a sudden appeared to be what my participants were, very indirectly, telling me: "we have a means of continually striving for our goals and personal development, it's through, lifting, triathlon, etc., etc.; let me tell you about it!"

Following these reflections I labeled the higher-order theme as, "*I'm still molding myself into the person I want to be*": *Physical activity as a venue for continued striving and self-change*. Discussions with my advisors have prompted the question of whether or not this phraseology clearly answers my research question. I did not feel that it did. I included the verbatim snippet in an effort to adhere to participants' in-vivo words. This, however, could have been a bit overwhelming (clunky, long, etc.) to the reader. My reflections lending to the final phraseology, *An Outlet for Continued Goal-Striving and Self-Change* were as follows (6/26/14, Memo #29):

…In re-wording the higher-order theme (and I am taking care to re-word NOT re-define it), I am torn between the words "opportunity" and "outlet" their definitions are as follows:

Outlet = "something that people use to express their emotions or talents; a place or opening through which something is let out"

Opportunity = "an amount of time or a situation in which something can be done"

Outlet / Opportunity. (n.d.). In *Merriam-Webster Dictionary online*. Retrieved from http://www.merriam-webster.com/

I think I am leaning towards "outlet." A higher-order theme of "An outlet for continued goal-striving and self-change," I think, more concisely expresses the same sentiment as the previous higher-order theme. Also, an excerpt of a previous draft of the literature review seems particularly relevant with the definition of outlet,

"…social conditions can draw out or suppress humans' natural propensities for growth (i.e., actualizing tendencies; Maslow, 1954; Rogers, 1963) by the extent to which they satisfy the psychological needs of feeling competent, autonomous, and related (Ryan, 1995)."

Self-Determination Theory (e.g., Ryan, 1995), as well as Maslow (1954) and Rogers (1963), saw humans as having "natural propensities for growth" or "actualizing tendencies." So if this is something that humans are assumed to possess, then "outlet" would seem the appropriate word for the higher-order theme. For participants in my study, physical activity was an outlet (i.e., "a place or opening through which something is let out") for the expression of these "actualizing tendencies." Physical activity was also an outlet in that is served as a medium through which participants "express[ed] their emotions or talents."