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UNDERSTANDING HEALTH THROUGH THE EYES OF RURAL ADOLESCENTS

by

Joanna Lynn Morrissey

<u>An Abstract</u>

Of a thesis submitted in partial fulfillment
of the requirements for the Doctor of
Philosophy degree in Health and Sport Studies
in the Graduate College of
The University of Iowa

May 2012

Thesis Supervisors: Lecturer Christina R. Johnson
Professor Kathleen F. Janz

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The purpose of this project was to develop a conceptual model grounded in the health experiences of rural adolescents. By exploring the embodied experiences within a unique population of rural Iowan adolescents, many who are overweight/obese and/or of Hispanic descent, the conceptual model was also used to inform a tailored health intervention for middle school students. The review of the literature revealed that the study of adolescent physical activity and body image concerns is largely measurement driven, and often explored from a deficit perspective. Thus, there remains a gap in the literature regarding the contextualized experience of health. This project used a qualitative approach to generate a model grounded in stories adolescents shared regarding their health.

Eighteen adolescents (13-15 years old) participated in one-on-one interviews. Grounded theory principles were used to understand how personal health experiences were socially constructed and explored the meanings participants derived from such experiences. An unstructured interview guide was used to gather information on health, physical activity, nutrition, and body image. The interviews were transcribed verbatim and analyzed using Charmaz's (2006) version of grounded theory.

A total of 28 codes emerged from the data to construct a proposed framework for the Model of Embodied Health and Wellness. The complex interplay of personal health behaviors, eco-sociocultural influence, and everyday experience mold adolescents' embodied health and wellness experiences. Participants reported a wide range of personal, social, cultural and environmental influences on their health experiences. Feeling in control, connected, and competent were major themes in how participants experienced, maintained, or challenged their health experiences within their sociocultural environment. In addition to constructing the proposed framework for the Model of Embodied Health and Wellness, this project engaged adolescents in conversations related to their own health experiences to develop a sociocultural tailored health intervention. This project provides a practical example of how the target population of an intervention

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can be included during the formative research phase to ensure the intervention is tailored to meet their needs and interests.

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Thesis Supervisor

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Date

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Thesis Supervisor

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Title and Department

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Date

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Graduate College
The University of Iowa
Iowa City, Iowa

CERTIFICATE OF APPROVAL

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PH.D. THESIS

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This is to certify that the Ph.D. thesis of

Joanna Lynn Morrissey

has been approved by the Examining Committee
for the thesis requirement for the Doctor of Philosophy
degree in Health and Sport Studies at the May 2012 graduation.

Thesis Committee: ___________________________________
Christina R. Johnson, Thesis Supervisor

____
Kathleen F. Janz, Thesis Supervisor

____
Susan J. Birrell

____
Faryle K. Nothwehr

____
Mary C. Trachsel

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To Mom and Dad

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ABSTRACT

The purpose of this project was to develop a conceptual model grounded in the health experiences of rural adolescents. By exploring the embodied experiences within a unique population of rural Iowan adolescents, many who are overweight/obese and/or of Hispanic descent, the conceptual model was also used to inform a tailored health intervention for middle school students. The review of the literature revealed that the study of adolescent physical activity and body image concerns is largely measurement driven, and often explored from a deficit perspective. Thus, there remains a gap in the literature regarding the contextualized experience of health. This project used a qualitative approach to generate a model grounded in stories adolescents shared regarding their health.

Eighteen adolescents (13-15 years old) participated in one-on-one interviews. Grounded theory principles were used to understand how personal health experiences were socially constructed and explored the meanings participants derived from such experiences. An unstructured interview guide was used to gather information on health, physical activity, nutrition, and body image. The interviews were transcribed verbatim and analyzed using Charmaz's (2006) version of grounded theory.

A total of 28 codes emerged from the data to construct a proposed framework for the Model of Embodied Health and Wellness. The complex interplay of personal health behaviors, eco-sociocultural influence, and everyday experience mold adolescents' embodied health and wellness experiences. Participants reported a wide range of personal, social, cultural and environmental influences on their health experiences. Feeling in control, connected, and competent were major themes in how participants

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experienced, maintained, or challenged their health experiences within their sociocultural environment. In addition to constructing the proposed framework for the Model of Embodied Health and Wellness, this project engaged adolescents in conversations related to their own health experiences to develop a sociocultural tailored health intervention. This project provides a practical example of how the target population of an intervention can be included during the formative research phase to ensure the intervention is tailored to meet their needs and interests.

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CHAPTER I

INTRODUCTION

Background

According to the Centers for Disease Control and Prevention (CDC, 2011), the World Health Organization (WHO) defined health very broadly as long as a half century ago. However, health in the United States has traditionally been conceptualized narrowly and from a deficit perspective, often using measures of morbidity or mortality (CDC, 2011). Conceptualizing and measuring health from a deficit perspective can involve a focus on deficits of individuals who fail to meet predetermined standards for an isolated behavior or characteristic. For example, a deficit perspective would focus on the instances in which individuals fail to meet recommended health outcomes, such as a normal blood pressure level, or fail to maintain the practice of healthy behaviors, such as regular physical activity participation. As an alternative to a perspective that focuses on the failure to thrive or develop according to a predetermined standard, this project explores health from a multi-dimensional and integrated perspective that views physical activity participation, nutrition, and body image as contributors to overall health and well-being.

As will be evident in Chapter Two, physical activity research is often framed around how levels of physical activity are related to weight status, as a health outcome. While this literature consistently demonstrates that regular physical activity participation is associated with healthy weight levels, regular physical activity participation is associated with a myriad of other health benefits. Even though the public health community views health as a multi-dimensional construct that includes mental, physical,

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emotional, and social domains (CDC, 2011), the research discourse is largely focused on increasing physical activity levels in an effort to reduce inactivity and the prevalence of obesity throughout the nation. The focus on obesity limits our perspectives on the multiple health benefits associated with physical activity. Maintaining a healthy weight is just one of many health outcomes associated with regular physical activity, and I want to keep the multi-dimensional nature of health at the center of this project. While much of the reviewed physical activity literature discusses the relationship between physical activity levels and obesity, I approach the exploration of physical activity from the viewpoint that regular physical activity contributes to various health outcomes, including enhanced well-being, improvements in quality of life, reduced risk of chronic disease, and improvements in self-esteem (Dunton, Whalen, Jamner, & Floro, 2007; Sallis, Prochaska, & Taylor, 2000).

Due to research suggesting that few adolescents meet the recommended levels of physical activity, concern about physical inactivity among youth has been mounting in recent years (CDC, 2009). As recently as 2006, the CDC reported that only 35.8% of adolescents meet the recommended physical activity guidelines of accumulating at least 60 minutes of moderate to vigorous physical activity (MVPA) each day. Additionally, 10% of today's youth report engaging in no physical activity, while 35% watch three or more hours of television each day (U.S. Census Bureau). Research suggests that minority adolescents consistently demonstrate lower levels of physical activity and higher levels of inactivity than their non-minority counterparts (Gordon-Larsen, McMurray, & Popkin, 2000; Wright et al., 2010).

While low levels of physical activity have been reported in the adolescent

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population as a whole (AOA, 2002; Ogden, Flegal, Carroll, & Johnson, 2002), rural residency might increase the risk of inactivity in youth (Lutfiyya, Lipsky, Wisdom-Behounek, & Inpanbutr-Martinkus, 2007). Patterson and colleagues (2004) found that rural youths had lower levels of physical activity when compared with their urban counterparts, which might contribute to this increased overweight/obesity risk. While Iowa's adolescent population fares better than the average US adolescent in terms of physical activity levels, 49.9% versus 35.8%, roughly half of Iowa's adolescent students are not engaging in adequate levels of physical activity. Adolescents living in Muscatine County are situated in a sociocultural environment that is unique to many other Iowan adolescents. As evident below, a brief historical account of Muscatine's business climate helps situate Muscatine as a community that employs many Hispanic residents.

Located in east central Iowa, Muscatine County has a unique demographic history that differs from most other counties in the state of Iowa. Throughout its history, Muscatine's business climate has been dominated by several strong and diverse industries (Tibbetts, 2008). Individuals of Hispanic descent have historically been attracted to the industrial opportunities that Muscatine can provide for employment. From its early meat-packing plant and lumber processing days to its current status as a 'City of Business', Muscatine has provided a plethora of employment opportunities for its residents. Today, thirteen Muscatine companies provide employment to 47% of the Greater Muscatine population (Healthiest State Initiative, 2011). Hispanics continue to be the second largest ethnic group in Muscatine County, second to the White, Non-Hispanic population. In 2010, Hispanics made up 14.1% of the Muscatine County population, while the Hispanic population in the entire state of Iowa was 5% (U.S. Census Bureau, 2012).

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The described population characteristics suggest Muscatine is unique among Iowa counties. This uniqueness may contribute to cultural and societal practices that are distinct to Muscatine and its residents. Of the eighteen participants, seven adolescents were either first- or second-generation Hispanic or Mexican individuals. Thus, this sample of adolescents is distinct from the majority of Iowa adolescents. Throughout this project, I made a concerted effort to attend to and account for this rich historical context.

Adolescence is a time of substantive physiological, cognitive, and social change. During this developmental period, adolescents become acutely aware of their weight and bodies (Ata, Ludden, & Lally, 2007) with 24-46% of girls and 12-26% boys reporting body image concerns (Presnell, Bearman, & Stice, 2004). According to Hesse-Biber (1996), normative body ideals are perpetuated within the mainstream culture, promoted by the medical and beauty industries, and encouraged by friends and families. While these ideal standards are unrealistic and virtually impossible to attain, they are accepted and internalized by people of all ages, races, and cultures. Given the pervasiveness and unlikelihood of achieving these ideals, a mismatch between actual bodies and ideal/ought bodies is likely. When internalized, adherence to such norms can lead to these norms becoming part of one's self-concept.

In order to promote health behaviors in a manner that meets the needs and interests of rural adolescents, it is important to explore and understand what those needs and interests are. One of the primary aims of this project was to explore how adolescents, many of who are overweight or obese, understand and practice health, specifically physical activity, nutrition, and body image. Therefore, in this study, I explore how physical activity, nutrition, and body image are culturally and socially constructed,

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understood, and practiced by a small group of rural adolescents.

Eighteen adolescents had the opportunity to share their health experiences with me during individual interviews. In addition to exploring how physical activity, nutrition, and body image impact adolescents' overall health and well-being, the information gained from the interviews served a secondary purpose of informing a middle school student physical activity intervention, designed to meet the needs and interests of adolescents in the Muscatine community.

Purpose of the Project

According to Denzin and Lincoln (2005), a goal of qualitative inquiry is to understand human experiences, how these experiences are socially constructed, and how individuals derive meaning from these experiences. In order to gain such an understanding of the personal, embodied health experiences within a unique population of rural Iowan adolescents (many of whom are overweight/obese and/or of Hispanic descent), this project was guided by principles of grounded theory (Charmaz, 2000, 2002, 2005, 2006), which is the product of qualitative research. I also approached this project from a feminist social-constructionist perspective (Birrell 2000; Gergen & Gergen, 2003; Gill, 1994; Krane, 1994) which explores adolescents' embodied experiences within their historical, political, and social environments. In short, this project's methodology seeks to explore health experiences from the perspective of rural adolescents. Despite being guided by grounded theory principles, this project yielded a conceptual model, rather than a grounded theory, that represented the health experiences of 18 adolescents living in Muscatine.

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Given the sensitivity and personal nature of the project's content, I chose to use individual interviews as the method to gather information, understand multiple perspectives, and uncover factors pertinent to participants' health experiences. Focusing on the narratives of the adolescent voice allowed me to attend to the ways the participants made sense of their experiences and how this understanding impacted day-to-day practices. An in-depth understanding of how rural adolescents develop and experience their health in their environment can guide health educators and practitioners in providing support, based on adolescents' needs and interests, for the initiation and maintenance of healthy behaviors. The information gained from participants' physical activity experiences was used to guide the "Choosing Healthy Actions in Muscatine Public Schools" (CHAMPS) intervention. The goal of the CHAMPS intervention is to promote healthy choices by middle school students.

Exploratory Research Questions

The exploratory research questions that guided this project were as follows:

1.) How do participants conceptualize physical activity?

2.) How do participants conceptualize body image?

3.) What meaning do participants make of the relationship between physical activity and body image?

Significance

This project was innovative and significant for several reasons. First, this project challenged existing paradigms by identifying and making adolescents' health experiences central. Providing adolescents with opportunities to engage in conversations related to their own health experiences in an effort to develop a unique theory and a sociocultural tailored health intervention was an innovative goal of this project. This project illustrates

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for health promotion and sport and physical activity psychology literature how health behaviors can be understood through grounded theory principles and a feminist social constructionist perspective. It is an approach that is rare in much of the existing literature.

While much of the traditional positivist literature has sought to reduce complex concepts like physical activity and body image into objective, clear-cut components, my goal was to explore the complicated development and subsequent experience of physical activity, nutrition, and body image. This project breaks from the traditional perspective that suggests such concepts are objective realities and instead, maintains that subjective, contextualized realities exist.

The presence of feminist scholarly research is limited within sport and physical activity literature. This project contributes to the sport and physical activity literature by developing a feminist perspective that acknowledges oppression as relational rather than categorical. Gender, race, and class are aspects of social life relevant to this project, and I attended to these relational aspects as part of social power relationships. This project contributes to the health promotion field by developing an understanding of how adolescents conceptualize and make meaning of health, and this understanding, in turn, can guide principles for action in developing interventions, messages, and content that will be most appropriate and successful for a rural setting.

In specific regard to body image, the dominant paradigm tends to focus on negative body experiences and is driven by pathologic historical roots, namely eating disorders. This narrow focus assumes that body image is typically a negative experience, thereby limiting our ability to explore neutral and/or positive body image experiences.

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Because there is evidence that individuals can challenge and resist the idealized body present in Western cultures (Fujioka et al., 2009). I chose to explore how individuals conceded to, resisted, challenged, or managed messages they received about their bodies. In this study, it was important to attend to situations and environments where individuals actively negotiated their body experiences, to examine the processes participants engaged in and exchanges they made with the social context to give in to or challenge the dominance of body ideals in media and other social institutions. In attending to this active negotiation, I aimed to advance the body image literature by breaking the seemingly natural link of body image to negative experiences.

The use of first person narratives, solicited by the interviews, provided a more contextual, pluralistic, and inclusive understanding of adolescent health. According to Warren (1990), a first-person narrative gives voice to a felt sensitivity lacking in traditional analytical discourse, gives expression to a variety of attitudes and behaviors that are often overlooked, and provides a way of conceiving meaning as emerging out of situations rather than as being imposed on those situations. Thus, the first-person narrative allows for experiences to be understood in the historical, material, and social realities in which they occur. The use of first-person narrative, carried out through individual interviews, provided me the opportunity to listen to boys and girls talk about their physical activity, nutrition, and body image experiences. By listening to participants' stories, I gained insight into how physical activity, nutrition, and body image are experienced, maintained, and resisted within one's sociocultural environment.

Walker (2007) and Warren (1990) describe a feminist ethical orientation that can ensure that the adolescent perspective and voice is heard. Walker maintains that having

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voice requires the will to speak and to not be overwhelmed by intimidation or despair. Adolescents, due to their lack of social, political, and economic power and/or resources, often are not given the opportunity to speak and thus cannot say what they intend to say. Guided by a feminist ethical orientation, I felt it was important to provide an opportunity for those in marginalized positions to be heard. Such an orientation can provide a safe and respectful context for adolescents to be heard and valued in regards to their embodied experiences of health. Rather than restricting the speech of adolescents, I tried to pay attention to and respond to the needs of those I was studying by providing them the opportunity to talk about their own experiences. This feminist orientation, promoting an ethic of care, provided a more contextualized focus on the meanings, intentions, purposes, and interpretations participants constructed regarding their embodied health experiences.

Recruitment Characteristics

The goal of this research project was to gain an in-depth understanding of how physical activity, nutrition, and body image impact rural adolescents' overall health and well-being experiences. I sought to locate adolescents' experiences within their lived, sociocultural context rather than seeking breadth in an effort to offer generalizations to a larger adolescent population. In order to locate adolescents' experiences within their sociocultural contexts, I focused on the following characteristics to illustrate how I gained an in-depth understanding of rural adolescents' experiences:

1. Participants were middle-school students, aged 13 to 15, in Muscatine, Iowa.
2. Recruitment of participants took place within one rural setting: Muscatine, Iowa.
3. Participants were recruited from a population that participated in the *Muscatine Adolescent Health Survey Study - Phase Two* (College of Public Health, 2010).

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Definition of Key Terms

Since one of the primary aims of my project was to explore adolescents' personal conceptualization and understanding of physical activity, nutrition, and body image, I refrained from defining these terms during the interviews. In Chapter Two, I review the mainstream physical activity and body image literature, with an emphasis on the adolescent population. The following definitions are included to serve as a guide to understanding how physical activity and body image are defined within much of the existing physical activity and body image literature. As is evident in Chapter Two, various body image definitions are used. The following body image definitions reflect two of the most common ways body image is described.

Physical activity is defined as any bodily movement produced by skeletal muscles that result in an increase in energy expenditure above resting levels (Bouchard, Blair, & Haskell, 2007).

Body image is defined as:

1.) A multi-dimensional construct that represents how individuals think, feel, and behave with regard to their own physical attributes (Muth & Cash, 1997).

2.) A loose mental representation of body shape, size, and form which is influenced by a variety of historical, cultural and social, individual, and biological factors, which operate over varying time spans (Slade, 1994).

Adolescence is defined as a developmental period of transition between childhood and adulthood that involves biological, cognitive, and social changes (Santrock, 2003).

Summary

The purpose of this project was to explore rural Iowan adolescent's perspectives and experiences of health. While the project's focus was on how physical activity and body image impact adolescents' overall health and well-being, the topic of nutrition became relevant during the interviews. I used individual interviews to explore how adolescents conceptualized, practiced, and experienced their health behaviors. Listening

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to adolescents talk about these intertwined concepts provides an understanding of how health experiences are practiced, maintained, and challenged within one's sociocultural environment. The multiple voices of the Hispanic, Caucasian, normal weight, overweight, and obese adolescent boys and girls were all heard to develop a conceptual model that represented their experiences.

The review of literature is found in Chapter Two, with the methodology of this project following in Chapter Three. Chapter Two reviews literature pertaining to physical activity and body image, with a focus on the adolescent population. Chapter Three includes the epistemological and methodological choices that guided this project. I approached this project from a feminist social-constructionist perspective to explore adolescents' embodied experiences within their historical, political, and social environment. To gain a rich understanding of such experiences, I used grounded theory as the process allows for the induction of knowledge. Individual interviews, guided by grounded theory (Charmaz, 2000, 2002, 2005, 2006), feminist (Birrell 2000; Gill, 1994; Krane, 1994), and social constructionist principles (Gergen & Gergen, 2003) were utilized to explore health experiences from the perspective of adolescents.

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CHAPTER II

REVIEW OF LITERATURE

This chapter reviews the literature pertinent to the purpose of this research project: to explore rural Iowan adolescents' health experiences, paying particular attention to physical activity and body image. This project sought to understand how adolescents talk about, conceptualize, and define physical activity and body image. Gaining adolescents' perspective on physical activity, nutrition, and body image was useful in understanding how these topics influence their overall health and well-being. The reviewed literature helps locate this project within the academic realm and provides the foundation for how this project developed.

While a grounded theory approach creates theory from an in-depth experience with the data collection process rather than from existing literature, all data collection must be considered in the context of relevant existing scholarship. Critical theorists augment the understanding of body image and physical activity experiences as seen from a traditional, objective lens. Accordingly, rather than viewing physical activity and body image through questionnaire and survey derived data, I set out to explore how different theoretical lenses and methodologies understood health behaviors. In this chapter, I demonstrate that the seemingly static development of physical activity and body image research, largely measurement driven, can be enhanced by the inclusion of research grounded in the experiences of those participating in the process.

Health

As mentioned in Chapter One, health has traditionally been measured narrowly and from a deficit perspective (CDC, 2011). Furthermore, the current discourse presents

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a linear progression of physical activity, normal weight, and health, with regular physical activity participation resulting in achievement and maintenance of healthy weight, which in turn, represents good health. This project was guided by the early vision of the public health community; a vision emphasizing that overall health can be enhanced through the practice of healthy behaviors, like regular physical activity participation and satisfaction with one's body.

According to the World Health Organization (WHO), health is more than the absence of disease (CDC, 2011). It is a resource that allows people to realize their aspirations, satisfy their needs and cope with the environment in order to live long, productive, and fruitful lives (Breslow, 2006; Herrman, Saxena, & Moodie, 2005). This multi-dimensional conceptualization suggests that health enables the personal, social, and economic development central to well-being. Diener, Suh, and Oishi (1997) describe well-being as judging life positively and feeling good. The notion of feeling very healthy and full of energy, known as physical well-being, contributes to overall well-being. Physical well-being and overall well-being can be enhanced via regular physical activity participation. I have included a review of physical activity literature that focuses on the seemingly natural link of physical activity and obesity levels to demonstrate how physical activity has often been narrowly conceptualized as the ability to combat the nation's obesity epidemic. I will break away from this traditional understanding of physical activity, and instead promote physical activity as an activity contributing to enhanced well-being, integrating emotional, psychological, and physical benefits known to be associated with physical activity. I propose that this holistic approach to physical activity, emphasizing gains in self-perceived health, social connectedness, longevity, and

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mental and physical development, is useful in helping people engage in healthy lifestyle behaviors. When physical activity is approached from this holistic perspective, people have a wide range of motives to be active- motives that have little to do with achieving a certain body ideal.

The Physical Activity, Body Image, and Health Relationship

Evidence supporting the physical and mental health benefits of physical activity continues to accumulate at a fast rate. In a review of evidence-based research examining physical activity and various health outcomes in youth, Strong and colleagues (2005) reported that physical activity programming had a beneficial association with anxiety, depression, and self-concept. A positive association between academic achievement and physical activity was also reported. In another review of the mental and physical health benefits associated with physical activity, Penedo and Dahn (2005) reported that physical activity improves mood and reduces symptoms of depression and anxiety. Furthermore, health related quality of life was improved through physical activity by enhancing the experience of well-being and increasing physical self-concept.

This evidence suggests that youth who engage in regular physical activity gain significant psychological and emotional benefits, in addition to the well established physiological benefits. Self-concept, referring to perceptions of oneself, is comprised of several domains, including the academic, social, emotional, and physical domains. The physical self-concept is constructed from an individual's perceptions of his or her appearance, strength, or sport competence (Strong et al., 2005). Since research suggests that physical activity can enhance one's appearance-related physical self-concept (as reported by Penedo & Dahn, 2005; Strong et al., 2005), I see physical activity and body

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image as two related topics that can influence overall health and well-being. The literature discussed above suggests physical activity can provide emotional and affective benefits, and in particular, benefits to the appearance-related physical self-concept, like enhanced body image.

Adolescents may choose to participate in physical activity for reasons other than achieving or maintaining physical health. It is possible adolescents choose to be active for social reasons, being around friends, or for emotional benefits, like a boost in mood. Since healthy social and emotional profiles contribute to overall health and well-being (Corbin et al., 2011), physical activity has the opportunity benefit health in various ways, not just through the physical domain. While physical activity may create empowered bodies, research suggests that physical activity can also produce conformity with the potentially oppressive dominant body ideals (Dworkin & Messner, 1999). I chose to focus on physical activity and body to explore dimensions of the relationships between physical activity and body image with health.

Physical Activity

Over the past 30 years, the prevalence of childhood and adolescent obesity has nearly tripled, amounting to 24 million children struggling with unhealthy amounts of excess weight. It is well established that many factors contribute to the rise in childhood and adolescent obesity (CDC, 2009). Among these factors is physical inactivity. Nationwide, 65% of students do not meet daily physical activity guidelines, 10% engage in no physical activity, and 35% watch three or more hours of television each day (U.S. Census Bureau). Furthermore, inactivity in adolescence has been found to track into adulthood. As a modifiable behavior, physical activity has been targeted to reduce a sedentary lifestyle, and subsequently, obesity. While regular physical activity is

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associated with various positive health outcomes, the focus in mainstream physical activity literature is on the relationship between physical activity and obesity. According to Schwimmer, Burwinkle, and Varni (2003), little is known about adolescents' quality of life (QoL). While Schwimmer and colleagues set out to explore adolescents' QoL, their research focused on severely obese adolescents' QoL, suggesting that obesity, first and foremost, should be at the center of health interventions, rather than a focus on improving overall QoL and well-being.

Physical Activity Defined

Physical activity is defined as "any bodily movement produced by skeletal muscles that results in an increase in energy expenditure above resting levels" (Bouchard, Blair, & Haskell, 2007, p. 3). The goal of physical activity is to enhance or maintain physical fitness and overall health. Physical activity can be achieved through planned activities, such as sports and structured exercise, and through daily activities such as household chores, yard work, and walking to school (Bouchard, Blair, & Haskell, 2007). While related to physical activity, exercise is a more structured concept, defined as a planned, organized, and repetitive physical activity, such as a sit-up or running on a treadmill. The primary objective of exercise is to maintain or enhance one or more of the following physical fitness components: cardiovascular, body composition, flexibility, strength, endurance, speed, agility, balance, coordination, reaction time, and power (WHO, 2007).

The Centers for Disease Control and Prevention (CDC) sets physical activity recommendations with the idea that regular physical activity, over many months and years, is likely to produce long-term health benefits. Regular physical activity is related

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to a host of positive health benefits, including increases in subjective well-being, positive mood states, decreased levels of depressive and/or anxiety symptomology, lower levels of blood pressure and cholesterol, and lower risk of chronic disease and illness (Dunton et al., 2007; Sallis et al., 2000). In order to achieve these health outcomes, children and adolescents are encouraged to accumulate no less than 60 minutes of moderate physical activity on a daily basis.

For youth, participating in moderate intensity activities on a daily basis is recommended. Such activities are those that bring noticeable increases in breathing, sweating, and heart rate, such as brisk walking, bicycle riding, yard work, and softball. Vigorous intensity activities substantially increase breathing, sweating, and heart rate, and they include playing tag, running, and soccer. Youth are encouraged to participate in vigorous activity at least three days per week. In addition to participating in daily moderate and vigorous aerobic physical activity, children and adolescents are encouraged to engage in muscle- and bone- strengthening activities two to three times a week, for 20 minutes (CDC 2009; WHO, 2007). Muscle-strengthening activities include playing tug of war, climbing, and resistance exercises. Bone-strengthening activities include jumping rope, hopscotch, gymnastics, and skipping. Since physically inactive and/or overweight children and adolescents may not be able to immediately achieve 60 minutes of daily physical activity, they are encouraged to progressively increase the frequency and time of physical activity to achieve this goal.

Adolescent Physical Activity

Since obesity and excess weight continue to threaten the future health status of approximately one-third of American adolescents (Ogden et al., 2010), increasing

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physical activity in this population has become a public health priority. Boreham and Riddoch (2001) noted three main benefits associated with regular childhood physical activity. First, there are direct improvements seen in childhood health. Active children generally have healthier cardiovascular results, are leaner, and have higher bone mass density than less active children. Second, there is a biological carryover into adulthood, as healthier children tend to become healthier adults. Finally, there is a potential behavioral carryover into adulthood, as more active children tend to become more active adults. Regular physical activity participation has been recognized as an important component of a healthy lifestyle. In adults, physical inactivity is related to both chronic physical and mental diseases (Pate, Long, & Heath, 1994). Because many chronic diseases originate in early childhood, it is important to establish habitual physical activity early in life (Pate, Long, & Heath, 1994; Armstrong, 1998).

A decrease in physical activity from early to late adolescence contributes to approximately 36% of adolescents failing to meet the recommended levels of moderate to vigorous physical activity (CDC, 2008). Their inactivity means that these adolescents may fall short of receiving a variety of benefits, such as enhanced well-being, reduced stress and anxiety, improved self-esteem, strong bones, and reduced risk of chronic disease. As recently as 2006, the CDC (2009) reported only 35.8% of adolescents meet the recommended physical activity guidelines of accumulating at least 60 minutes of moderate to vigorous physical activity each day. In addition, the level of physical activity decreases during adolescence, and these patterns of inactivity have been found to track from adolescence into adulthood (CDC, 2009). While Iowa's adolescent population fares better than the U.S. average in terms of physical activity levels (49.9% versus

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35.8%), roughly half of Iowa's adolescent students are not engaging in adequate levels of physical activity (CDC, 2009). These reported low levels have prompted public health officials and health care providers to explore factors associated with youth physical activity in an effort to develop strategies and programs to promote physical activity in youth.

Correlates of Adolescent Physical Activity

Adolescent physical activity is a complex behavior, influenced by multiple factors within the environmental, sociocultural, psychological, and biological domains. A recent review of environmental correlates found support from significant others, mother's education level, family income, school attendance, and low neighborhood crime incidence to be positively associated with adolescent physical activity levels (Ferreira, van der Horst, Wendel-Vos, Kremers, van Lenthe, & Brug, 2006). Van der Horst and colleagues (2007) found that attitude, self-efficacy, goal orientation/motivation, physical education/school sports participation, family influences, and friend support were positively correlated with adolescent physical activity levels. Fogelholm, Stigman, Huisman, & Metsämuuronen (2008) examined the associations of weight status and physical activity with seven physical fitness components in a sample of adolescent males and females. The authors concluded that overweight adolescents had impaired performance in tests requiring cardiorespiratory fitness, muscle endurance, lower leg power, and speed/agility. These findings suggest that physical activity is influenced by a variety of environmental, intra- and inter- personal factors.

Despite the fact that adolescents spend a large portion of their day at school where they have access to PE classes and, in some instances, recess, research suggests that

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adolescents accumulate greater activity levels outside the school environment (Cox, Schofield, Greasley, & Kolt, 2006; Loucaides, Chedzoy, & Bennett, 2003; Michaud-Tomson, Davidson, & Cuddihy, 2003; Vincent & Pangrazi, 2002). Today, many adolescents travel to school by car or bus, spend less time in physical education class and recess than prior generations, and often lack suitable places for outdoor activity. Cox and colleagues (2006) examined physical activity levels of school-aged children in both the school and out-of-school environments and found that the most active children obtained a significantly higher proportion of their daily step counts outside the school day than the least active group. These results suggest that there may be a limited amount of physical activity that can be achieved within the structure of the school day.

While many adolescents may choose to engage in sedentary activities following the school day, others may spend time in structured leisure activities such as after school sponsored sports or community sponsored park and recreation activities. These activities require commitment, include regular participation schedules, and are often adult-organized and directed (Fawcett, Garton, & Dandy, 2009). Fawcett et al. (2009) examined the role of motivation, self-efficacy and parents' support on adolescent participation in structured leisure activities. The majority of adolescents (89%) reported that their parents considered participation in structured leisure physical activity important and provided support such as coaching, watching, and assisting with practice. Fawcett and colleagues (2009) concluded that involvement in structured leisure activities requires a considerable amount of parental support, such as providing transportation, money, encouragement, and volunteering. When adolescents choose to participate in after school or community sponsored activities, it appears parents remain an important determinant of

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adolescent physical activity participation because they can provide various types of social support.

Despite the search for autonomy and separation from parents during the adolescent years, social support remains an important factor that influences adolescent physical activity levels (Duncan, Duncan, & Strycker, 2005; Humbert et al., 2006; Robbins, Stommel, & Hamel, 2008; Wenthe, Janz, & Levy, 2009). Wenthe et al. (2009) found that family support was the most significant and consistent factor associated with both objectively and subjectively measured moderate-to-vigorous physical activity (MVPA) in a Midwestern sample of adolescent males and females. In an examination of social support for physical activity in a sample of Midwestern rural middle school students, adolescents identified family members and the form of support they receive from family, such as transportation and encouragement, as important factors in their physical activity involvement (Robbins et al., 2008). Arnon, Shamai, and Ilatv (2008) examined the relative importance and impact of socialization agents on a rural sample of adolescents' leisure-time activities. Family and peer group were the most important socialization agents for adolescents' involvement in leisure-time activities. This finding suggests that even though adolescents are at an age when they have more control over their leisure activities and seek independence from their parents, family support remains an important factor in participation in leisure-time activities.

Given the many benefits of physical activity and the low prevalence rates, physical activity interventions have been designed and implemented to promote the adoption and maintenance of active lifestyles among children and adolescents. Traditional physical activity interventions, focusing on individual change, have

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demonstrated limited success in promoting long-term maintenance (Dishman & Buckworth, 1996; Marcus & Forsyth, 1999). Research suggests that successful maintenance of healthy behaviors, such as a nutritious diet and regular physical activity levels, is enhanced when interpersonal and environmental factors are targeted and accounted for (Perri et al., 2001; Sheeran, Conner, & Norman, 2001). By engaging participants in a conversation about such healthy behaviors, I explored the interpersonal and environmental factors rural Iowan adolescents believe are necessary to participate in and maintain healthy behaviors. Since this project explored perceptions and practices of health behaviors in a largely Hispanic, rural adolescent population, the following segment briefly reviews the literature regarding physical activity levels within this population.

Adolescent Gender, Minority, and Rural Differences

Exploring physical activity levels among this project's participants was particularly important, as much of the adolescent population is not meeting the recommended physical activity guidelines. Using the 2003–2004 National Health and Nutritional Examination Survey (NHANES) data, Troiano and colleagues (2008) set out to describe levels of physical activity in the United States. Gender differences in adherence to recommended physical activity guidelines were observed across age groups, with 35% of girls, aged 6-11, obtaining at least 60 minutes compared with 48% of boys, aged 6-11. Among adolescents, aged 12-15, adherence prevalence for girls and boys was 3% and 12%, respectively. For each successive age group, females were generally less active than males, and physical activity decreased with increasing age (Troiano, Macera, & Ballard-Barbash, 2001). In adolescents, aged 16-19, mean levels of moderate physical activity are low, and vigorous activity is almost nonexistent. Of particular interest is the

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dramatic decline of physical activity during adolescence. By engaging adolescents in a discussion about physical activity, this project provided insight into what is preventing and/or supporting adolescents' physical activity behaviors. Such knowledge can be useful in designing an intervention specific to participants' needs, which may improve physical activity levels in a population known to have low physical activity levels.

In an effort to improve the health of all Americans, a goal of Healthy People 2010 and 2020 is to eliminate health disparities in the United States (HHS, 2010). According to the National Institutes of Health (NIH, 2002), health disparities are the "differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States" (para. 1). Whitt-Glover et al. (2009) emphasize the importance of examining the underlying causes of disparities in an attempt to provide policymakers, health educators, and the lay public with information needed to guide the distribution of resources and initiatives to reduce and/or eliminate such disparities. Among various minority populations, the NIH has named Hispanic Americans as a population at risk of experiencing adverse health conditions, such as obesity, high blood pressure, heart disease, and diabetes (NIH, 2002). While the NIH provides information on child and teen health (NIH, 2009), a review of this information yields an emphasis on health from a deficit perspective, rather than a focus on quality of life and/or well-being issues. This project took a different approach, exploring how Hispanic American adolescents articulate physical activity and body image. Their accounts may provide insight into how health practitioners can distribute resources and initiatives in an effort to reduce health disparities in a rural setting.

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Research suggests that minority adolescents consistently demonstrate lower levels of physical activity and higher levels of inactivity than their non-minority counterparts (Gordon-Larsen, McMurray, & Popkin, 2000; Wright et al., 2010). Increasing physical activity levels in this population has been an important goal of the nation's health agenda because the low levels of physical activity being reported accompanying an increase in the prevalence of overweight and obesity among minority adolescents. In 2003-2004, 19.2% of Mexican-American youth, aged 2-19 years old, were overweight (Butte, Puyau, Adolph, Vohra, & Zakeri, 2007). Butte and colleagues found that, within a large cohort of US Hispanic nonoverweight and overweight youth, physical activity levels were influenced by age, gender, and BMI status. Total physical activity declined markedly with increasing age and was consistently lower in girls than boys. Furthermore, participating in physical activity was sporadic and not sustained for long periods of time. Given that physical activity is a modifiable factor influencing childhood obesity, Butte and colleagues call for efforts to increase the time spent in moderate to vigorous physical activity among US Hispanic children and adolescents, with special attention given to overweight girls. This project answers that call by attending to physical activity experiences among these at-risk adolescents.

While low levels of physical activity have been reported in the adolescent population as a whole (AOA, 2002; Ogden et al., 2008), rural residency might increase the risk of overweight and obesity in youth (Lutfiyya, Lipsky, Wisdom-Behounek, & Inpanbutr-Martinkus, 2007). Patterson and colleagues (2004) found that rural youth had lower levels of physical activity than their urban counterparts, which might contribute to this increased overweight/obesity risk. Furthermore, youth are often limited in deciding

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their daily routines and even more restricted in gaining access to physical activity facilities without transportation and guidance from a parent, school, or youth organization (Moore, Davis, Baxter, Lewis, & Yin, 2008). Thus, accessibility to community and physical environments may be even more important to physical activity among rural youth than urban youth. Research suggests it is important to identify modifiable correlates of physical activity for youth, since such correlates can guide the dissemination and implementation of physical activity interventions in community and school settings (Owen, Glanz, Sallis, & Kelder, 2006). The physical activity correlate information I gathered from the interviews helped guide the implementation of a physical activity intervention relevant to the needs and interests of a rural adolescent population. Rural and urban residents often perceive and interact differently with physical activity environments so interventions should be properly adapted to fit the setting. While access to trails, parks, recreation areas, sidewalks, street connectivity, and diversity of land use have been found to support physical activity levels in urban settings, rural adolescents may not have access to such resources (Owen et al., 2006; Moore et al., 2008). Since rural areas likely have low population density, rural residents are likely to live further from community and environmental resources, making it more difficult for them to utilize such resources (Moore et al., 2010). While the correlates of physical activity in urban youth are well established, there is a lack of information regarding the barriers and opportunities for physical activity at the intrapersonal, interpersonal and community level in rural youth (Moore et al., 2008; Saelens, Sallis, & Frank, 2003). This project helped fill this gap by exploring rural adolescents' viewpoints on physical activity opportunities within the Muscatine community.

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This physical activity literature review suggests that regular physical activity is associated with a wide range of physiological and psychological benefits. Furthermore, the reviewed literature suggests that regular physical activity is complex behavior influenced by a variety of sociocultural factors. Lack of social support, rural living, unsafe parks or sidewalks, and limited access to physical activity space may prevent individuals from engaging in regular physical activity. Therefore, residents of rural areas may not be able to experience the physiological and psychological benefits associated with being regularly active. The presence of social support and greater access to safe activity space may provide individuals an opportunity to be regularly active and thus experience positive health outcomes. An aim of this project was to identify psychosocial correlates of physical activity for adolescents residing in a rural community. In order to experiences positive health outcomes, adolescents' levels of activity need to be supported by physical activity facilitators, while the impact of barriers to activity must be reduced.

In addition to exploring how physical activity is culturally and socially constructed, understood, and practiced, I also explored the construction of body image experiences among Muscatine adolescents. Cortes and colleagues (2001) suggest that value placed on body size is culturally and socially constructed. Given that the Muscatine community has a relatively large Hispanic population, many of whom are overweight or obese, exploring their perceptions of body image may provide insight into how body image is constructed socially and culturally within Hispanic and Caucasian adolescents.

Altabe (1998) used a battery of quantitative measures to assess weight-related body image and general appearance body image among various ethnic groups. Altabe

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found that Caucasians reported more body dissatisfaction than Asian-Americans, while Hispanic-Americans reported more body dissatisfaction than either Asian or African-Americans. Research on Hispanic women indicates that although they may report similar levels of body dissatisfaction as white women, they are more likely to rate themselves as attractive and report more positive attitudes toward obesity (Altabe, 1998; Franko, & Herrera, 1997). Altabe calls for additional research to explore Hispanic-Americans' body image experiences, as such experiences have been studied less than those of all other minority groups and Caucasians. This project helped answer that call by exploring body image experiences among rural Hispanic adolescents, many of whom are overweight or obese. With attention to cultural values of fatness and perceptions of a healthy body size, I hoped to provide insight into how the practice of health behaviors can be encouraged to support a healthy lifestyle, despite varying perceptions of a healthy body size.

Body Image

In the 1920s, Paul Schilder defined body image as "the picture of our own body which we form in our mind, that is to say, the way in which the body appears to ourselves" (Schilder, 1950). As researchers, practitioners, and educators have examined it over time, body image has evolved into a multi-dimensional construct studied across a wide range of disciplines, including psychology, cultural studies, sociology, and public health (Davison & McCabe, 2006; O'Dea, 2005; Schwartz, O'Neal Chambliss, Brownell, Blair, & Billington, 2003). While it is beyond the scope of this project to provide an exhaustive account of all these conceptualizations, it describes a few that are most commonly used within the body image literature.

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Slade (1994) defined body image as “a loose mental representation of body shape, size, and form which is influenced by a variety of historical, cultural and social, individual, and biological factors, which operate over varying time spans” (p. 302). Muth and Cash (1997) suggest body image is conceptualized as a “multi-dimensional construct that represents how individuals think, feel, and behave with regard to their own physical attributes” (p. 1438). When describing how the construct is typically conceptualized in the body image literature, Gleeson and Frith (2006) claim that “body image is usually described theoretically in terms of complexity and multi-dimensionality, and as a conscious and unconscious human experience informed by historical, cultural, social, individual and biological factors” (p. 80). Despite the slight variations among these definitions, common among them is the acknowledgment that body image is multi-dimensional and influenced by a variety of psychosocial and cultural factors.

A feminist socio-constructionist approach exploring body image experiences provided participants of this study with an opportunity to share their constructed body image experiences with me. The use of an unstructured interview guide allowed me explore and understand what psychosocial and cultural factors were influential to the construction of body image experiences among adolescents participating in this project. The goal of this approach was to allow the conceptualization of body image to develop and emerge from the themes gathered during the interviews, rather than attempting to categorize participants’ body image experiences according to definitions that exist in the current literature.

Cash and Pruzinsky (2002) suggest the construct of body image is ambiguous because researchers define it in so many different ways and these definitions are often

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used interchangeably. Thompson and colleagues (1999) identified 16 definitions of body image that emerge from research on body image. These definitions include weight satisfaction, size perception accuracy, body satisfaction, appearance satisfaction, appearance evaluation, appearance orientation, body esteem, body concern, body dysphoria, body dysmorphia, body schema, body perception, body distortion, body image, body image disturbance, and body image disorder. It appears that as advancements in the body image research continue to be made, the terminology used to define body image continues to grow.

Body Image Measurement

Despite this range of definitions, a common theme within the body image literature suggests body image is often measured along at least one of four dimensions: perceptual, cognitive, affective, and behavioral (Banfield & McCabe, 2002). The *perceptual* dimension involves the accuracy of an individual's judgment of body shape, size, and weight relative to actual body proportions. To measure perception, a schematic figure scale (Figure Rating Scale; Stunkard, Sorenson, & Schulsinger, 1983) asks a participant to indicate her perception of which figures best represent various body sizes, including figures she perceives to most closely represent her current figure and ideal figure. The *cognitive* dimension includes an individual's thoughts and beliefs concerning one's body shape and/or appearance. Asking individuals to identify the body size they think they currently look like can assess cognition via a schematic figure scale. The *affective* dimension addresses an individual's feelings toward her body appearance. Using the same schematic figure scale, affect is often measured by asking an individual to identify the body size he feels he currently look like.

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Receiving the least amount of attention is the *behavioral* dimension. This dimension is often debated among body image researchers because behaviors can be argued to be either a symptom or a consequence of other dimensions (Banfield & McCabe, 2002). For example, negative thoughts toward one's body can result in an individual's weight management behaviors, such as restrictive dieting or adhering to an extreme exercise regimen. In this case, behavior is a consequence of the cognitive dimension of body image. However, if an individual fails to see bodily changes such as weight loss or increased muscle size following an exercise program, she may have negative feelings, such as low self-efficacy, toward physical activity. In this case, behavioral disturbances lead to problems associated with the affective dimension. Researchers' conceptualizations of body image may contribute to the dimensions they choose to measure or account for. For example, the belief that body image includes thoughts and feelings may cause a researcher to include affective and cognitive measures while excluding behavioral measures. This can be problematic if the researcher suggests she is examining a more global conceptualization of body image, perhaps a conceptualization purportedly including all four dimensions of body image that in reality only accounts for two,

According to Kostanski, Fisher, and Gullone (2004), the most commonly used measure of global body image is the Figure Rating Scale (FRS) (Stunkard, Sorenson, & Schulsinger, 1983). The FRS asks participants, using schematic figures, to indicate which figures best represent various body sizes, including their current and ideal figures. While the FRS is often used to measure global body image, the scale does not account for the behavioral dimension. While exploring these four dimensions provides insight into

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how individuals behave toward and perceive, think, and feel about their body, such dimensions attempt to fit body image experiences into simple, fixed categories. This specific exploration fails to recognize that an individual's body image experiences may exist as a complicated, dynamic, embodied entity.

While body image has often been conceptualized as complex and multi-dimensional, informed by historical, cultural, social, individual, and biological factors, the construct is often treated as a concrete, fixed representation that exercises control over people's behavior. When examining the relationships among motivation for sport activities body image, dieting behaviors, and self-esteem, De Bruin, Woertman, Bakker, and Oudejans (2009) used the *Multi-dimensional Body Image Questionnaire-Short Version* (Woertman, 1994) to measure body image. This self-report questionnaire assesses the perceived and social components of the image of the face and body. Responding to various body parts, participants use a nine-point Likert-item scale from 1 (too thin) to 9 (too fat) to rate their perceived body shape. A score of five indicates satisfaction, a score above five indicates perceiving oneself as too fat, and below five as too thin. De Bruin and colleagues (2009) concluded that weight-related sport participation was significantly associated with body image concerns, more weight control, and lower self-esteem. As is evident in the description and interpretation of the participants' scores on the questionnaire, this measure accounts for the perceptual dimension of body image yet is used to draw conclusions for what appears to be a more general conceptualization of body image. The authors do not state that they are using this questionnaire to assess only the perceptual dimension, but rather indicate that the questionnaire represents the general construct of body image. The perceptions an

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individual hold toward his body comes to represent his overall body image experience, thus failing to account for his cognitions, affect, behaviors, but also the dynamic negotiations he may participate in during his day-to-day experiences with body image.

Pruis and Janowsky (2010) compared body dissatisfaction and other aspects of body image in younger and older women using traditional questionnaires such as the *Body Shape Questionnaire* (*BSQ*) (Cooper, Taylor, Cooper, & Fairbum, 1987) and the *Figure Rating Scale* (*FRS*) (Stunkard, Sorensen, & Schulsinger, 1983). The *BSQ* uses a six-point scale (1 = never, 6 = always) to indicate how often each statement about body shape, weight, and composition has been for the participant in the past four weeks. The *FRS* is composed of nine line drawings of bodies that progressively increase in size from very thin to overweight. Participants are asked to select the bodies they perceive to represent their current and ideal body size. Body dissatisfaction is calculated as the discrepancy between the perceived current and ideal bodies. Using results from the *BSQ* and *FRS*, Pruis and Janowsky concluded that both younger and older women have similar levels of body dissatisfaction. Similar to the De Bruin and colleagues (2009), Pruis and Janowsky only measured the perceptual dimension of body image, yet concluded that this perceptual measurement assesses body image as a global construct. Also problematic in assessing dissatisfaction as a discrepancy between one's perceived actual and perceived ideal body size is that body image is reduced to a singular, static structure.

Cash and Pruzinsky (2002) suggest that body image is often perceived to be trait-like, thus remaining static despite situational changes. Gleeson and Firth (2006) maintain that researchers, particularly within the field of health psychology, assume it is necessary to simplify body image in order to make the construct measurable and operable.

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Researchers often use a single measure such as a figure rating scale in an effort to make body image measureable. While often acknowledged as a multi-dimensional construct, body image is often reduced to a concrete, fixed, and singular structure when measured in research studies.

The purpose of my critique of the reviewed body image literature was to demonstrate how body image is often measured as a fixed, uni-dimensional construct. While this literature helps inform our understanding of body image, I believe body image is a dynamic and complex construct that ebbs and flows in our daily lives. In listening to and learning from participants, I hope to locate body image as an experience constructed from their particular life situations. Since the adolescent body image experience, similar to physical activity, is at the heart of this project, the following section discusses literature on adolescent body image.

Adolescent Body Image

Adolescence is a time of substantive physiological, cognitive, and social change. During this developmental period, 24-46% of girls and 12-26% of boys have reported body image concerns (Presnell, Bearman, & Stice, 2004), which may be related to adolescents' acute awareness of their weight and body (Ata, Ludden, & Lally, 2007). According to Hesse-Biber (1996), normative body ideals are perpetuated within the mainstream culture, promoted by the medical and beauty industries, and encouraged by friends and families. While ideal standards are unrealistic and virtually impossible to attain, they are accepted and internalized by people of all ages, races, and cultures. Given the pervasiveness and unlikelihood of achieving these ideals, a mismatch between actual and ideal bodies is possible. When internalized, adherence to such norms can lead to

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these norms informing self-concepts.

Adolescent girls' dissatisfaction typically reflects a desire to be thinner, while adolescent boys' dissatisfaction often reflects a desire to be bigger, taller, and more muscular (Smolak, Levine, & Thompson, 2001). As adolescent girls move through puberty, they experience changes in their body shape and size, including the widening of hips and increased distribution of fat in breasts, thighs, and hips, as well as hormonal changes such as an increase in estrogen (Dubas & Peterson, 1993). Rosenblum and Lewis (1999) found that adolescent girls are increasingly dissatisfied with their hips, thighs, waists, and overall weight as they progress from early adolescence to late adolescence. Throughout adolescence, girls also experience increases in weight and adiposity. Rosenblum and Lewis (1999) suggest that these physical changes move girls away from today's ideal female body type, which is thin, slender, and fit.

While body image is far less examined and understood in adolescent boys, current research suggests the pressure to increase one's muscle size is linked to body image concerns in adolescent boys (McCabe & Ricciardelli, 2003; Carlson Jones, 2004). Adolescent boys experience changes such as amount of body and facial hair, acne, muscle mass, voice change, and increases in testosterone (Abbassi, 1998). Thus, changes, and perhaps lack of change, in physical status appear to be related to body dissatisfaction in adolescent youth. Since the presence of both female and male body ideals exist in today's society and given that boys and girls report body image concerns, it is necessary to examine how such ideals impact the development and maintenance of body image in both adolescent boys and girls. This increased attention to the body, coupled with the sociocultural pressures to conform to Western body ideals, puts

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adolescent boys and girls at risk for developing body image concerns, which in turn may have devastating, long-lasting impact on their sense of self.

Historically, developmental theorists have suggested that adolescence represents a time to integrate the various identifications experienced during childhood into a more complete identity. Miller (1993) suggests that adolescents seek to find their true selves through relationships within their sociocultural environment, which includes peers, clubs, religion, political movements, and their school. By providing messages about appropriate behavior and/or celebrating particular body ideals, the sociocultural context plays a part in the formation of an individual's identity (Miller, 1993). Among others, Levine and colleagues (1994) suggest that heightened awareness and concern with one's body occurs when the sociocultural environment promotes and uses physical appearance as a measure of self-worth or success. The cultural prescription of an ideal body is particularly problematic when these ideals are impossible to attain. Subsequently failure to attain such unrealistic standards is likely to have a negative impact on one's sense of self.

Popular culture, school policies, the medical profession, and the public health field have emphasized the importance of engaging in physical activity to achieve and maintain a healthy body (Evans, Davies, & Rich, 2008). While the public health field promotes physical activity participation as part of a healthy lifestyle, popular media, such as television, movies, and the Internet, portray physical activity as a means to achieve the ideal body mold (Dunkley & Wertheim, 2001). Adolescents, devoting an average of seven hours and 38 minutes to entertainment media across a typical day (Kaiser Family Foundation, 2010), are inundated with messages suggesting that physical activity participation is necessary to achieve certain body ideals and may come to understand

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physical activity as an appearance related behavior rather than part of a healthy lifestyle.

Strelan, Mehaffey, and Tiggemann (2003) suggest individuals who engage in exercise for appearance reasons, such as weight control, tone, or attractiveness, experience increased body dissatisfaction more often than individuals who engage in exercise for functional reasons, including enjoyment, health, or fitness. Current societal pressures to be thin, fit, and muscular coupled with the public health field's promotion of physical activity as a way to achieve positive health outcomes, suggests a need to examine how these factors influence body image among adolescents, as they are constantly exposed to such messages.

Sociocultural Factors

Among the myriad of sociocultural factors influencing adolescent body image are socioeconomic status, mass media consumption, the public health sector, parents, and peers. Brabazon (2006) suggests "the working class is socially and spatially excluded from infrastructure and facilities, including those promoting health" (p. 70), while the middle- and upper-class citizens can afford to engage in physical activity as part of their lifestyles. Given the lack of resources, such as leisure time and money, many lower SES children are excluded from the activities that would benefit their health, which may negatively impact their sense of well-being. Even if health opportunities, like physical activities, do exist within the school setting, overweight and/or obese adolescents are often excluded from such opportunities due to the stigma associated with obesity, a stigma that includes being perceived or treated as lazy, fit, or unfit (O'Dea, 2005). In addition to the more obvious occurrence of reduced physical activity patterns, equally important to acknowledge is that adolescents become more sensitive about their weight

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and experience lower levels of self-esteem if they internalize this stigma (O'Dea, 2005). The school setting may be the only resource available for students to be physically active. However, only five states require PE in every grade K-12, while only one state meets the nationally recommended 150 minutes per week of PE in elementary schools and 225 minutes per week in middle school (Shape the Nation, 2010). Since regular physical activity participation is associated with positive health outcomes, the lack of physical activity opportunities in the school setting does not allow adolescents to experience the health outcomes associated with regular physical activity, which may include a positive experience with their bodies.

Media, parents, and peers are factors that have been found to contribute to adolescent body image. In explaining body image dissatisfaction among young people, sociocultural models "propose that society promotes an appearance culture that highlights the desirability of physical attractiveness and beauty for both males and females" (Lawler & Nixon, 2010, no page). Cultural ideals of female beauty endorse thinness while a muscular, mesomorphic body is celebrated as the ideal body for males. Ata and colleagues (2007) suggest media usage is fairly common among adolescents. The mass media transmit messages about what an ideal body should look like for both males (i.e., muscular, tall, toned) and females (i.e., thin, slender, fit). Since many adolescents use multiple mass media channels, including television, internet, magazines, and books, they are constantly exposed to these idealized images Durkin, Paxton, and Sorbello (2007) and Jones, Vigfusdottir, and Lee (2004) have found that adolescents experience body dissatisfaction because they cannot attain the ideal body types presented in the media. It appears these unattainable body ideals and beauty/image standards augment the

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internalization of such images, which ultimately undermines adolescents' satisfaction with their bodies.

In addition to the mass media's presentation of body ideals, the public health sector has designed and delivered various campaigns and interventions aimed to reduce obesity and promote physical activity levels. For example, the *VERB* youth campaign encourages youth to be physically active every day. The campaign combines paid advertising, marketing strategies, and partnership efforts to reach 'tweens' (aged 9-13) (CDC, 2010). The goals of the *VERB* campaign include the following: to increase knowledge and improve attitudes and beliefs about tweens' regular participation in physical activity; to facilitate opportunities for tweens to participate in regular physical activity; and to increase social support and encouragement of tweens' participation in physical activity (CDC, 2010). This campaign demonstrates the portrayal of physical activity as lifestyle behavior, rather than an appearance related behavior.

KidsHealth (http://kidshealth.org/) is the most-visited site on the Web for information about health, behavior, and development from before birth through the teen years. When accessing the 'For Kids' webpage, children and adolescents are able to calculate their BMI. Once calculated, the child's BMI is posted on a graph that classifies him or her as underweight, healthy weight, overweight, or obese (KidsHealth, 2011). While activities and messages, such as those presented on KidsHealth, are intended to spark a healthy lifestyle, these messages may have undesirable effects on youth.

O'Dea (2005) suggests that the 'control your weight' messages emphasized by some health campaign messages identify overweight individuals as "failures, deviants or moral outcasts who need some sort of 'treatment'" (p. 259). If such campaigns continue

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to emphasize weight control, adolescents may take extreme measures to control their weight or suffer dissatisfaction with their bodies if they feel they need to lose weight and are unsuccessful in their attempts. Rather than portraying physical activity as an enjoyable lifestyle choice contributing to overall quality of life, these messages risk portraying exercise and physical activity only as a means to become more fit or to lose weight. Research suggests that a preoccupation with weight is related to poor body image (Ata et al., 2007; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Given these findings, repeated exposure to messages suggesting that physical activity participation should be done to lose weight may undermine an adolescent's enjoyment of physical activity, which in turn, may negatively impact body satisfaction.

Parents act as primary role models for their children by modeling acceptable behaviors and providing messages that are consistent with their own personal beliefs or worldview (Rodgers & Chabrol, 2009). As primary socialization agents, parents communicate messages to their children regarding their appearance and eating behaviors. Research has found that through verbal comments parents *directly* influence adolescents' beliefs about and attitudes toward dieting, eating, and weight concerns (Fulkerson et al. 2002; Haines, Neumark-Sztainer, Hannan, & Robinson-O'Brien, 2008; Neumark-Sztainer et al., 1998). Such comments may include commenting on a child's weight; encouraging the child to diet; commenting on a child's food choices; making intentionally hurtful observations or comments made 'as if to be helpful'; and generally discussing weight issues. In other words, direct comments are aimed at the adolescent's weight and/or eating behaviors. Parents have also been found to *indirectly* influence adolescents' weight and eating beliefs and attitudes through modeling (Fulkerson et al.

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2002; Huon, Lim, & Gunewardene, 2000; Strong & Huon, 1998). Indirect influences occur when a parent comments on his or her own weight/eating behaviors or when the parent models weight-related behaviors. Examples of parent modeling behaviors include: dieting; comments on their own weight concerns; restricting own food intake; and comments reflecting the importance to the parent of being thin. Parents' direct commenting and own modeling of weight-related behaviors have been linked to adolescent dieting, restriction and weight-loss attempts, disordered and high-risk eating, and increased engagement in risky behaviors, including fasting and use of laxatives and diuretics (Dixon, Adair, & O'Connor, 1996). As a result, parents' attitudes, thoughts, and own behaviors can be particularly influential on adolescents' attitudes toward their own body images.

During adolescence, boys and girls become more peer-oriented and seek out approval, acceptance, and support from their friends (Ata et al., 2007). Research suggests that friends' body image concerns and eating behaviors predict adolescents' own body and/or weight concerns and behaviors (Paxon, Schutz, Wertheim, & Muir, 1999). Friends who encourage dieting, internalize idealized body image, discuss weight concerns, and engage in restricted eating behaviors which have adverse effects on body image (Ata et al., 2007; Paxon et al., 1999). When investigating sociocultural influences on adolescent body image and body change strategies, McCabe and Ricciardelli (2001) found that adolescent girls perceived that their male and female peers provided general feedback regarding their body, while also encouraging them to lose weight and increase muscle tone. Interestingly, the authors found that female peers encouraged both their male and female friends to lose weight regardless of BMI, while male peers encouraged

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low BMI friends to gain weight and increase muscle tone. Given the lack of peer feedback reported by adolescent boys, the authors suggest that clear peer messages regarding the ideal male body may not yet have been developed or transmitted. However, boys do appear to have some awareness of cultural body norms as they encouraged low BMI friends to gain weight and increase muscle tone. This research suggests peers play an integral role in the development and maintenance of body image within the adolescent age group.

Parents, peers, media, the public health field, and the school environment all impact the development and maintenance of adolescent body image. Much of the reviewed literature suggests that sociocultural factors have a one-way causal relationship to adolescent body image. Rather than examining the causality of body image, this study contributes to the adolescent body image literature by exploring how sociocultural factors and body image influence one another in a dynamic, reciprocal manner.

Positivist body image research has contributed to our understanding of body image in various respects. For example, we have insight into the prevalence of adolescent body image concerns (Presnell, Bearman, & Stice, 2004) and understand that discrepancies occur between individuals' current and ideal body size or shape exist (Pruis & Janowsky, 2010). A small, but growing body of literature has more recently examined body image as a complex and dynamic process (Evans, Rich, & Holroyd, 2004; Johnston, Reilly, Kremer, 2004; Wright, O'Flynn, & Macdonald, 2006). These studies have used qualitative and reflexive paradigms to explore individuals' fluid and active relationship with their social environment, suggesting that body image is much more than a static representation of one's body. This work is particularly useful in complicating body

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image, and the current project contributes to this literature by conceptualizing and examining body image as a multi-dimensional and dialogic process.

The remainder of this chapter reviews literature that critiques the traditional approach to examining body image. By providing a review of this critique, I do not intend to suggest that traditional body image research is not useful in understanding body image. Rather, I hope to illustrate how the health promotion and sport and exercise psychology fields can grow and advance with the inclusion of a reflexive paradigm that provides a more contextualized and subjective understanding of body image.

Critique of Traditional Body Image Research

Within the history of the clinical psychology and psychiatry disciplines, research has focused on eating disorders in females and on dissatisfaction with the body. Gleeson and Firth (2006) assert that researchers often interpret a discrepancy between actual and ideal body shapes as inherently meaningful; that is, the discrepancy signifies body dissatisfaction. These authors argue it is possible that such a discrepancy may not be troubling for some individuals. Following historical trends, a large amount of literature continues to focus attention on understanding body image among females with eating disorders. While acknowledging its value, Cash and Pruzinsky (2002) suggest this literature fails to capture the diverse nature of these body experiences. These authors call for a conceptualization of body image that transcends the pathology driven paradigm, which focuses on body dissatisfaction or dysfunction, and a move toward a paradigm that also includes positive body image experiences, such as resiliency and adaptive responses.

With an awareness of this seemingly natural conceptualization of body image as a pathological experience that can be objectively measured, I looked to understand body

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image from the subjective perspectives of participants. Through an unstructured interview approach, adolescents defined and conceptualized body image based on their own life situations, free from a definition that objectively placed them on a negative to positive body image continuum.

As mentioned above, research has typically examined body image within the individual, which unfortunately privileges the notion that body image primarily resides under one's control while ignoring the critical fact that individuals operate within a social context. Like the simplistic measurement of body image, the social environment is often streamlined in terms of social factors acting as causal antecedents to image concerns and/or dissatisfaction with one's body (Grogan, 2006). Gleeson and Firth (2006) argue that the social and cultural context is often explained only as having an influence *on* body image, so that body image is a product of past social and cultural experiences.

To illustrate this problematic explanation of social influence, one can turn to the aforementioned research concerning media's influence on adolescent body image. Researchers have found that adolescents experience body dissatisfaction because they cannot attain the ideal body types presented in the media (Durkin, Paxton, & Sorbello, 2007; Jones, Vigfusdottir, & Lee, 2004). Apparently, the unattainability of these body ideals and beauty standards augment the internalization of such images, which ultimately undermines an adolescent's satisfaction with his or her body. Thus, the social influence of mass media is described as having a uni-directional impact on body image. This uni-directional approach obscures the possibility that individuals actively engage with their social and/or cultural environment and fails to account for how body image can influence one's behavior in such settings.

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Critique of Positivist Conceptualization of Body Image

Since the study of body image has its roots in psychology and psychiatry (Grogan, 2006), body image and weight concerns, like other phenomena studied in the social sciences, have typically been examined within the positivist paradigm. As the traditional view of the scientific method, positivism continues to dominate research across a wide range of disciplines and is often perceived as superior to other paradigms. According to McNamee (2005), positivism is the "patient accumulation of facts that are tested against experience in a controlled manner so as to become more certain of the order of the natural world" (p. 5). Riley and colleagues (2008) suggest that traditional research has attempted to describe, record, and verify the reality of body experiences, including weight concerns, body management techniques, and body image dissatisfaction. Researchers attempt to reduce body image to an object that can be measured across time, people, and culture. While all quantitative research is not positivist, a great deal of the body image research is measurement driven, often an element of positivist research. While body image measurements, such as questionnaires and rating scales, provide insight into how individuals perceive their bodies, such measurement-driven approaches fail to account for a subjective and contextualized understanding of body image.

Similar to the reviewed body image literature in this chapter, much of the research in the psychology of sport and physical activity field draws from the broader field of empiricist psychology. According to Gergen (2001), empiricist psychology seeks to explain human behavior as the internal possession and rational decision-making power of the individual. While the sport and physical activity psychology literature accounts for individuals' environment, the socio-cultural aspects of the environment are often

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described as objective factors affecting behavior. For example, Social Cognitive Theory (SCT; Bandura, 1977, 1986) introduces the concept of reciprocal determinism to explain the relationship both between and among behavior, cognition, and external stimuli. SCT contends that behavior is regulated through cognitive processes, which ultimately assumes that people are individually responsible for their behavior. Furthermore, SCT maintains that people have the capacity to make their own decisions and ability to take the actions needed to adjust their environments to meet their needs. Such assumptions again refer solutions back to the individual. Similar to other traditional sport and physical activity psychology theories, such as Theory of Planned Behavior (TPB; Ajzen, 1985) and Goal Orientation Theory (Nicholls, 1984), SCT fails to examine how sociocultural environments are constructed to maintain power and privilege, naturally separating individuals from their social and cultural world and failing to account for an understanding of lived experiences that are constructed within one's environment. By attending to relationships of cultural, social, and economic power and privilege in rural adolescents' experiences, this project expands the sport and physical activity psychology literature by recognizing that behavior, cognition, and affect are all embedded within sociocultural environments.

Drawing on a social constructionist paradigm, I argue that truth and/or meaning are constructed through our encounters with the realities of our worlds (Crotty, 2003). Since these realities vary from person to person, researchers neither assume nor propose that experiences and/or observable occurrences are universal, nor can they assume that one objective truth exists. Since our experiences are influenced by individual interpretations and personal encounters, social constructionist scholars suggest such lived

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experiences must be understood in the context and circumstances within which they occur.

Critique of Pathological Conceptualization of Body Image

According to Riley and colleagues (2008), much of the body weight research pathologizes body weight issues by suggesting that concerns such as eating disorders and body image dissatisfaction result from an individual's psychology, resulting in blaming the victim for experiencing body image concerns. This research is driven by the desire to establish causes, symptoms, and cures for these supposed illnesses. Today's dominant discourse suggests the self is a free, rational and self-determining individual who has an unexamined and unchallenged agency in making decisions (Einstein & Shildrick, 2009). Within the objectivist weight research, failing to maintain a thin, healthy body is a result of improper, irresponsible body management and unhealthy choices (Riley et al., 2008). By identifying an individual as pathological, researchers and/or clinicians transfer complete responsibility onto an individual to resist cultural ideals, discover solutions at the personal level, and make the choice to become healthy.

Rooted in empirical psychology and medicine, sport and exercise psychology research tends to explore and explain behavior at the intrapersonal level. An individual's behavioral practices, such as exercising and eating, are often perceived to occur as a result of pathological tendencies of individual psyches, such as body image concerns or social physique anxiety (Berry & Howe, 2000; Haase & Prapavessis, 2001). Thus, an individual who may experience psychological distress, adhere to an excessive exercise regimen, or restrict food consumption is often understood and/or explained as engaging in such behaviors due to a psychological deficit or dysfunction (Malson & Swann, 1999).

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This research locates a treatment of any negative body image and other body concerns within the individual sphere, including personal attitudes and behaviors (Bonci, Bonci, Granger, et al., 2008; Markula, Burns, & Riley, 2008), displacing the role of the sociocultural context plays in creating, negotiating, and/or maintaining individuals' experiences with their bodies.

In addition to constructing body image as a problem at the individual level, positivist research also tends to identify weight and body concerns as women's pathology (Riley, et al., 2008). This individualism reproduces the male-as-norm, and women-are-deficient discourse that is prevalent in much of the body image literature (Wolszon, 1998). The aforementioned body assessment techniques and body image definitions primarily focus on appearance and weight (Farrell, Lee, & Shafran, 2005; Kostanski, Fisher, & Gullone, 2004), which both society and the medical/health profession discuss largely as female concerns. Since females have consistently reported being less satisfied with their bodies than males and more likely to adopt strategies to lose weight (McCabe & Ricciardelli, 2001), research has continued to locate body image concerns primarily among females, despite males' reports of dissatisfaction with their bodies (McCabe & Ricciardelli, 2003; Carlson Jones, 2004).

As is evident from the research discussed above, a great deal of the body image literature has been examined from a positivist paradigm. While researchers studying within this paradigm have provided useful and meaningful understandings of body image, the research has failed to provide an understanding of a more complex, dynamic, fluid, and embodied experience of body image. Rather, the positivist position has imposed a naturalistic and universal outlook on people's lived experience. To gain a more complete

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understanding of body image as an embodied experience from the perspective of adolescent girls *and* adolescent boys, this study turns for guidance to feminist and social constructionist principles.

Alternative Conceptualization of Body Image

Embodiment is “the intertwining of the mind and body, as well as to express a dynamic interplay-a reciprocity-between the whole person and the external world” (Einstein & Shildrick, 2009, p. 295). Since the embodied self is in a constant state of flux, there are no permanent features of identity. Rather, one’s identity is continually being negotiated and interacting with the individual body, the social body, and the body politic (Einstein & Shildrick, 2009). Since a social constructionist perspective accounts for the social and political context as well as the personal self, this approach can be useful in understanding health as a lived and embodied experience. An individual’s body image and physical activity experiences may ebb and flow as a result of his or her various life situations. For example, an adolescent’s body image experience may differ between the home setting and the school setting, suggesting that body image is not a static, concrete structure, but rather an embodied experience that ebbs and flows based on the interplay between the whole person (body *and* mind) and the external world. According to Crotty (2003), social constructionism is the epistemological view that argues there is no objective truth. Rather, “truth, or meaning, comes into existence in and out of our engagement with the realities in our world” (p. 8). The meaning of physical activity and body image are thus generated by an individual and do not exist as objects or things waiting to be discovered. Social constructionists believe that reality is dependent on mental activity; an individual’s interpretation of various occurrences and/or phenomena is

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important in the construction of meaning. A social constructionist's ontological view suggests that reality is understood in multiple, intangible mental constructions that can change as a result of personal and/or social experiences. Thus, reality is not objective, universal, nor fixed.

Summary

The purpose of reviewing the literature discussed in this chapter was to locate myself within this project and acknowledge literature pertinent to this project: health, physical activity, and body image. I have refrained from letting my personal understanding of relevant concepts and topics inform this project, and have instead let participants' understanding of relevant concepts and topics inform and guide the project. In order to gain a deeper understanding of the personal, embodied experiences of a particular population of rural Iowan adolescents (many of whom are overweight/obese and/or of Hispanic descent), this project was guided by grounded theory methodology (Charmaz, 2006), which seeks to explore and understand personal experiences, the social construction of these experiences and the meanings derived from them (Denzin & Lincoln, 2005). The next chapter describes my methodological choices.

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CHAPTER III

METHODOLOGY

There is much to be gained from the existing literature on adolescents' physical activity and health. However, the breadth and depth of rural adolescents' health experiences, in particular their physical activity, nutrition, and body image, remains unknown, since much of the literature is grounded in objectivist theoretical perspectives. Missing from the existing literature is an understanding of how intertwined social and cultural factors construct adolescents' health experiences in a rural setting. Grounded theory focuses on creating an explanatory theory close to actual experiences by basing propositions on themes that emerge across interviews (Draucker, Martsolf, Ross, & Rusk, 2007). Because grounded theory's explanatory power derives from accounts of direct experience of participants (Strauss & Corbin, 1998), its results are expected to hold relevance to participants' experiences of health and physical activity.

This chapter describes the process I used to explore the research questions posed in Chapter One. I approached this project from a feminist social-constructionist perspective to explore adolescents' embodied experiences within their historical, cultural, and social environment. In order to explore and understand adolescents' complex health experiences, I used grounded theory because the process allows for the induction of knowledge (see Table 1). Individual interviews, guided by grounded theory (Charmaz, 2000, 2002, 2005, 2006), feminist principles (Birrell 2000; Gill, 1994; Krane, 1994), and social constructionist principles (Gergen & Gergen, 2003) were utilized to explore physical activity and body image experiences from the perspective of adolescents.

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Before discussing my methodological choices, I provide a brief self-reflection to locate myself within this research endeavor.

Self-Reflection

My interest in and understanding of grounded theory and feminism have grown throughout my graduate career and fostered a need to explore my own research questions about adolescents' physical activity and body image experiences from these perspectives. Kirby and McKenna (1989) use the term *conceptual baggage* to describe one's personal reflections on his or her research interests. Feminist scholarship promotes the practice of self-reflection, which I found important in connecting with my participants, and allowed me to explore my personal perspectives and biases. Writing this self-reflective piece provided me the opportunity to more effectively connect to and understand my own experiences, which ultimately is necessary to understanding others.

Since I was an active participant during the interviews, it is appropriate to reflect on issues of self-disclosure. Andersen (2005) provides insight into when it is appropriate to self-disclose. Rather than asking if I should or should not self-disclose, Andersen suggests I ask myself, "Who is being served by my behavior?" (p. 10). Self-disclosure may be appropriate when disclosing personal information is in the service of the working alliance, helps foster the relationship among participants, or lets a participant know she or he is not alone in her or his experience. I attended to my use of self-disclosure by frequently asking myself, "Who is being served by my behavior?" If the answer was 'the participant' then I shared a small piece of my personal experiences. If the answer was 'myself' or 'not the participant', I refrained from using self-disclosure. For example, when a participant named Alex and I were getting to know each other at the beginning of

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the interview, he said he did not have much interest in physical activity but enjoyed playing video games in his free time. He asked me if I played video games when I was his age, and I disclosed that I in fact did a great deal of video gaming when I was in middle school. I felt this amount of self-disclosure was helpful in fostering our relationship. In sharing my personal experiences, when appropriate, I felt I was able to develop an authentic and trusting relationship with participants, while also providing an empathetic and nurturing environment for participants to feel safe in when they shared their experiences.

As I looked to explore rural adolescent physical activity and body image experiences, this project encouraged me to reflect on my own adolescent experiences. Throughout the process of this project, I remained cognizant that my personal adolescent experiences were likely to differ from the experiences I heard about during the interviews. As an adolescent, I grew up in an urban setting with access to a wide range of physical activity resources, including parks, sport complexes, community recreation centers, University sponsored camps, school sport teams, and a safe cul-de-sac in which to play neighborhood games. In addition to these resources, I had parents who supported and encouraged me to be active while a handful of siblings or friends were always available to play capture the flag or hopscotch. I spent the hours following the school day outside playing games or attending sport practices/games. I do recall being aware of my body during this time. Upon reflection, I was comfortable with my body and proud of its physicality and functionality. However, I soon realized that my bodily experiences were much different than my peers. While at practice for tennis or track, my girlfriends would often comment on how unhappy they were with their weight or with parts of their

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bodies. Following a two-hour practice, my closest friends would stay on the tennis courts to run countless wind sprints in an attempt to lose a few more pounds. When traveling for middle school tennis matches, my best friend's mom would monitor and comment on my friend's food choices, remind her that she should run a few laps around the court to warm-up or cool-down, and declare her van the 'no sweet van.' Many of my friends were self-conscious and preoccupied with their weight, made comparisons within our peer group, and exercised and dieted to be like the thin, beautiful images we saw in magazines and on television.

While my close peer group consisted of females, I did have a few close male friends. While we often played together and attended each other's sporting events, I cannot recall any conversations we had about our bodies. Yet, I would be remiss to discount such conversations and experiences. As mentioned in Chapter Two, adolescent male body image is not well understood, and I hoped to bring their body image experiences to the center by exploring body image and physical activity among a sample of middle school boys.

Participating in physical activity has been encouraged by our national health agenda to bring about various physiological and psychological health outcomes. I was interested in exploring how physical activity can be delivered and engaged to promote a broader sense of health, one not focused on weight status. Rather, I wanted to attend to the possibility for an adolescent experience to include a greater appreciation for what the body can functionally and physically do rather than one that focuses on what the body looks like or fails to achieve. These experiences guided my attention to physical activity and body image through a lens that accounts for a contextualized understanding of these

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concepts. During this project, I refrained from discussing my definitions and understanding of health, physical activity, and body image with participants because I wanted to ensure the theory being built was produced from participants' knowledge and experiences.

My professional interest in adolescent physical activity and body image grew and developed during my time at the University of Iowa. As a research assistant, I had the opportunity to work on a longitudinal research study examining the impact of physical activity on children's and adolescents' bone health and adiposity. While still ongoing, this project has yielded findings indicating that engaging in physical activity during childhood, even as young as five years old, has a positive impact on bone health and maintaining a healthy level of adiposity. As a teaching assistant, I taught various courses that promote physical activity to develop and maintain a high quality of life. The enthusiasm I have for these courses further cemented my desire to be involved in the promotion of healthy behaviors. I believe that my personal and social experiences, as well as my academic and research endeavors, provided me with the opportunity to explore adolescent physical activity and body image through a unique and useful lens. This is a lens that connected me with participants and provided an empowering context for participants to share their experiences so that I could hear their individual and collective voices as they discussed their embodied health and wellness.

Methodological Choices

According to Field and Morse (1985), qualitative methods are useful when attempting to explore and understand the sociocultural context of peoples' experiences and assess the specific beliefs and perceptions that influence behavior. I practiced

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feminist and social constructionist principles to provide a contextualized understanding of such experiences within a non-oppressive setting. This project's methodology applied principles of grounded theory, a type of qualitative research, to explore health experiences from the perspective of rural adolescents. In the coming text, I discuss why I selected feminist principles, social constructionist, and grounded theory principles as my methodological choices.

Feminist Principles

According to Stanley and Wise (1983), feminist theory is based on three themes. First, oppression is both a personal and political issue which guides the notion that women are oppressed in their own and shared experience with other women. Second, personal experiences are valuable in their own right, indicating that the personal is political. Thus, women's collective experiences can be a source of power, suggesting there is political, social, cultural, and interpersonal power in daily life. The final theme guiding feminist research is that a new understanding, known as feminist consciousness, is developed through consciousness-raising activities and experiences. By sharing experiences, individuals come to discover that issues they believed to be personal do, in fact, have social and/or political basis and solutions.

While early feminist work often privileged gender as the only category of oppression, many of today's feminist scholars recognize that the intersection of multiple categories of difference, including gender, race, class, sexuality, religion, and age, interact to establish relations of power (Birrell, 2000). My goal was to explore such lines of oppression within this project's adolescent population and enable participants to explore and discover both personal and collective solutions to their current life situations.

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By attending to intersecting categories of difference, I hoped to understand the possible inequities and oppression experienced by Hispanic and/or overweight/obese adolescents. Determining how power is produced, reproduced, and challenged is a primary goal of feminist research. Instead of viewing power as repressive, some feminists view it as productive: producing social meanings, relationships, and identities. I recognize that participants' personal and collective experiences may act as sources of power and I explored the possibility of participants' resistance to the dominating discourses and ideologies in their life situations. Often, power exists in a fashion that simultaneously privileges certain groups of people while oppressing or marginalizing other groups (Pringle, 2005). An individual's perceptions of reality are shaped and constrained by the dominant discourse and ideology that are privileged in a given society. I explored how participants perceived their experiences to be shaped or constrained by dominant discourses surrounding the body and physical activity and how they might try to resist those discourses.

While on the margins of sport and exercise psychology, feminisms have been noted as important theoretical frameworks within the field because they bring women's experiences into the center of analysis, contextualize sport and exercise experiences, and challenge assumptions of traditional psychological research, allowing for new forms of knowledge (Gill, 1994; Krane, 1994). This project contributes to the sport and exercise psychology literature by providing a critical application of a feminist perspective to the adolescent population that brings adolescents' experiences to the center of analysis and contextualizes their physical activity and body image experiences within their personal worldviews. In addition to challenging assumptions of traditional psychological research,

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this project provides an innovative form of knowledge to the health promotion literature by exploring physical activity and body image experiences from the adolescent perspective, which in turn informed a unique health intervention based on participants' particular needs and interests.

This project was novel in its effort to ensuring that the adolescent perspective and voice is heard. According to Walker (2007), educational, medical, and religious authority has been exercised to disqualify and/or contain the voice of those in marginalized or oppressed positions. For example, minority patients are more likely to report being the subject of negative attitudes during the health care process (Chen et al., 2005; Haviland et al., 2005) and these feelings of discrimination may negatively impact their assessment of quality of care received. Such negative feelings may lead to decreased adherence and follow-up in their medical care. Sorkin, Ngo-Metzger, and De Alba (2010) found that members of minority populations were significantly more likely than non-Hispanic whites to report discrimination. In an examination of how poverty and the lack of health insurance coverage were related to perceptions of racial and ethnic bias in health care, Stepanikova and Cook (2008) found that uninsured blacks and Hispanics were more likely to report they had experienced racial and ethnic bias in the health care they received than did their privately insured counterparts. Hispanic patients are more likely to report higher quality of care levels when health providers are friendly, openly express how they value the patient as a person, and participate in open and interactive dialogue (Gloria & Peregoy, 1996; Kennedy, 2003). During the interviews, I attempted to promote an authentic, open and welcoming environment for adolescents to share their

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experiences. By providing such a context, I hoped participants would feel valued, respected, and comfortable in sharing their experiences with me.

Dickinson (1999) explores the viewpoint that adolescents with diabetes are oppressed by health care professionals who provide care to their adolescent patients. Dickinson argues that adolescents' experiences with diabetes can mimic the experiences of an oppressed group. Oppression occurs when a dominant group has the ability to identify its own norms are the *right* ones and have the power to enforce such norms. Furthermore, the characteristics of the subordinate group are negatively valued and the status quo continues to prevail (Dickinson, 1999). Dickinson also argues that the subordinate group can develop feelings of low self-esteem and self-hatred due to being oppressed. Within the context of adolescent diabetes, decisions are made primarily by parents and health care professionals. Decisions are often reached on hard factors, mainly blood glucose levels. According to Dickinson (1999), emphasizing numbers, as is consistent with medical model practice, "often neglects the patient's social context and does not focus on the whole person" (p. 144). When exploring the personal meaning of diabetes, Kyngas and Barlow (1995) reported that adolescents felt controlled by and constantly questioned by their parents and health care providers in their diabetes care management. The constant surveillance from parents and providers, along with the strict requirements of their care plan, led to adolescents feeling guilty and depressed about self-care, while also feeling they needed to lie about glucose levels. Dickinson concluded that motivation and commitment to engage in healthy behaviors, such as adherence to a self-care diabetes program, can be enhanced when adolescents' voices are included in the decision making process.

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According to Garbarino (1999), any genuine understanding of children and their rights must arise out of empathy given that children feel just as adults and others feel. Garbarino (1999) suggests that an empathic consideration allows for a way of relating to the world that focuses on and understands the feelings, motives, and interests of others. Relating to others requires paying attention to, being aware of, and respecting their needs, interests, feelings, and positions. In order to provide satisfactory health care to minority and other traditionally oppressed groups, it is important to *listen* to their personal and collective voice.

Walker (2007) suggests that individuals in supposed authority positions should not assume their judgments ought to have authority for the people they are speaking about or holding power over. While health care providers may understand obesity from a medical perspective and can provide suggestions about how to reduce the prevalence of obesity, they do not represent the voice of adolescents. Adolescents, in relation to their physical activity and body image experiences, have often lacked what Walker (2007) refers to as dignity: the capacity to speak for the self about oneself. Individuals at the top of the hierarchical arrangement (i.e., obesity experts, health care providers) have set barriers by containing the speech of those most important in this particular context, adolescent boys and girls. Walker (2007) believes that having voice requires the will to speak and not be overwhelmed by intimidation or despair. Adolescents are often not given the opportunity to speak, due to a lack of political and/or social power. Consequently, they cannot say what they intend to say or cannot speak for their own experiences. I believe it was necessary to provide a context for those in marginalized positions to be heard. I strove to provide a safe and respectful context for adolescents to

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be heard and valued when they spoke of their embodied experiences of body image and other weight related concerns.

Social Constructionist Principles

While the research process can be defined and practiced in various ways, social science research often involves an examination to discover new facts and offer correct interpretations (Thomas & Nelson, 2001). This studious inquiry is conducted through a researcher's chosen paradigm. A paradigm is "a worldview that defines, for its holder, the nature of the 'world', the individual's place in it, and the range of possible relationships to that world and its parts" (Guba & Lincoln, 1994, p. 107). There are three components to any given paradigm: (1) an ontological question; (2) an epistemological question; and (3) a methodological question. Ontology is the study of the nature of being and is concerned with what can be said to exist. It asks the question: What is there that can be known about reality? Epistemology is the theory of knowledge embedded in a theoretical perspective and thus concerned with explaining how we know what we know; exploring the question: How do we know what we know (Crotty, 2003)? Finally, methodology, asking how a knower can go about finding out whatever she/he believes can be known, consists of the "strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and the use of methods to the desired outcomes" (Crotty, 2003, p. 3).

According to Crotty (2003), objectivism is the "epistemological view that things exist as *meaningful* entities independently of consciousness and experience, that they have truth and meaning in them as objects, and that careful (scientific?) research can attain that objective truth and meaning" (pp. 5-6). Objectivism is the epistemology that

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supports positivism, which endorses the use of experimental and survey research and statistical analysis of sampling and scaling measurements (Crotty, 2003). Within the social sciences, research has been dominated by positivism for the past 400 years (Guba & Lincoln, 1994). According to McNamee (2005), positivism is the "patient accumulation of facts that are tested against experience in a controlled manner so as to become more certain of the order of the natural world" (p. 5). There are three central ideas that provide the framework for positivism. First, positivism includes "a theory of historical development in which growth of knowledge contributes to the development of progress or social stability" (McNamee, 2005, p. 6). Second, positivism assumes that only a particular kind of knowledge counts as scientific. This knowledge is based on observations that can be made in the world. Third, positivism assumes that all research can be integrated into a unified system (McNamee, 2005). Positivist research is conducted from the bottom-up, using careful observation, systematic recording, and controlled experimentation to gather data that then predicts why particular phenomena occur or predicts the regularity of the world (Crotty, 2003; McNamee, 2005; Riley, Burns, Firth, Wiggins, & Markula, 2008).

While positivist research has yielded useful and productive findings advancing literature within the social sciences, the emphasis on objectivity is often criticized as some critical paradigms maintain that all research, including science, is a form of human knowledge and that "every judgment of science stands on the edge of error and is personal" (Parry, 2005, p. 32). Since human knowledge is created and negotiated within social contexts and interpreted in our minds, knowledge can never be completely objective. By reducing the number of constructs, concepts, structures, influences, or

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forces to a minimum, positivism simplifies human phenomena to non-rational, biological, or mechanical processes" (Slife & Williams, 1995, p. 128). Thus, the reductionist nature of positivism attempts to reduce a group of similar occurrences to a single, yet universal correct principle. An alternative to positivism, a social constructionist paradigm, argues that there is no one objective truth; rather, truth and/or meaning are constructed through our encounters with the realities of our worlds (Crotty, 2003).

The physical activity and body image literature has largely been examined through a positivist lens (as critiqued in Gleeson & Firth, 2006; Grogan, 2006); however, critical alternative approaches have contributed a rich understanding of physical activity and body image experiences (Collins, 2002; Evans, Rich, & Holroyd, 2004; Karsten, 2003). While researchers studying within the positivist paradigm have provided useful and meaningful understandings of physical activity and body image, the research has failed to provide an understanding of physical activity and body image as complex, dynamic, fluid, and embodied experiences. In an effort to provide a more contextualized understanding of participants' physical activity and body image experiences, my epistemological stance was grounded in social constructionism.

From a social constructionist perspective, lived experiences are dynamic, negotiated, and fluid, not mechanical static processes. Since these realities vary from person to person, researchers cannot assume or propose that experiences and/or observable occurrences are universal. Rather, because our experiences are influenced by individual interpretations and personal encounters, such lived experiences can only be understood in the context and circumstances in which they occur.

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Social constructionism assumes that all knowledge is historically and culturally situated and is a product of social interchange (Gergen & Gergen, 2003). As forms of inquiry, social constructionist theorists are interested in how people come to describe, explain, or experience the world (Gergen, 2003). Rather than developing knowledge from facts and categories awaiting discovery, it is instead socially constructed and agreed upon as truth (Bohan, 1997). The social constructionist approach proposes that socio-cultural forces have powerful constitutive effects on a person's body and psyche (Riley et al., 2008). Furthermore, Wolszon (1998) suggests that soaking up cultural norms is inevitably a part of life, so the social context does have a powerful and reciprocal relationship with the body.

A social constructionist approach theorizes about embodied experiences by proposing that the body is socially produced and this production can be multiple, unstable, contradictory, and variable. This approach helped me examine if and how these meanings were taken up, negotiated, and made local within participants' social context, a rural Iowa community.

Grounded Theory

Grounded theory, first developed by Glaser and Strauss (1967), is a qualitative methodology for developing theory grounded in data gathered from multiple sources and analyzed. Since theory emerges from the data, the developed theory is likely to provide insight, enhance understanding, and offer meaningful guides to action (Strauss & Corbin 1998). While grounded theory, as described and practiced by Glaser and Strauss (1967) and Strauss and Corbin (1998), has been influential in advancing qualitative methodologies, Charmaz (2002) argues that their work is located within the positivist

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realm. According to Charmaz, early grounded theory research (Glaser & Strauss, 1967; Strauss & Corbin, 1998) assumed that an external reality exists to be revealed by an unbiased, objective researcher. As an interpretive methodology, Charmaz's (2000; 2006) constructivist grounded theory does not accept that an objective truth is awaiting discovery, but rather, suggests that participants and the researcher mutually shape experiences and knowledge.

Given the complexity and multifaceted nature of physical activity and body image, an inductive and flexible process was useful in developing an understanding of rural adolescent physical activity participation and body image experiences, rather than attempting to explain those experiences through a previously constructed theory. Grounded theory is a qualitative inductive theory often utilized when there is an absence of information about a particular phenomenon (Sandelowski, Davis, & Harris, 1989). According to Stern (1980), "the strongest case of the use of grounded theory is in investigations of relatively uncharted waters" (p. 20). The participants in this project and their particular life situations were unique and not fully understood. In learning about them, I relied on grounded theory to provide me an opportunity to explore the largely uncharted territory of participants' physical activity and body image experiences as rural overweight or obese adolescents. An advantage of grounded theories and processes is the focus on real-life experiences and worldviews, rather than abstract concepts. By exploring real-life experiences and social processes, grounded theory principles allowed culturally specific perspectives to emerge from adolescents living in a rural community (see Figure 1 for the project's grounded theory process).

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While correlates of physical activity and body image are well established in the adolescent literature, less is known about physical activity and body image experiences within an adolescent population at risk of being metabolically unhealthy. The information provided by the participants revealed a unique perspective on physical activity and body image experiences that is missing in the current health promotion and exercise psychology literature. The adolescent perspective revealed gaps between understanding the adolescent experience and the goals of physical activity and body image research that attempts to intervene within this population. In the present project, the information gained the unique perspective of the participants was used to inform a middle school student health intervention based on the information shared in this project. Since this intervention was designed to meet the unique needs identified from participants' responses, I believe the intervention's outcomes will be more effective, such that physical activity participation attrition rates will be reduced and life-long physical activity levels will be established. I also believe that knowledge gained from adolescents' body image conversations and concerns can inform and contribute to the greater body image literature by providing a voice that is less well established in the literature.

Method

Participants

For the purposes of this study, I focused on adolescent boys and girls living in a rural Iowa community. I chose this sample pool for several reasons. Since this study was part of a larger middle school student health intervention project, the sample was selected from the 160 young people who represented the target population of the intervention.

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Through the Muscatine Heart Study (MHS), all 160 eligible participants were identified as metabolically healthy or unhealthy based on the components of the metabolic syndrome: waist circumference, blood pressure, triglyceride, HDL-cholesterol and glucose levels. MHS researchers projected that approximately 10% of their sample would be classified as metabolically unhealthy. However, based on metabolic syndrome scores, the overall prevalence of metabolically unhealthy adolescents in this sample was 15.4%. Given that existing literature cites low levels of adolescent PA and the prevalence of the metabolic syndrome within MHS participants, I chose to focus on rural adolescents living in Muscatine.

Data Collection

According to Denzin and Lincoln (2005), my personal interests and social location as a researcher cannot be ignored in the research process as I play a role in the production of knowledge. While I did not grow up in a rural community, I was able to reflect on my own adolescent health experiences to provide an embodied perspective during the research process. In this project, my role was to develop an effective interview guide, establish rapport with interviewees, audiotape interviews, and organize and analyze the data to collect useful information that would inform a theory relevant to rural adolescents' health experiences.

Muscatine Clinic Staff made initial contact with eligible participants. The staff members have worked with all eligible participants in past research endeavors and have developed rapport with participants. The staff members called the participant's parent/guardian, briefly described the project, and asked if the child would be interested in participating in an interview. I provided staff members with an introductory script that

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they referred to during the phone call to the parent/guardian (see Appendix A). If the adolescent and his or her parent/guardian agreed to participate, staff members asked for his or her availability and scheduled a time for the participant to come to the Heart Clinic for an interview.

Given the complexity and personal nature of physical activity and body image experiences, I decided one-on-one interviews would be the best approach to elicit such personal and sensitive information. Qualitative research seeks to collect rich, saturated data and does not necessarily require a large number of participants to achieve saturation (Denzin & Lincoln, 2005; Guba & Lincoln, 2005; Saukko, 2003). To gain the perspectives from the groups represented in the MHS, I aimed to get 3-4 participants from each of the six participant groups (Hispanic girls, Hispanic boys, normal weight girls, normal weight boys, overweight/obese girls, overweight/obese boys), for a total of 18-24 participants. I believed this number would produce an abundance of data and allow for saturation. The data collection consisted of 18 one-on-one, tape-recorded, unstructured interviews (see Table 2 for participant characteristics). To produce interview data of sufficient depth, I interviewed each participant in a safe and private place acceptable to the participant and me. Each interview was conducted in a private room at the Muscatine Heart Clinic (see Appendix B for informed consent).

I ensured the room was comfortable for participants prior to the interview, by providing comfortable chairs, water and granola bars, and adjusting the room temperature appropriately. Upon arrival, I welcomed each participant and his or her parent/guardian and introduced myself. I then asked the participant and parent/guardian to read, ask any questions, and sign the informed consent. Each participant was provided with the

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research incentive of $20 in Chamber of Commerce Bucks at this time. Each tape-recorded interview lasted approximately 60 minutes. Participants were assured that none of their responses would be identified with them personally and that data was to be stored in a locked cabinet and/or on a computer. An unstructured interview guide was developed to explore participants' physical activity and body image experiences (see Appendix C).

According to Patton (1990), this style of interviewing provides a context that is highly responsive and flexible to individual differences and situational changes. Applying a grounded theory perspective, the interview guide relied on an unstructured approach to allow participants the freedom to guide the discussion. Open-ended questions, reflecting broad topic areas, were included to help guide the interview and ensure relevant topics were addressed. Physical activity questions focused on types of physical activities in which participants engage; attitudes, beliefs and values related to physical activity; and perceived barriers to and facilitators of physical activity. Body image questions uncovered the process that participants experienced in developing and managing their body image and the pressures they encountered. Probes, like "Can you say a little more about…", were used to elicit more detailed responses.

Trustworthiness and authenticity are valuable in this approach while the positivist notion of the researcher-object of study relationship is not valued. Sparkes (2002) suggests scholars should "consider repositioning our theories and data in relation to the life as lived, and be a little more cautious about how, when, and why we turn storied lives into categories and theories" (p.9). Instead of fitting lived experiences into categories, such experiences should be treated as detailed, focused, and full data. This detailed data

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"reveal participants' views, feelings, intentions, and actions as well as the contexts and structures of their lives" (Charmaz, 2006, p. 14).

To develop an open and collaborative relationship with each participant (DiCicco-Bloom and Crabtree, 2006), I used active listening skills and made my best effort to remain a sensitive and nonjudgmental observer. I believe my interviewing skills provided participants an opportunity to produce full and rich descriptions of their own experiences and I paraphrased and asked for clarification when needed to ensure accurate interpretations of their stories.

At the end of each interview, participants had the opportunity to add anything else they wished to contribute. Once the interview was completed, participants were thanked for their time and given a debriefing statement if they should have any concerns or questions in the future (see Appendix D).

Memo-Writing

During the data collection process, I engaged in memo-writing by keeping a reflective journal. In an effort to immerse myself in the research process, I wrote in my journal after each interview. If I did not have time to write immediately following an interview, I wrote a reflection as soon as time allowed. I wrote brief memos to summarize the content of the interviews, record longer definitions of the codes, and reflect on my initial impressions of the data, such as my thoughts about the relationships between and among codes.

The following is an excerpt taken from a memo written after interviewing Matt, Participant 16:

> Matt came in for interview at 2:00pm. Wow, a very difficult (unexpected) interview for a few reasons. Matt was not very talkative and not willing to

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> expand much. Started to tear up and get upset when we started talking about diet/nutrition. One week ago, his dad was diagnosed with diabetes. I did not push much with this as Matt seemed uncomfortable and about ready to jet! He became a bit resistant in answering. I encouraged his own healthy choices and changed interview direction. I do kind of wish I probed a bit more: What is it in particular about diabetes that scares you? Rest of the interview went well.

At the start of subsequent interview day, I read my memo entries to remind myself of what had occurred in previous interviews. If I wrote about a time during the interview that did not go as well as I had anticipated, I spent time thinking of ways I could better communicate with my participants. After revising my interview approach or re-directing my line of questioning, I wrote memos describing the changes I made and reflected on the effectiveness of my revised approach. I repeated this process after each interview. Additionally, each memo I wrote served to establish codes during the analysis phase and was used to inform the constructed grounded theory. The memos provided an abstract conceptualization of what occurred throughout the two weeks of data collection and allowed me to attach these abstract thoughts and concepts to the grounded theory.

Transcription

The process of transcribing the interviews began immediately following the first day of data collection and continued until all 18 interviews were transcribed. The transcribed interviews yielded 327 pages of text to be coded and analyzed. All names have been changed to protect the identity and confidentiality of participants and their significant others. Using data coding principles recommended by Charmaz (2006) and Creswell (2007), I approached the analysis process from both a line-by-line perspective and incident-by-incident perspective. The line-by-line coding process (Creswell, 2007) included the reading of each transcript, one at a time, from start to finish. I read each transcript, line-by-line, three separate times. Following each transcript reading, I re-read

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my memos and journal entries, adding any additional thoughts or insight I had after having read the transcript. I made new memos as questions, ideas, and thoughts about the analysis occurred as I continued to code the data.

While my initial analysis did include line-by-line coding of transcriptions, I applied principles of the incident-by-incident approach (Charmaz, 2006) by listening to each audio file in its entirety, multiple times. This incident-by-incident approach is often used when context is an important component in understanding participants' experiences (Charmaz, 2006). I felt the combination of these two approaches strengthened my analysis as the line-by-line coding was useful in identifying emerging codes, concepts, and themes; while the incident-by-incident approach was useful in contextualizing the codes, concepts, and themes within participants' subjective experiences.

Coding Procedures

I followed the coding procedure format suggested by Charmaz (2006), which culminated in the articulation of a theory that describes the health experiences of adolescents living in a rural community. The data analysis process is outlined in Table 1. The basic idea of a grounded theory analysis is to read and re-read a textual database in an effort to discover variables and the relationships among these variables. The first step, open coding, identifies, names, categorizes, and describes phenomena found in the data (Charmaz, 2006; Neuman, 2003). To allow grounded codes to emerge from the data, I made an effort to put aside my preconceptions, biases, and previous knowledge base of the interview content and instead focus on allowing new themes to arise out of the data. I used this initial open coding approach to examine the transcripts line-by-line and separated the data into components by assigning a code or label to data units. I identified

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codes in each of the 18 transcripts, resulting in over 500 line-by-line codes which were recorded in an excel file. Examples of the open coding process can be found in Table 3. Despite my efforts to remain open to new themes emerging from the data, many of the emergent codes and themes support theoretical constructs already present in existing health and psychology literature, namely constructs related to Self-Determination Theory (Deci & Ryan, 1985) and tenets of ecological models (Sallis et al., 2006; Spence & Lee, 2003).

Once I identified all of the emerging codes and began to see themes, I began axial coding (Charmaz, 2006; Neuman, 2003) by relating codes to each other to form categories. I created a word document with the actual coded data for each category cut and pasted underneath that category. The axial coding helped me identify relationships between categories to discover causal connections among all 18 transcripts. Examples of the axial coding are found in Table 4. In constantly comparing the data, the repeated appearance of identified themes was noted and subsequently included in the constructed theory. Rather than using a software program such as ATLAS.ti, I chose to manually code the data. This process allowed me to connect with the data in such a way that I felt familiar enough with it to create a theory grounded in the categories and themes that emerged from the data. By breaking down the data into smaller components, I was able to visually organize it by categories, which allowed me to begin higher-order coding, also known as selective coding.

The goal of selective coding is to choose a core category and then relate other categories to this core category. This process allowed me to develop a central theme around which other factors are centered. The quotes included in the results section fit

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within each of the selective coding categories to reflect the meanings around health, physical activity, and body image. I compared and contrasted the categories across gender and health status, as well as with the existing literature, to further theorize about the findings. This practice of selective coding further solidified the central categories and integrated the themes to explain how the data responded to the exploratory research questions.

While my intention was to develop a theory grounded in the experiences of the 18 participants, the data analysis process, instead, revealed a model that visually represents the experience of health among these 18 participants. The coding process guided the development of the constructs framing the proposed model presented in Chapter Five. This coding process helped me develop a model that was grounded in data and descriptions of relationships between theory concepts. The resulting model was developed based on data from multiple sources (i.e., 18 participants) and provides a visual understanding and explanation for the substantive topic of health. Unlike a grand theory that may be widely accepted but not grounded in systematically analyzed data (Charmaz, 2006), this model was grounded in data to explain a specific social phenomenon.

During the analysis process, I practiced the six characteristics that Strauss and Corbin (1998) note are important for a grounded theorist: (1) the ability to step back and critically analyze the situation; (2) the ability to recognize a tendency toward bias; (3) the ability to think abstractly; (4) the ability to be flexible and open to criticism, (5) the ability to be sensitive to the words and actions of others; and (6) the ability to absorb and be devoted to the work process.

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Summary

This chapter described the methodological process I took to explore the research questions and accomplish the goals of this project. The data collection included eliciting health narratives from a group of 18 rural Iowan adolescents. The data analysis began with initial coding, utilizing a line-by-line approach with the transcriptions, and an incident-to-incident approach with the audio files. I used axial coding to identify properties among the codes. The selective coding process identified the central concepts emerging from the initial and axial coding steps and reformulated the codes and categories into central themes. In following my methodological choices, I adhered to a process that contributed to an increased consciousness of the unique yet vitally important physical activity and body image experiences that this adolescent population faces and participates in. The following chapter, Chapter Four, will present the results of this analysis.

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Table 1. The Process of Building Grounded Theory

Phase	
Research Design	
	1. Review Literature
	To focus research questions
	2. Select Cases
	Identify relevant cases/literature using theoretical sampling
Data Collection	
	3. Develop Protocol
	Semi structured interview guide, informed consent
	4. Enter the Field
	Familiarize self with environment, contact and interview participants
Data Ordering	
	5. Data Ordering
	Arrange memo notes and audio files chronologically to allow for examination of process
Data Analysis	
	6. Analyze first case data
	Open Coding: read transcripts line-by-line; identify and code the concepts found in data
	Axial Coding: organize concepts and make them more abstract
	Selective Coding: focus on main ideas, develop the story, and finalize the grounded theory
	7. Theoretical Sampling
	Replication across cases to confirm, extend, and sharpen theoretical framework
	8. Reaching closure
	Theoretical saturation when marginal improvement becomes small
Literature Comparison	
	9. Compare emergent themes with existing literature
	Compare with similar and conflicting existing literature

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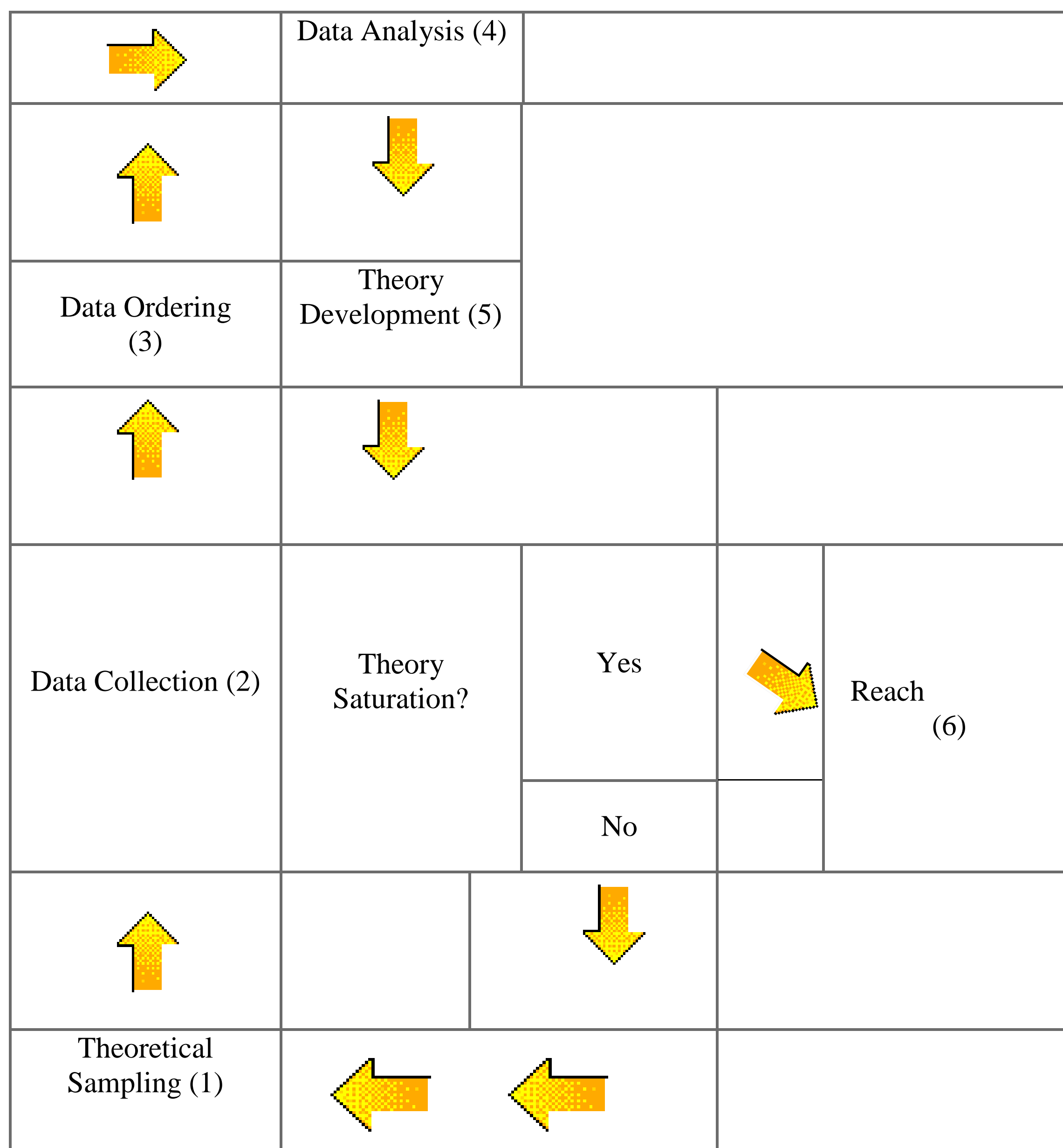
Figure 1. The Interrelated Process of Building Grounded Theory



Adapted from: Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory.* (2nd ed.). Thousand Oaks, CA: Sage Publications.

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Table 2. Participant Characteristics

ID	Name	Sex	Ethnicity	WEIGHT CLASSIFICATION
1	Mary	Female	Other Hispanic (Latin American or Spanish)	Overweight/Metabolically Healthy
2	Cole	Male	Caucasian	Normal Weight
3	Hunter	Male	American Indian	Overweight/Metabolically Unhealthy
4	Carrie	Female	Caucasian	Overweight/Metabolically Healthy
5	Charlie	Male	Caucasian	Overweight/Metabolically Healthy
6	Megan	Female	Caucasian	Normal Weight
7	Jeremy	Male	Caucasian	Normal Weight
8	Steven	Male	Caucasian	Overweight/Metabolically Healthy
9	James	Male	Mexican American	Normal Weight
10	Gwen	Female	Other Hispanic (Latin American or Spanish)	Overweight/Metabolically Healthy
11	Ruby	Female	Mexican American	Overweight/Metabolically Healthy
12	Maggie	Female	Caucasian	Overweight/Metabolically Unhealthy
13	Tara	Female	Caucasian	Normal Weight
14	Rachel	Female	Caucasian	Overweight/Metabolically Unhealthy
15	Kelly	Female	Mexican American	Normal Weight
16	Matt	Male	Mexican American	Overweight/Metabolically Unhealthy
17	Ross	Male	Caucasian	Normal Weight
18	Alex	Male	Caucasian	Overweight/Metabolically Unhealthy

<table>
<tr><th colspan="8">TOTALS</th></tr>
<tr><td colspan="4">9 Females</td><td colspan="4">9 Males</td></tr>
<tr><td colspan="2">5 Caucasian</td><td colspan="2">4 Hispanic/Other</td><td colspan="2">6 Caucasian</td><td colspan="2">3 Hispanic/Other</td></tr>
<tr><td>3 Overwt</td><td>2 Normal Wt</td><td>3 Overwt</td><td>1 Normal Wt</td><td>3 Overwt</td><td>3 Normal Wt</td><td>2 Overwt</td><td>1 Normal Wt</td></tr>
</table>

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Table 3. Open Coding

Process	Example 1
1. Line-by-line	I'm a really good batter, I'm one of the best batters on our team this year
2. Code concepts in data	Codes: baseball, competence, team sport
	Example 2
1. Line-by-line	Yeah, I enjoy sports, they are escapes from home, I enjoy sports.
2. Code concepts in data	Codes: enjoyment, escape, sports
	Example 3
1. Line-by-line	And then girls, they just try to have the curves and the nice body, you know?
2. Code concepts in data	Codes: body image, body ideal-girl
	Example 4
1. Line-by-line	Yeah, at least five pounds, maybe seven pounds definitely
2. Code concepts in data	Code: weight loss

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Table 4. Axial Coding

Process: Organize codes to make more abstract	Code	Examples of Codes	Excerpts Illustrating Codes
28 Organized Codes			
	1. Adolescent Culture	Troubling times; helping; competition, groups; unfair	Excerpts: *Rachel:* …bunch of just snobby kids that loved to make you go mad. *Alex:* You do get the massive jocks and then some kids are weird.
	2. Body Image Defined	Body Ideal-girl/boy; think about body; see body; body (dis)satisfaction; body parts to change; specific body part; comparison/analyze	Excerpts: *Ruby:* Boys want to have abs and be very muscular. Girls just want to be skinny. *Rachel:* How you see yourself, how you look at yourself and how you think of yourself.
	3. Body Image Conversations	Bullied; family talk; peer talk; conversation about media; negative talk; positive talk; re-assure other about body image; discuss desire to look like other; guilt for being naturally 'skinny'	Excerpts: *Justin:* …lose a couple pounds, get rid of their arm flaps… *Cole:* My friends will talk about how other people looked funny…
	4. Body Image Memories	(Dis)satisfied in past; family monitor diet/PA; family tease; peer tease in past; cultural impact (e.g., Barbie/NFL); family dissatisfied w/body; sibling cutting weight	Excerpts: *James:* He would be barely eat food every single day. *Hunter:* I was like a really chubby kid and I was still annoying as ever, and, I don't know, I was really disliked.

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Table 4. Axial Coding Continued

	5. Desired PA Opportunities/ Resources	Choice in PE activities; dance types; snow ski; putt-putt; laser tag; lacrosse; girls' football team; boxing; try out TV fitness products; more convenient hours at community resources; free activities; more people involved	Excerpts: *Jeremy:* More bike paths. *Alex:* A golf course that's in better shape.
	6. Eating Barriers	Family gatherings; vacation; family finances; extra-curricular activities; peer habits; family habits; eating out; craving/temptation; school lunch; portion size; seasonal availability	Excerpts: *Alex:* The size of what I eat. *Matt:* On the weekends…
	7. Eating Facilitators	School lunch; personal control; family influence; healthy options at restaurant; eating for health; coach	Excerpts: *Cole:* Mom always telling us to eat good. *Tara:* Our coach kind of told us to start eating healthier.
	8. Eating Habits	(Dis)satisfied; room for improvement; eating for fuel; skip meals; eating to lose weight; healthy attempt; picky; eat what is available; explore new foods	Excerpts: *Cole*: I know what foods are good and bad. *Ross*: ...hooked on Totino's pizza.
	9. Fear of Disease	Diabetes; cholesterol; test; finger poke; illness risk	Excerpts: *Gwen:* Another thing that worries me is cholesterol problems. *Matt:* I don't want to be like my dad and have to poke my finger.

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Table 4. Axial Coding Continued

	10. Goals	College athlete; attend college; professional athlete; high school athlete; change eating habits	Excerpts: *Ruby:* …just to play throughout college and stuff. *Steven:* I only have one goal right now.
	11. Health Defined	In shape; mental; physical; whole person; not sick; diet; exercise; sleep; normal; stamina; energy for day; move; active; fear	Excerpts: *Steven:* Healthy, where your body is good. *Rachel:* Taking care of your body physically.
	12. Healthy Eating Defined	Food group; pyramid; moderation; limit junk/sweets; portion/serving size; minerals/vitamins; 3 meals; healthy snack; whole food	Excerpts: *Alex:* Good servings and fruits and vegetables. *James:* If they eat healthy foods they'll not be as fat…
	13. Helping Others	Support other(s) healthy choices; teach other(s); ask other(s) about behaviors; tell other(s) PA benefits; encourage other(s) to choose health for important others	Excerpts: *Cole:* They have to want to do it. *Alex:* Having fun when you're doing it.
	14. PA Amount	Don't know; individually whatever works; specific time; activity dependent; too much/too little	Excerpts: *Steven:* Between 20 and 30 minutes. *Rachel:* It just depends.
	15. PA Barriers	Weather; peers, family; finances; too busy; feeling tired; crowds; quality of resources; social media; lack of targeted programming; boredom/repetition	Excerpts: *Charlie:* Sometimes some of the people are not my favorite… *Rachel:* If it has to do with a lot of running.

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Table 4. Axial Coding Continued

	16. PA Benefits	Escape from life; part of perfect day; time to chill; feel good; competition; get outside; crave activity; builds self-esteem; master/improve skill; sportpersonship ; contact; cathartic; fun	Excerpts: *Mary:* To get away from my family. *James:* I like taking my anger out on the mat.
	17. PA Defined	Do something; outside; moving body; sports; active; running; play; not lazy; gym	Excerpts: *Tara:* Get your heartbeat going. *Steven:* Activity that's physical?
	18. PA Facilitators	Trails; family; peers; others doing PA; can't quit; organized activity; teachers; limited media time; community resources; camp; support	Excerpts: *Charlie:* Gym teachers help with the physical activity. *Tara:* I don't come home from school and sit on the computer all night
	19. PA First Involvement	Parents signed up/put in activity; self; watching siblings; year in school; peer participated; teacher convinced	Excerpts: *Tara:* My mom started me when I was four. *Jeremy:* My oldest sister, she helped me get into cross country.
	20. PA Types	Walk dog; softball; dance; horseback riding; show choir; swim; track/CC; basketball; bowl; baseball; football; soccer; mow lawn; Wii Sports; row boat; badminton; fish; trampoline	Excerpts: *Alex:* Riding my bike, rowing a boat. *Rachel:* I like Wii Sports Resort.

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Table 4. Axial Coding Continued

	21. Personal Body Image	Feelings about body; thoughts about body; scaled (1-10); appearance; weight; (dis)satisfied with body parts; panic; body size; Wii classification; importance to self; do better; pressure	Excerpts: *Ross:* I'm happy. I mean you can't change it. *Jeremy*: I'm not that muscular. Yeah, I'm happy with it, though.
	22. Proud of Body (Self Pride)	Body strong; designed for PA; push self; age; sport participant; trying to make improvements; making healthy choices; sport success; healthy weight; losing weight; fitness; being sober; psychological wellness; willpower	Excerpts: *Cole:* My body was designed for physical activity. *Ruby:* My weight's good.
	23. School meals	Positive experience; negative experience; lack of option; food appeal; no time; lines long	Excerpts: *Cole:* They make it as healthy as they can. Rachel: Like they're bruised.
	24. School Physical Education	Competitive; walking; games; fitness tests; format described; (dis)like; sweat; inside/outside; difficulty level; not able to participate	Excerpts: *Ruby:* They make us play hockey and soccer. *Alex:* First we do warm up, we do stretches.
	25. Self/Interests Defined	Independent; common sense; confident; play sport; draw/art; video games; hang with friends; play instrument; recovering from drug/alcohol abuse; outdoors; community involvement; school	Excerpts: *Charlie:* I like to play sports a lot. *Rachel:* I like to play the saxophone.

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Table 4. Axial Coding Continued

	26. Socio-Environment Influence	Safety of neighborhoods; condition of resources; power of cliques; SES status; role model	Excerpts: *Matt:* I saw this guy with cuts all over his face and blood and bruises. *James:* Devin Hester, when he returned the ball
	27. Sport Stories	Reason to drop-out; fear; regret; unfair; best sport memory; worst sport memory; punishment	Excerpts: *Matt:* Our school is known for terrible sports. *Steven:* I get angry and I'll just throw it wildly.
	28. Troubled Times	Worry about going back to old ways/habits; bullied; contemplate suicide; diabetes diagnosis; anger management therapy; sibling stealing; pressure of starting new school; puberty	Excerpts: *Alex:* I didn't have a lot of friends. *Maggie:* The thing about my age is that they're really ignorant.

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CHAPTER IV

RESULTS

This project attempted to fill a void in the literature by identifying a theory to explain how rural adolescents understand their experiences of health. However, the data analysis process revealed that a conceptual model was more appropriate in representing the experience of health than was a theory grounded in participants' experiences. This project involved individual interviews with 18 adolescents residing in a rural Iowan community, who provided detailed information regarding their health experiences. This chapter presents the themes that emerged from the data analysis process. Thematic analysis, often referred to as content analysis, identified themes and categories that emerged from participants' accounts of their experiences (Neuman, 2003; Sparkes, 2005). These themes were used to construct the conceptual model presented in Chapter Five. Presented below are common themes participants revealed around health, physical activity, nutrition, and body image.

Emergent Themes

In an effort to establish rapport and a welcoming space with each participant, I began each interview by asking participants to describe themselves to me, which resulted in participants sharing their interests and hobbies with me, and on occasion, providing information about their roles as a students and/or family members. When describing himself, Hunter stated:

> I like to play baseball a lot and I'm a sports person, I'm an activity person but I also like playing video games with my mom's boyfriend and with my dad. I used to really be into drawing and stuff like that. I was never much of a painter but I love to draw and people told me that I should be a cartoon artist because that's like my favorite and I'm good at drawing not fully real characters but not stick people.

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Hunter's response provides an example of how many participants responded to this first question: describing him/herself as someone who engages in physical activity (e.g., sports, recreational/leisure activity); plays video games (e.g., Halo, Wii Sports, Call of Duty); holds a social role (e.g., family member, friend, student, volunteer); and participates in a variety of extra-curricular activities (e.g., art, music, choir, church events, clubs). Common among their self-descriptions were sharing goals they have for their future as well as describing personal challenges they face:

> Gwen: My goal is to go to Iowa, to the University of Iowa. I love it there. Yeah, I want to become a doctor for little kids. I'm going to be a freshman. I didn't really get into any sports this year, though; I don't know why….I do like getting involved in school activities, like, I don't know, whatever they have in school. Community stuff, I do like that. I like to keep my grades up, too. I don't like to fail, so that's important. A lot of my eighth-grade teachers told me, "Don't fail your first year as freshman; I know it seems like it's not that important but in the long run it really does because it affects all your other years, too."

> Kelly: I'm very interested in art. Well I guess I'm the artist in the family. I'm adopted and I don't know. I like whatever I like to see, whatever I like I just draw it. It can be whatever – cartoons or realistic or anything. Hopefully when I grow older I can reach my goal of going to art college. I like to be active, like play soccer, my first thing I like to do is football. I like music. Right now I'm trying to get healthy. I'm in Horizons for some problems, like I used, you know, so I'm trying to manage that.

Since I described the purpose of my project to participants, prior to starting each interview, participants may have been influenced to share their sport and physical activity experiences when describing themselves. However, participants went beyond describing their physical activity experiences and shared a variety of hobbies, social roles, personal struggles, current and future goals, and personality qualities when describing themselves. This first question served as an opportunity for me to learn about each participant; find commonalities between us that further established rapport; helped me gauge each

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participant's comfort level in conversing with me; and guided the direction of each interview.

The unstructured interview guide approach (Patton, 1990) that I used during the interviews was effective in providing each participant the opportunity to guide the discussion. Due to factors such as the relationship between the participant and myself, our individual personality characteristics, and the participant's willingness to disclose personal stories with me, each interview took its own, unique direction. While some interviews were more challenging in being able to elicit information than others, participants seemed to enjoy conversing with me. After summarizing what we spoke about, I asked each participant if there was anything else he or she would like to add or say, and many participants stated they enjoyed the interview:

> Gwen: I had a great time today.
> Hunter: It was good talking to you.
> Ross: It was a good interview.
> Kelly: That was a pretty good conversation.

Despite using the unstructured guide approach for each interview, common threads arose among the conversations and these threads generated the themes I discuss in this chapter. The overarching goal of this project was to explore how participants define and understand health, while also exploring how they practice, or 'do', health. Within this population, topics such as physical activity, diet, fear of disease, body image, self pride, and the middle school culture, which are all impacted by the larger socio-ecological environment, emerged as significant puzzle pieces that connect the larger picture of health for adolescents residing in a rural Iowa community.

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Health

While the public health community, including myself, views health as a multi-dimensional construct that includes mental, physical, emotional, and social domains, I tucked away my understanding of health during each of the 18 interviews. My goal for the interviews was for each participant's meaning of health to direct and guide our conversation. While participants provided responses to questions related to health, many of them seemed hesitant at first and unsure of their response when they did speak. After I reassured them that there was no right or wrong answer, participants began to open up and provided more in-depth responses. Carrie's response reflects the multi-dimensionality of health and wellness:

> You have a better state of mind, not like not only body, your body is feeling good, you can do more stuff, and you feel better as a whole person. You probably get better grades because you're studying more and you're happy more because you feel better because you're getting what your body needs. I think to be healthy you need to eat right, you need to diet and exercise, and you kind of need to be happy because if you're happy then you're doing more and you think in a better state of mind so that helps.

Kelly, despite struggling with her definition, echoes Carrie's sentiments:

> Health is at least getting active and you don't have to eat, eat, eat really healthy, you can, like eat healthy in different ways. You can … like … it's so hard to explain. Just, like, to me it's like just being active, like not only doing it every day. Don't force yourself. You can walk your dog, that's being active, too, but doing something like that is easy or something you enjoy, something that's … gosh, it's so hard, um…Something that can help you with your mood. I used to just get angry really easy so sometimes I would go for a walk down our road. You know, I would go for a mile. It relieves stress and when I come back and I'm just in a good mood.

Maggie is perceptive in explaining what health means to her, which reflects the larger health promotion field's approach to health and fitness:

> I don't try a lot to be completely fit but I do, like, if I think I'm starting to not feel so good or my body is getting a little less lean and I think I'm due to work out, I

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> want to work out enough but I don't want to work out like a whole … like when I say a whole lot I don't mean every single day I have to do it. It's not my life, but I'm just thinking whenever I need it. That's almost I want to say it's my motto but that's kind of my lifestyle. Of course I have my own hobbies but time is really important to me even if people don't think I use it the way they use it. I'm not saying that every one is one-sided but … um … I'll work out the best I can and if I … I want to keep my body healthy enough to be able to do, like, everyday things good enough to be actually to be able to use it to its good enough potential for what I need to use it for.

While other participants discussed health in terms of being free from disease and illness, and more commonly expressed the need to be physically active and eat a balanced diet, the excerpts presented above demonstrate that some participants understand health and wellness to be multi-dimensional and integrated concepts.

Physical Activity

Physical activity was the dominant topic of conversation in each of the 18 interviews. Participants enthusiastically talked about a wide range of issues related to physical activity (see Table 4). Participants shared similar interests in terms of what physical activities they currently participate in, what barriers prevent them from being active, and also voiced similar ideas in what they would like to see develop in Muscatine. Within the umbrella of the physical activity theme, participants' responses were organized into the following codes: (1) first involvement; (2) physical activity defined; (3) school physical education; (4) physical activity types; (5) amount of physical activity; (6) physical activity barriers; (7) physical activity facilitators; (8) desired physical activity opportunities/resources; (9) physical activity benefits; and (10) personal sport stories.

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First Involvement

Since many participants described themselves as sport or physical activity participants within the first few minutes of the interview, I found this line of conversation useful in gaining detailed information about their physical activity participation. To understand the history and context of their participation, I asked participants to share with me how they first got involved in each sport or physical activity they mentioned, both current and past participation. Many participants recalled their first involvement as young children, in kindergarten.

> James: Kindergarten, maybe, first grade started doing wrestling. I did it for Club A, I didn't like it for club and when I got to middle school I liked it better. My dad, he just signed me up for wrestling. I didn't even like wrestling but then he signed me up for soccer, too, when I was, like, in second grade, I think.

James's response is representative of many participants' responses: their first involvement occurred at a young age; was initiated by a parent; and the child was often required to participate despite a lack of enjoyment in an activity. Steven recalls a specific memory of his initial involvement in bowling:

> … <*Laughs*> I saw that they were advertising for leagues so I talked my dad into it and so I joined up and I've been doing it for about the last three-and-a-half years now. I asked my dad if … I pointed out to him, "Do you think maybe I could do this?" So we got information on when it was and all that stuff and he said, "It's all right but your mother has to agree" or otherwise he said he'd get in trouble if she didn't like it. So we called my mom and she said it was alright and then I got signed up. Then the next week I was there.

Unlike James and many others who mentioned that their parents "just signed me up because they said I have to be active" (Mary), Steven took the initiative to ask his dad if he could pursue bowling and after having a conversation with his parents, Steven began bowling. At a young age, Steven demonstrates autonomy by pursuing an activity he is interested in, and gains support from his parents. Parents were the most common source

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of participants' first involvement in physical activity, as evident in the reporting by eight of the nine female participants and seven of the nine male participants.

Physical Activity Defined

To help inform the larger health intervention, it was important to gain a sense of how participants defined and understood the term 'physical activity.' The phrase, "I don't know" was common among participants' responses. While participants had no trouble talking about the types of physical activity they engaged in, many of them had difficulty providing a definition of the term, were unsure of their response, and seemed worried they were answering incorrectly. When they struggled, I asked, "If you had to write out a definition of physical activity, what would you write?" Below are a few excerpts to show how participants defined physical activity.

> Megan: I don't know, but I always think working out or exercising, doing something to get your heartbeat going and get your heart rate going to keep you healthy because you need to have physical activity to stay healthy I guess.

> Ross: Doing something, not necessarily on a team but being active, being outside. I mean, I guess not necessarily outside 'cause you could sit outside and just sit there. I mean … it's kind of hard to explain. Well biking, running, swimming, playing catch – basically anything.

> Clara: It's like getting active or maybe working out throughout the week, that's what I think. Like weight lifting, running, or like doing … riding bikes, and even sports.

> Kelly: Probably like getting up and doing something. It can be anything, like walking just to go get some groceries. That can be physical, too. It's healthy. At least you're doing something.

These excerpts demonstrate the challenge participants had in defining the term, but also indicate an understanding that physical activity is more than sports and exercise, that it involves any bodily movement.

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School Physical Education

Similar to asking participants to define physical activity, it was important to gain insight into how participants felt about physical education in their respective middle schools, Central and West. The information gained from these conversations also served to guide the intervention, as an aim of the intervention was to develop strategies that would improve the physical activity opportunities within the school setting. Participants' responses ranged on a continuum of how little or how much they enjoyed physical education class. Hunter stated:

> It's one of my favorite classes. A lot of people think of it as punishment because they don't like physical activities but I think of it as a privilege because it's my favorite.

Charlie and Gwen echo Hunter's enjoyment in the games that are played during class:

> Charlie: They're usually pretty fun. We play lots of games and they're like kick ball or whiffle ball or stuff like that and that's fun.
>
> Gwen: I love it. It's my favorite class. I just get so excited to be in that class. Like they have different, like, sections and one season you're doing volleyball and in another you're just playing dodgeball or ice hockey or field hockey, floor hockey – whatever it's called. And then you do outside events like soccer and you do indoor soccer. So I just really like it.

Megan and Maggie's responses fall at the other end of the enjoyment continuum, in that physical education is not their favorite class:

> Megan: Some of the games they choose … Line tag, you walk on the lines, it's like, come on. Is that really any exercise? I know we do these little chant things and all we have to do is ten sit-ups and ten push-ups. Is that a work out? No. Gym was kind of pointless to a point.
>
> Maggie: I can't say I'm the most active child but also, during the school year, I don't really participate a lot in gym since my [rheumatoid] arthritis because I remember back before, like, I took so much medicine … because we did a bunch of laps…but it was tiring because we just went on and on and on for about 30 minutes and then my knee got inflamed, it got huge.

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In addition to participants reflecting on whether or not they enjoyed the class, each of the 18 participants reflected on gender differences within the physical education class setting. Girls were more likely to walk during class while boys were more likely to participate in the games. Girls often chose to walk because they did not want to get sweaty or 'gross', did not enjoy the games being played, and did not like how competitive the boys were when playing games. Hunter, Tara, and Gwen provide insight into differences between boys and girls and reflect on why such differences may exist:

> Hunter: There's not many sports that we have that girls are interested in. We'll play wiffle ball or softball or something and some girls will play but not much. I don't know, sports is something girls at our school don't want to play. Most of them seem chatty and they'll talk with their friends and what-not, which is why they walk because they can hang out with their friends while they walk.

> Tara: I think boys treat gym classes like the Olympics sometimes, they go crazy. I just don't think they [girls] have the opportunity to play if they're [boys] more competitive. I don't know.

> Gwen: More girls walk. Uh-huh, definitely, yeah. I guess I think that guys are just more active in sports and stuff, and girls are just kind of more, like, girly: 'I'm going to hurt my knee' or something, you know, or 'I'm going to get my hair messed up and I'm going to get all sweaty.' I just hate sweating and I don't like that. And then my hair … and I had gym class first period. And then my makeup is all messed up and then my friends in the locker room are just sitting there, "Oh my gosh, my hair is just so messed up and I've got to redo my makeup and I've got to get my clothes on. Maybe I should just stay in my shorts and shirt."

Sorting the interview transcriptions by the middle school participants attended did not yield any significant differences among participants' thoughts about physical education class. Boys and girls, alike, shared that many girls choose to walk rather than participate in the games, and that boys, having chosen the games, are very competitive during class. Six of the nine female participants stated that they preferred playing games for fun, rather than for competition, which eight of the nine male participants cited as a reason they enjoyed physical education class.

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Physical Activity Types

Currently, participants engage a wide range of activities, including: playing at playgrounds; soccer; baseball; wiffle ball; walking and running around the neighborhoods; biking around the city and on trails; and going to various recreation centers, like Discovery Park, the aquatic center, and the YMCA. Examples of organized physical activities include sports, summer leagues, and YMCA indoor leagues, while unorganized activities include playing with friends and siblings, walking the dog, and rowing a boat when fishing. Megan's experience, which is similar to that of several participants, reveals how exhausting it can be to be involved in multiple activities:

> And this year I've gone on Tuesdays from 7:30 to 8:30 pm and Wednesdays from 8:00 to 10:00 at night, but then, when dance recitals start hitting, we go Tuesday, Wednesday, Thursday, Saturday, and sometimes Fridays. Yeah, and we have hours and hours a week, so … It was kind of getting too much 'cause we were all kind of getting drained out, we were just like it's getting tiring, especially staying up Wednesdays from 8:00 to 10:00 because I had church before that on Wednesdays. I had all that stuff going on; it was just crazy. Actually for awhile there I refused to go to swimming in the mornings. <***Laughs***> And the coach called and my mom's friends with the coach. She's all like, "Where has she been?" and my mom's like, "She won't get up and go because she's just getting burned out I guess" because getting up every morning – getting up every morning before school it was hard, and we had swim meets at night and stuff. And so then my mom convinced me to go and I was like, okay, I guess I will.

While participants, in general, seemed to enjoy the various (and multiple) activities they engage in, they also reveal instances when they are stretched too thin, trying to find a balance among school, extra-curricular activities, and their social lives. While girls and boys both reported participating in a variety of activities, the coding process revealed that girls participated in more unorganized activities than boys. For example, seven girls mentioned that they walked their dog as a form of activity, while only one boy mentioned walking his dog. On the other hand, boys mentioned their participation in an organized

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sport, such as a summer baseball league or a school organized football team, 127 times, while girls mentioned organized sports only 43 times.

Amount of Physical Activity

While participants seem to understand that physical activity is important to overall health, they were not able to provide specific guidelines that are recommended for physical activity. Similar to the issues described with defining physical activity, participants were hesitant in stating a particular amount, as they seemed worried about answering incorrectly. I did encourage participants to say whatever came to mind and told them there was no right or wrong answer, but rather, I just wanted to hear how much activity they thought they should get each day. While some participants did provide a specific length of time regarding physical activity, many participants suggested people should 'do whatever they feel like doing'. The responses from Mary, Carrie, and Charlie reflect this general, unspecific amount:

> Mary: I don't know; I just do whatever, just whenever I feel like it.
>
> Carrie: I think whatever works for you, but I think you should push yourself a little bit because you don't want to get lazy and stuff. You should try and get and do things.
>
> Charlie: I don't know. It just depends on the sport because in some sports you do a lot of running and some sports you don't do a lot of running so it kind of depends on how long.

While not providing a specific amount of time, Ross does state that there is a minimum and maximum amount of activity. It is at this point in our interview that Ross seems to have a revelation about how much time he does actually spend in physical activity, and the impact this activity has on his body:

> I don't think necessarily just running for five minutes then saying 'I'm tired' … you have to push yourself kind of and then you'd go longer and longer and longer.

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> Not five hours a day. But, yeah, I think there's a limit. There's definitely a minimum limit but I think there's a maximum limit, too. You can't go too hard because it won't help, it'll just hurt. An hour and a half, I mean that's usually what cross-country practice is. And then we have a baseball game after that sometimes, which is two hours, so that's like a four-hour day basically, a double-header, then it's like a six-hour day, and swimming before that you've got an eight-hour day. Wow, when I think about it that's a lot of activity that I'm doing. Yeah, yeah. I never really thought about that. Half of my day is hurting. <***Laughs***>

When participants mentioned how much time they thought they should spend being active, responses ranged from a time period of 30 to 90 minutes. Some participants shared where they had learned how much activity was appropriate:

> James: Like an hour a day, like they said. I saw a commercial that said 60 minutes a day. Yeah, except well … walking around counts actually doesn't it? 'Cause me and my friends, when we hang out, we walk around a lot.

> Megan: At least, like, an hour and a half I would say, to get some. Personally, I don't just sit and watch TV all day. I just can't stand to do that. I like to go outside and just do something and I can't just sit in front of the TV all day; I can't do that. I don't know.

> Hunter: Like an hour a day. I try to do it every day, whether it's just outside hanging out with my friends and walking around, I'm still outside for at least an hour a day.

After hearing participants struggle to name an amount of physical activity that was appropriate for themselves, I believe an effort should be made to increase middle school students' knowledge about the physical activity guidelines that are recommended for general adolescent health. Since the goal of the health intervention is to help middle school students choose healthy actions, students need to be aware of how much activity is needed to experience health benefits. Thus, the intervention should include an educational component aimed at increasing students' and their families' knowledge about the recommended physical activity guidelines. However, care should be taken to present the guidelines in a way that is empowering to adolescents and their families. Various

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examples of ways to be physically active within the Muscatine community should be included in this educational component. Furthermore, the myriad of health benefits, beyond physical health outcomes, should be the focus of education about the importance of meeting the guidelines.

Physical Activity Barriers

While participants reported that friends and family were important to their physical activity participation, these types of support were also identified as barriers. The family's financial situation was often described as a barrier. Many participants come from large families with low incomes and are not able to afford the sport/physical activities fees. A few participants reported that their families had to forfeit their YMCA membership due to a parent's unemployment or dire financial situation. Friends often persuade participants to abandon physical activities to go to the movies, go shopping, or play video games. A busy family schedule was also noted as a barrier because parents work and do not have the time to transport participants to their activities. Siblings' activities also prevented participants from engaging in their own activities because they were traveling to watch their siblings play sports. Mary and Hunter share how their family life acts as a barrier to their physical activity participation:

> Mary: My dad got laid off so we lost our Y memberships. We wanted to start working out and stuff but we just couldn't come up with $7 every day or whenever we wanted to go. So it was getting hard.
>
> Hunter: I haven't been bowling for three years because of financial issues and what-not, but I used to be in the city league for bowling and it was like $6.25 every Saturday but, I don't know, I loved bowling but I haven't bowled in years. He [dad] watches me and he criticizes me sometimes. My dad just likes giving me crap because, I don't know. When I do I get a little mad but I'm in anger management and I've learned to control it a little better than I used to. My brothers, they're not very active, period. They don't like being out there and doing anything. But I share the room with my younger brother and aside from the mess that they make every

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> day. Jonathan, my older brother, he was in t-ball and what-not and then he quit all sports. He was in bowling with me for a year and he quit that and he was in baseball, he was on my team for a year and he quit that. And he just quits everything he does.

Thus, some of Mary's and Hunter's efforts/desire to be active are unfortunately thwarted by factors outside of their control: a family's financial situation, parental criticism, or a sibling's lack of participation. Other common barriers to physical activity included: the winter season, preferring to play video games, especially Call of Duty; being too tired or too busy; not being aware of events/activities that take place in the community; activities being too expensive; and not having an interest in what is available. Gwen is very passionate about her dislike for the winter climate, which was also noted by many other participants:

> In the winter I get lazy. I don't like the winter at all, that's why I prefer summer and fall and spring. You know what I mean? You have all that nice weather and it just kind of motivates you to get out there. You know how we have all winter? Snow and cold, the cold and ice. It makes us be at home all cozy. With your snuggie, just watching TV. That's basically what you want to do in the winter; in the winter there's snow outside and I can't go walking because I'll freeze up.

Physical Activity Facilitators

While family, friends, teachers, and community resources were identified as barriers, these same influences were also identified as facilitators. Identifying these influences as barriers and facilitators suggests again the ebb and flow nature of adolescents' personal health experiences. At times, the social support provided to adolescents enables their activity, while at other times it impedes their activity. Cole talked effortlessly about various physical activity enablers:

> I like how it is just so easy to get around to places, like everything's just so close. It's just kind of like packed in. And we also have a bunch of trails here, so me and my friend ride our bikes a lot, we'll go on really long bike rides and we'll go down a road and then take a path and then we'll end up out by the highway so we

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> can go grab a bite to eat and then continue on. When we drive down Mulberry Street there's always, you see at least three people running and they're always usually older. Wanting to be there. I see all my teachers – not all of them – but I saw three of my teachers walking with some friends. It was cool, I mean just all around. We run on Mulberry Street all the time, I see people running and walking. Definitely a lot of bike riders. Yeah. It keeps your mind off of it [cross country practice], too, because you can look at people, you can see people driving by.

While Cole was exceptionally enthusiastic about a positive support system, Hunter describes how tough love from his dad acts as a facilitator:

> My dad's always hard on me and I can't quit anything, even if I don't want to do it and he doesn't like it that much either, I can't quit. I start it I finish it.

The research team implementing the health intervention is taking a community-based participatory approach by asking organizations within the Muscatine community to be involved in the project. The Muscatine YMCA is one of the community organizations involved in the intervention, so it was important to understand how participants felt about the YMCA. Charlie, Jeremy, and Matt perceive the YMCA to be a facilitator to their activity:

> Charlie: Well the Y helps a lot, especially the basketball courts, that keeps me active.
>
> Jeremy: The Y is nice because if you're a member and in high school you can take lots of classes, you can just do weight lifting, there's basketball, there's swimming, there's the track around the weight room, and there's racquetball.
>
> Matt: I go to the Y mostly every day during the school year. Just sometimes when I'm not lazy I just go, to where there's machines and weight lifting and all that and I just go there and run one mile on the machine things. I go with my mom. She runs and weight lifts, not weight lifts but works out her arms and legs.

Even though the YMCA was named a facilitator to many participants' activity, the cost of the membership was a barrier to other participants. In Chapter Five, I will discuss how

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the intervention will cover the YMCA fee for middle school students in an effort to support adolescent activity levels.

Desired Physical Activity Opportunities/Resources

Participants had great insight into strategies that can help Muscatine youth be more active. Specific to physical education class, participants would like a longer session because much of the time gets taken up by changing for class and instruction from the teacher. Additionally, participants would like to have physical education class available the entire school year, be able to vote/suggest on games and activities to play, and follow a two- or three-week session curriculum. For example, Mary thinks physical education classes could focus on weight lifting for two weeks and then begin another two-week session on a different sport or activity. In terms of leisure time activities, participants want variety. They want an opportunity to try out new and various activities. Activities mentioned include: dancing (e.g., hip-hop, jazz, tap); snow skiing; bowling; tennis; mini golf; laser tag; diving; rock climbing; lacrosse; rugby; gymnastics; and boxing. Many participants thought it would be fun to have a running club that met to run together and have a variety of running routes to choose from. Participants also want transportation to various activities and/or recreational space in Muscatine. Carpooling would help with the transportation issue.

Many participants mentioned it would be nice to have something similar to a “Youth/Teen Recreation Center” which was only available to a certain age group, targeting the tween and teen age groups. At this ‘free-of-charge’ center, they would like the freedom to choose from a variety of physical activity equipment and just play with their friends, rather than being told to do specific activities. For example, Alex would

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like to checkout/rent bikes and go on bike rides with his friends. This center would ideally be open later in the evenings and on the weekends so youth have an opportunity to use the center. Participants would also like to see existing recreational space be better maintained. For example, the tennis courts have cracks in them and poor nets, so participants feel they would be used more often if they were better maintained. Participants emphasized the importance of having a big enough space and a large number of equipment pieces so there is enough for everyone to participate. There appears to be an issue with cliques not getting along, and participants mentioned they are not likely to play with people in cliques they do not like. Thus, there is a need to have enough space for each clique to have its own space and equipment. Overall, participants want variety, want to be involved in the decision making process about what equipment and activities are chosen, and want space available on the weekends and late at night.

Physical Activity Benefits

Participating in physical activity provided participants with an opportunity to: hang out with friends, parents, and siblings; escape daily stressors; have fun; compete; learn new skills; and feel energized which contributes to feeling healthy. Megan and Hunter, who come from difficult family situations, reflect on how physical activity provides an escape from their daily life:

> Megan: It's a time for me to get away from my family, too, and just go do whatever you know and just dance and stuff. It's my quiet time I guess. I listen to music and just walk. I feel fine whenever I come home.
>
> Hunter: Like for baseball, it's just fun and it's enjoying. It's a really fun sport and it's a way to get out of the house because I have six sisters and two step-brothers and we run a daycare so it gets crowded and annoying. So it's a way to get out of the house. I enjoy sports, it's an escape from home.

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For Megan and Hunter, and a few other participants, family life does not provide the stability that it does for other participants, but rather provides a source of stress for them. It is evident that physical activity, for Megan and Hunter in particular, serves as a resource to cope with a difficult family environment. Maggie also talks about physical activity being an escape for her, but in a much different manner than Megan and Hunter:

> Of course I always love going out and swimming because it's just so fun. You can use your imagination, even if you're just keeping it to yourself you can do so much in the water. Well, you know, just the simple things, either like you're swimming with the dolphins or you're in some other place that you don't even know about and no one else knows about and you be in your own place, you can pretend you're flying when you're swimming.

Maggie, who self-identifies as a loner and not a big people-person, sees physical activity as an opportunity to express her creative personality. For Gwen, physical activity provides a range of social, psychological, and physiological benefits:

> I like the idea of meeting new people, you know, learning different skills, and sportsmanship. It's, you know, it shows you a lot. Plus, you know, you stay out of trouble when you're in sports, so it's a good thing. I enjoy that you're burning off calories there. After all you have a great time in the gym and you feel better from the workout. I would say just it makes you feel better, getting out there, having fun, you're with your friends, nobody is telling you, 'Hey, you have to do this, you have to do that.' Nobody is out there telling you what to do, you can just do your own thing, you can be free, and you have a lot of fun. You meet people so that's really good. You never know; like two friends of mine, they got into sports and then they became best friends. So you know, you can be best friends with someone just by meeting them and playing volleyball at Weed Park in the sand. That's really fun.

Central to this project is exploring how physical activity participation contributes to participants' overall health and well-being. These excerpts reveal the wide range of benefits that participants experience due to their physical activity participation. Participants identify a variety of social, physical, intellectual, emotional, and environmental benefits that contribute to their general health and sense of well-being.

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Personal Sport Stories

I felt it was important to highlight stories that seemed to have a long-lasting and powerful influence on how Steven and James make sense of physical activity and provided insight into how adolescents, like Steven and James, remain resilient in the face of fear or disappointment. Steven, a passionate, insightful yet brooding boy, describes how a negative experience with baseball ended his physical activity participation temporarily:

> When it came to have the tournament things after the season was over and I just hoped that it would end. Like we'd lose the first game. I guess mainly I was just sort of scared to begin with. The first time they told me he was the league's fastest pitcher and I just could not … I just watched every single ball go by because I wasn't used to that. And then … I don't really know. I guess … Sorry … I'm not good at explaining things. I didn't like being the worst player on the team. I wasn't but I was close to being there. When I was back on the other league I was … I was like the best so … and I could have almost any position that I wanted. I could pitch, which I was working on, but once I got to the upper, next league I'm just not doing that because I saw, I was in the outfield, and I saw the guy on our team lean through a pitch. The guy hit the ball and somehow he had his glove right here [near face] and he caught it but if his glove hadn't been there he would have been hurt really badly and that just kind of scared me there. I don't know. I just couldn't keep going with that.

Steven, despite exhibiting a deep-seeded fear in baseball, was forced by his father to continue playing for the next two years following this incident. Steven quit two years later and disclosed that he could not be around sports for a year after leaving baseball. When I asked what upset him most about baseball, he said it was the fear he felt each time he stepped onto the field, a fear he felt nowhere else. After a year away from sports, Steven found a new love in bowling and disclosed he had learned from his baseball experience: "Bowling was really exciting. I guess I just didn't want to quit this thing. I wanted to keep on doing something. So I just told myself to keep with it, I guess." Here we see Steven being resilient in his efforts to continue bowling, even after having such a

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negative sporting experience with baseball. Additionally, Steven uses self-talk to motivate himself during his bowling participation.

James's story reflects disappointment in the seemingly always present power hierarchy of sport. Similar to Steven, James took a break from sports following a negative experience. While Steven's experience was a personal one, James's negative story resulted from his older brother's experience:

> Like last year, my brother's junior year, he played football, there was this kid that really sucked at quarterback but he got to play because his dad was, like, a part of the school. Then one day the coach, they were playing a seven-on-seven game, and the coach was, like, "All right, who wants to play quarterback?" because the guy wasn't there and he knew my brother played that spot, and he didn't even … and my brother's friend was pointing at him, like everyone was, and he picked someone else. That's why my brother quit that year. Later that year that kid got benched so my brother probably would have gotten to start.

James's own sport participation was affected by this experience because he felt that no matter how athletic he was or how hard he worked, he disclosed that not having the right last name or not knowing the right people would prevent him from experiencing success. Similar to Steven, James was able to work through this experience and bounce back to activity by becoming a member of the soccer and wrestling teams. Fortunately, Steven and James were able to recover rather quickly from these negative experiences, which demonstrates a great deal of resiliency. While physical activity and body image experiences guided the exploratory nature of this project, participants also reflected on how their diet and nutrition influenced their health. The nutrition-related codes are presented below.

Nutrition

Participants also spent time reflecting on their thoughts, feelings, and behaviors regarding their diet. I use the word *diet* to reflect participants' habitual nourishment; the

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food and drink they are regularly provided and consume. A goal of this project is to view health from a balanced, improving perspective and I believe one avenue that can be used to practice this perspective is to break the seemingly natural link of diet to weight loss, when in fact diet is defined as one's regular intake of food and drink. In cases when participants talk specifically about going on a diet designed for weight loss or disease management, I provide a brief sentence to highlight their alternative usage of *diet*. Under the umbrella theme of diet fall the following codes: (1) healthy eating defined; (2) eating habits; (3) school meals; (4) eating barriers; and (5) eating facilitators.

Healthy Eating Defined

Similar to their perceptions of physical activity, participants seem to understand that healthy eating is important to overall health, yet struggle with identifying specific guidelines that are recommended for a balanced diet. When asked what healthy eating means to them, many participants answered, 'eating fruits and vegetables.' Participants were able to identify some food groups that were important to eating a balanced diet, but did seem cautious in answering questions relating to healthy eating. Responses from Maggie, Hunter, and Kelly provide a general summary of how participants defined healthy eating:

> Maggie: Healthy eating, of course you can have snacks, of course, and then try to have, even if you don't have something super-healthy at your house then try to find something at least healthy enough for you to try to get you through the day. If it's not the healthiest thing, if you don't have a whole lot of fruit at your house and you're running out of stuff then try to get the healthiest thing you can. Because I heard that breakfast impacts the most. And if you have some fruit, you really should try to expand your horizons and try to find some fruit that you like.
>
> Hunter: Like that pyramid thing. There's meat and protein and grains and they just added some other stuff that I can't remember. Like they have rice and bread by themselves now and now it's just confusing, but … I don't know. I never

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> actually learned the food pyramid but I kind of know what I need for vegetables and something else, or like the meat and stuff.
>
> Kelly: Like, to me, my opinions are probably not choosing greasy, fatty stuff, you know? Something like … I don't know how to say it. <***Pause***> I don't know how to say it but there are these little pamphlets in the mail showing how you can eat healthy and everything. There is certain kind of food, like you can have a sub or eat a salad but some people don't really like to starve themselves like eating salad or anything. But you can still lose weight by eating kind of whatever you want, as long as you are getting active.

These excerpts demonstrate that participants have an idea of what it means to eat healthy, but struggle with providing a direct answer. Their responses are scattered, as they try to piece together what healthy eating means to them. Since the health intervention includes a component on diet, I believe it is necessary for the curriculum to address the most recent 'Choose My Plate' dietary guidelines in an effort to increase middle school students' knowledge base of a balanced diet.

Eating Habits

Establishing a baseline of what participants currently eat is useful in developing a plan of action to help students choose healthier options if they disclose dissatisfaction with their current eating habits. In addition to discussing their personal dietary choices, participants' responses ranged on a continuum of how dissatisfied or satisfied they were with their current eating patterns. Exploring their eating habits also yielded contextual information about their current living situations, as eating healthfully was perceived to cost more money, which was an issue several families have to worry about. Carrie describes a typical day in terms of her diet, while Rachel reveals her family's decision to spend more money on healthier options, and Megan reflects on the challenges she has faced on maintaining a healthy diet:

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> Carrie: I just don't feel right if I don't eat breakfast, like my stomach hurts, I just don't feel good the rest of the day. If I'm on the go I take … I drink these Breakfast Essential milk packets where you just mix it in. That's supposed to have all the nutritions *[sic]* you need for breakfast, or I'll eat cereal or eggs or something like that. During lunch I usually try eating lighter like a sandwich, maybe chips or fruit, and a granola bar. Then during the night I try eating a full meal where you have the main course. Like last night we had egg salad sandwiches with carrots and tomatoes and then, for dessert, we had fudge bar.

> Rachel: We sometimes do pretty good, like lately my mom has been trying to buy more healthier food, like putting money towards fruits and vegetables than maybe a couple bags of chips or something. She wants our family to be eating more healthier and getting my younger siblings used to that so then they'll have better habits as they get older, so the budget is more for healthier foods.

> Megan: I really ate so healthy last year, I lost … I was really chubby to start with and then I started eating really healthy and then I started losing weight. Because I didn't used to care how I ate, you know, we were so busy all the time. And then I started eating healthier and I lost a little bit of weight. But then I haven't been eating so healthy lately and I've gained back a little bit of weight. But I'm starting to eat healthier again and as the summer goes on I've tried to work out again to keep myself just at a good weight. And I'm kind of glad my parents were buying and eating healthy foods because then I learned that stuff so that I don't get older and go buy my kids a bunch of junk; I grew up that way so I know you don't eat that way. It's not good for you to eat that way all the time. It's okay for you to eat some junk but not every meal all the time.

Many participants used a scale from '1' to '10' to rate her/his satisfaction with her/his current eating habits. Most participants provided a middle value (e.g., 5, 6, 7), suggesting they would like to improve their eating habits. For example, Maggie gave herself a 'seven' because she felt she doesn't eat the best all the time, but does try to eat fruits and vegetables at every meal. Making an effort to eat healthy was common among all 18 participants, which I believe is an encouraging finding, as participants seem motivated to choose healthy options. However, various factors within their socio-cultural environment seem to obstruct their ability to eat healthfully. Being aware of this issue is useful to the design of the health intervention, as the research team can implement ideas and strategies

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within the socio-cultural environment to provide students with access to healthy food choices.

School Meals

Similar to physical education class, participants expressed mixed feelings regarding school meals, both breakfast and lunch. All 18 participants eat school lunch, rarely packing a lunch from home. A few participants mentioned they eat breakfast at school as well, which often consists of a pop-tart, boxed cereal, or a peanut butter and jelly Uncrustable® sandwich. Participants are aware of the changes schools have made in the last year to improve the nutritional quality of school food, which include offering baked chips, no longer selling pop at meal times, and not serving ice cream. While healthy choices are available, foods such as french fries, pizza, and fried chicken sandwiches are more easily accessible. According to Tara, there are two lines for pizza, which also happen to be the first two lines when students enter the cafeteria. There is only one line for the submarine sandwich line. Tara feels that while healthy options exist, including salads, fruit, and submarine sandwiches, students do not often take advantage of the healthier foods because they are tempted by the "greasier, better tasting" foods like pizza. Given the short time period, students do not have the time to wait in the submarine line and since the pizza lines move quicker, many students choose pizza. Students also inaccurately assume the healthier options are reserved for faculty and staff. Passionate responses from James and Jeremy reflect the general consensus of participants' perceptions of school food:

> James: Horrible! I hate school lunch. It's nasty, I think. The only thing I ever eat are the chicken patty or a taco salad or shrimp. Those are pretty much the only things I ever eat. Because, I don't know, every day at lunch I'll get a bag of chips and a Propel. That's what I got pretty much every day this year unless I got one

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> of those three things. Yeah, baked chips, that made me mad. I got used to them. Like the pizza they make there is nasty; I hate it. Yeah, they have good food but if they made it better that would be good. Better everything.

> Jeremy: Most of the food we have looks healthy but some of them, like our pizza, if you just hold it up the grease will just drip off. Yeah, we have salads but most people don't think of having a salad because they think it's for a teacher. When I was in sixth grade, I was thinking about it but I had to ask the lunch lady if I could eat the salad because I thought it was for the older adults if they didn't want to eat the school lunch. The lunch lady said, "Yeah, you can have it. It's for anyone who wants it."

For many students, eating at school may be their only opportunity to eat a well-balanced meal. By exploring participants' attitudes toward school meals, I was able to gather information that the intervention research team can share with the school district's food service team to create strategies to improve access to, as well as the taste and appearance of foods while still maintaining the appropriate nutritional content.

Eating Barriers

Participants identified several barriers that prevented them from choosing healthy food options. Participants felt pressure to eat unhealthy foods with their friends because that is what all their friends were doing, and they felt the need to follow the group norm. Other barriers included the lack of healthy options when dining out; high cost of healthy foods; lack of food at home due to family financial issues; giving into cravings; feeling that junk food tastes better and is easier/quicker to prepare; and families being on the go so much that they have no time to prepare a meal at home. James and Hunter reflect on times that are particularly challenging to eating a well-balanced diet:

> James: When we're having family get-togethers there's a lot of food. Sometimes I don't really eat a lot of vegetables, I'll just eat the desserts and stuff. Like when everyone else around you is eating not healthy stuff and that's all there is. Maybe like at Christmastime with all those desserts and everyone's eating them, Christmas and Thanksgiving have the best food.

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> Hunter: At my mom's we don't eat much 'cause her financial is not too good so we go to the school lunches, and, I don't know, stuff like that, try to eat as little as we can. But then Suzy goes and steals food and gets Mom mad. That's what I don't like about her going over where I go. I'd like to eat more vegetables, I haven't had much vegetables lately. I don't know. I haven't been eating much, period.

While James's response was common among many participants, isolated family gatherings or holidays challenged their confidence their abilities to eat a balanced diet, Hunter's response was very difficult to hear, as his family's situation seems to perpetually influence his ability to eat a balanced diet. On the day of our interview, Hunter's 11-year-old sister, Suzy, stole a candy bar from the local gas station because she was so hungry. Similar to his intentions and desire to be physically active, his desire to eat healthfully is hindered by something outside his control, his family situation. The school lunch he mentions is the free summer lunch program available to Muscatine youth. Like meals during the school year, it is imperative that these meals are well-balanced and taste good, since Hunter and many students like him are not getting well-balanced meals at home.

Eating Facilitators

Many of the identified barriers to choosing healthy foods were also named as facilitators to eating healthfully. Family members, peers, local restaurants, and the school were mentioned as factors helping students to choose healthy foods and subsequently eat a well-balanced diet. Carrie describes how a friend helps her eat healthy, while Megan and Charlie share examples of how their family encourages healthy eating. Charlie also mentions strategies he personally uses when purchasing food, as well as noting how restaurants impact his dietary choices:

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> Carrie: One of my friends, the one that is very athletic, who is very strong, during the school year I would eat lunch with her and instead of getting fries and pizza and cheeseburgers we'd get spaghetti or something like that, or a sub sandwich.
>
> Megan: Probably because we didn't used to eat very healthy and then at one point Dad's like, "We just can't eat like this anymore." My dad used to be … he didn't used to be big by any means but he used to have a stomach so he was like, as they get older – not that they're really old by any means – Dad's like, I've got to start eating healthier so then we stopped buying all the chips, that's probably when I was in third grade or something, and we haven't bought chips since 'cause we don't buy them but maybe once in awhile, like if we're going to have people over or something we'll buy chips and dip or something but we don't buy them just when we go to the store by any means. We buy fruits and vegetables, we started eating salad with our dinner every night, and stuff like that so that just helped. He decided it wasn't good for us to keep eating the junk and he wanted to try to lose a little bit of weight and he's actually real thin now. And he just … I don't know, I guess he just decided we need to eat healthier because it's not good for you to eat a bunch of junk. He's always run but now he can eat a lot though and he works a lot, I mean he's thin because he runs miles and miles every morning so it's easy for him to keep a good weight.
>
> Charlie: Like sometimes I eat chips but not too much. My parents try not to buy that many chips and stuff like that. I learn from my parents, some of it. They tell me what's the best options and stuff to choose; that helps me choose something. Especially my dad 'cause he eats a lot of healthy stuff. It helps me when I've just eaten so I'm not hungry when I'm buying stuff at the store. It's just choosing the right things. Some restaurants, they show what's the healthiest choice, healthier choices and stuff. Yeah, I try to choose the more healthy ones.

These excerpts indicate the impact participants' social environment has on their diet and food accessibility. A single strategy targeting parents' knowledge about healthy eating will not be enough to see behavior change among middle school students. A strength of the health intervention is to target multiple levels of influence, including the school and home environment, educating students at a personal and group level, and providing healthy snacks during physical activity programming. By intervening at multiple levels, we hope healthy messages and action permeate the larger Muscatine community.

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Fear of Disease

This project is part of a larger intervention study aimed at promoting positive health behaviors in Muscatine middle school students, including the 43% who are overweight/obese and the 15.4% of whom are metabolically unhealthy. The 18 participants interviewed for this project participated in Phase One of the "Muscatine Adolescent Healthy Survey" (funded by the Roy J. Carver Charitable Trust, Muscatine, IA). The primary purpose of this survey was to describe cardiovascular risk factor levels and prevalence of the metabolic syndrome in Muscatine adolescents. These data, along with data obtained from two health and physical activity questionnaires, provided information to the students, parents, teachers, and administrators regarding the overall health of middle school students. Phase One participants were provided with their personal test results, which seemingly had a long-lasting impact on how participants in this project made meaning of their personal health experiences.

When speaking about her general health, Gwen mentioned that she was scared of diabetes. When asked what it was about diabetes that scared her, Gwen responded:

> Don't people die of diabetes? That scares me the most. A year ago I came in and did the heart study and I did it and my glucose or something. It was above a hundred or something like that. That was the first time that I did that. I guess it's a sugar problem? I was, like, shocked because I don't want to be … I don't want to be an adult and having all these problems, you know, going to the hospital a lot. It really worries me. Not too much, but since I am active. My parents talked to me about it and the problems it does cause. And another thing that worries about me is cholesterol problems, too. It just … that runs in our family, too. I look at my family and then my dad's part of the family, like my dad's part of the family. My grandma, she has diabetes because of, you know, she's too big or she eats a lot and I don't want to … I don't want that in my future. I want to be healthy. My other grandma, she did have a problem about that, too, so it kind of runs in the family and I'm trying to avoid that.

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In addition to her fear of being diagnosed with diabetes, Gwen's response reflects how her experience with health is a dynamic and complicated relationship. While she is aware of her risk factors, which instills a sense of fear and worry, she states that she is not too worried because she is active and taking action to avoid "that." This demonstrates the ebb and flow of subjective experiences: Gwen, at times, feeling she has some control in managing her risks by being active and eating a balanced diet, and at other times, feeling scared over things she cannot control, like a family history of high cholesterol and diabetes. The everyday experience of fearing for her health appears to fluctuate between a conscious worry and a more fleeting afterthought, revealing an internal cognitive battle that remains unresolved. Gwen speaks to the impact that significant others' health status has on their personal health experiences. Similar to Gwen, Kelly and Matt mention how a family history of diabetes has affected their understanding of diabetes. Kelly's response reflects a positive experience with diabetes as she was in a substance abuse treatment program for a year and came home to hear about her older brother's diabetes diagnosis and subsequent diabetes management:

> I have a brother, he was diagnosed with diabetes so he lost some weight and, yeah, he's doing really good. I was gone, I didn't even know about it until I got back from Woodlands. And my mom kind of told me about stuff that had been going on so she told me about that and I'm like, whoa. Then when he came to my house and he got out of the car I was, like, whoa, he looked so different! It was crazy. I think he knows … he pretty much knows what to do to eat healthy and everything. He usually just comes to our house and goes swimming, too. We, of course, invite him and everything and that's probably active, too. Yeah, he just brings healthy food to the house and eats it and everything.

Unlike Kelly, Matt has an intense fear of diabetes and was very emotional when we were talking about health, in particular about diabetes:

> Well, since my dad got diabetes, I think it was a week ago, we threw away all the chips and all that and things that had cholesterol and all that, so we brought

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> whole-grain stuff and all that. It was hard to believe that he actually got that. Because he didn't have anything wrong with him. My mom is trying not to get diabetes for us.

It was at this point that Matt began to cry and from this point on, became uncomfortable answering questions. When asked what he and his family were doing to help manage his dad's diabetes, Matt stated that the family was eating healthier, but personally, he seemed to be taking a different approach:

> Since my dad got that I haven't ate like how I used to. I probably, since I wake up at eight, I eat breakfast and then I don't eat until, like, six. I don't want to get what my dad has. I don't want to be like my dad and have to poke my finger and see if my blood is okay and all that.

Matt's response, both verbally and visually, indicated he was struggling emotionally with his dad's recent diagnosis and he was engaging in behaviors he felt were going to reduce his own level of risk, even though eating two meals a day as an active, growing boy is potentially harmful to his health. Given the prevalence of diabetes and/or diabetes risk within this population, combined with participants receiving their metabolic health results from the Muscatine Adolescent Survey, it is imperative that the intervention include an educational component to help adolescents and their families understand how to manage diabetes and how to reduce risk factors associated with diabetes. As with the physical activity education component, care should be taken to avoid a victim blaming atmosphere and refrain from instilling a sense of fear in Muscatine residents when presenting this educational programming.

Given my interest in exploring adolescent body image experiences, my interview guide included questions regarding body image. Rather than examining body image from the more traditional measurement approach, I broadly explored body image by providing

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participants' the opportunity to guide our conversations. The emergent body image codes and themes are presented below.

Body Image

Body image was one of the more sensitive topics discussed during the interviews. Participants seemed to have a difficult time talking about their definitions of body image and their own personal body image, but openly discussed conversations they heard at school, how mass media outlets impact body image, and how their friends talked about body image. Codes within the theme of body image include: (1) body image defined; (2) personal body image; (3) body image conversations; and (4) body image memories.

Body Image Defined

In the days leading up to the interviews, I was uneasy about how to bring body image into the conversation without making participants feel uncomfortable. I did not force body image into my line of questioning: rather, 17 of the 18 participants either brought up the topic themselves or provided me with an entry point to explore body image. For example, when Ross spoke about the things he enjoyed about physical activity, he mentioned he did not like being lazy, but stated that many of his classmates seem lazy:

> I mean… I guess not being lazy, I mean if that kind of makes sense. It's like I have a lot of people at school who are – I'm not going to say names just 'cause – but … Like it's hard to get up and just move. Even my family sometimes; not my personal family, but my relatives. It's like it's hard to get up and walk to the door and I mean it's kind of sad to look at.

Ross's reflection provided me the opportunity to probe deeper into why he thought it was sad to look at others struggling with daily living tasks and he responded that he felt some classmates were unhappy with how they looked, which guided our conversation toward

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body image. During these conversations, I made an effort to set aside my understanding and knowledge of body image, talk less, and allow participants the time to gather their thoughts regarding body image, given the sensitivity of the topic. Below are excerpts that reflect how many of participants defined the term ‘body image’:

> Mary: Body image is how your body looks and how you see yourself pretty much and if you like the way you look I guess…. being happy with the way you look and have confidence, be happy with what you have.

> Carrie: Um, well, let me think…Ok, well, there is positive body image, which is when you look good, you’re doing what you need to do, you cannot be in a better state of your body for yourself. Then there is the negative part, which is more popular, that people think: ‘I don’t look good’, ‘I need to fix this’, ‘this is wrong with me’.

Mary’s response reflects the traditional approach to measuring and defining body image, as she mentions two of the four dimensions typically assessed in traditional body image measures. Mary’s definition of body image includes the affective dimension because she felt one’s feelings toward his or her body appearance (i.e., being happy) was a component of body image. The cognitive dimension, which includes an individual’s thoughts and beliefs concerning one’s body shape and/or appearance, is also part of Mary’s body image definition (i.e., how you see yourself). Carrie’s definition addresses the behavioral dimension, as she mentions the need to “fix this”, if people possess negative body image. For Carrie, body image appears to be a valenced and static entity, as body image is either positive or negative.

A discussion regarding body ideals and where participants and their friends learn these body ideals was common among many of our conversations. When asked what boys their age want to look like, participants replied that boys want to have muscles; get built; have a six-pack; look like buff professional athletes; and not be skinny wimps.

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Participants said girls want to get really skinny; have curves; be toned; and have a nice body. After coding the data in each individual transcript, I organized the data by gender, followed by weight status, and then by ethnicity. However, I was not able to find any significant differences among these groupings. Boys and girls alike, regardless of body size or ethnicity, described many of the same ideals suggesting such body ideals permeate the adolescent culture. Additionally, participants commonly reported that people their age were not happy with their bodies "because they're always trying to change something about their body" (Jeremy). When conversations turned to where participants and their peers learn to admire these body types, participants mentioned media outlets, reality television, Barbie, the NFL, and video games:

> Maggie: Body image? What do I make of it? Body image, like most kids my age act, well older teenagers seem like they want toned bodies 'cause they're watching these shows like 'Jersey Shore' where people are super tan and they sometimes try to eat healthy but maybe they're acting like it but most of the time people want thin or muscular people that are really tan, have fairly long hair, they wear makeup, and they put their hair in, like, ponytail, super-big ponytails or super-big hair, and they use hair spray. . I know the kids at my school seem like that but I know they all have wider minds than I think they would because everyone has their own personal thoughts but that's most of the way they want to put it off as.

> Carrie: I think, going back to when we're very young, we're given Barbies to play with, they want to be the perfect shape and the perfect size, so I think they do strive to be like that. I think boys look up to athletes that they envy and, you know, 'I want to be like that someday, I want to play NFL' and do that stuff, I think they're competitive between each other so I think they push each other, the people who play sports and stuff. But the people that don't play sports, I don't think they do that as much. I think media and, like, we're given magazines that have these models who are a certain height, a certain hair color, certain make up, body, clothing. People my age want to wear that clothing so they have to make their body fit that clothing. I think they analyze themselves and everybody else when they're my age, they are more judgmental towards them and other people. And when you're younger you don't really think about that much because they don't really have a lot of worries a whole lot. I think we just realize more and we're opened up to a bigger world, it kind of opens up our eyes to different things.

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> Jeremy: Right now, the Wii says, like on Wii Fit, it will tell you if you're overweight, normal, or obese, it says for my height and my age it I'm underweight but I'm getting closer to normal. I'm kind of nervous because if you're too skinny it's not healthy for your body so I'm trying to go forward and go on the normal range or at least very close to it. I don't really care for being skinny.

Evident in these responses is the pervasiveness of body ideal messages that are reaching our youth, even at younger ages when participants played with Barbie. Participants, like Maggie, Carrie, and Jeremy, feel that boys and girls are learning to desire a body type from a variety of sociocultural influences: mass media outlets, toys, and professional sporting leagues. Additionally, many participants mentioned their friends were dissatisfied with their bodies. As presented below, participants themselves, appear to be dissatisfied with their bodies on occasion.

Personal Body Image

In many of the conversations, mention of personal body image followed discussions about peers' feelings, thoughts, and behaviors relating to body image. After reviewing my memos, listening to the audio files multiple times, and organizing and re-organizing the coded transcripts, all but one participant spoke about their personal body image. In the case of the one participant who did not discuss his body image, our conversation never took the path toward discussing personal information; this individual was visually uncomfortable disclosing any personal information. When I did probe deeper into exploring his personal health experiences, he said he was not sure how to answer and subsequently answered in one-word responses, demonstrating a lack of willingness to discuss his personal stories with me. While participants may have defined body image as a static, valenced entity, their personal body image experiences are

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dynamic, complex, and ever-changing. Megan's experience, over the course of the year, is like a roller coaster ride, consisting of highs and lows, satisfaction and dissatisfaction, in control and out of control:

> I just don't want to get overweight and I just want to stay healthy, because if you eat healthier … I don't know … it's just better for your body and stuff to eat healthier, like your heart and everything. But at the end of the year I was like, Oh my gosh, I can't be eating this anymore because I was freaking out. I can't keep eating this. Oh my gosh, I've gained a few pounds; it's not good. Because I used to be really chubby because I used to not care how I ate and I was, like, oh my gosh, I didn't want to gain back all the weight that I took time and exercise to lose weight to be healthier. That was like seventh grade. I guess I just started losing weight on my own because I started stretching up and I lost 15 pounds on my own and then I just started eating healthy because I don't like being chubby so I just started eating healthier. And I was happy with my body. Now, I guess I'm not huge by any means but I've got a little bit of a stomach so I kind of … I don't know. On that scale, I'm like a nine because nobody is going to be perfect. It's like … I am the way I am; I can't eat anything and stay skinny because that's not the way it works, that's not the way I am. I've eaten – you know how I said I ate junk for quite a while and didn't gain weight – and then it started catching up with me a little bit, but not too bad, though.

Megan rushes her response and seems panicked as she recalls how she felt and experienced her body over the last year. There were times she was happy with her body and other times she was preoccupied by her body size, demonstrating the complexity and ebb and flow nature of her embodied experiences. Similar to Megan, Mary and Charlie spoke about their personal feelings toward their bodies, while also describing how they were trying to improve their body satisfaction:

> Mary: Sometimes I, sometimes I wish I were smaller because I went to the doctor and for my height and I'm short and she said I should lose some weight and I've been trying. I was kind of, like, upset. I know I'm pretty big and sometimes my parents are telling me, like, "You need to watch out for that stomach" or something like that and sometimes it makes me feel bad and I know I do need to but I don't need to be told that all the time. I don't want it to affect me really big but I have been trying to cut down on what I eat, watch what I eat and stuff, eating healthier, and exercise a lot, I do try.

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> Charlie: I think I'm ok. Probably five or six or something. Yeah, I think I'm okay. I think I could do better on some things but I don't think I'm falling towards the deep end – I don't think I'm that bad – but I think I could do better at some things. Maybe do a little more, like get out, do more with yourself, and then don't eat so much sweets and eat more fruits and veggies and stuff like that.

Even though Charlie and Mary said they were generally happy with their body image, both of them provide examples of how they are actively managing their body satisfaction; taking action to increase their personal satisfaction with their bodies. As was common in our discussion of physical activity, eating habits, and general health, Charlie used the '1' to '10' scale to rate his satisfaction with his body image. While not every participant used this rating scale, 11 of them did and from those 11 participants, eight (five girls, three boys) used a nine or ten to rate their satisfaction with their bodies. Such a positive rating suggests boys and girls embrace and accept their bodies as they are, which may actively challenge the dominant body ideals present in the media and various other social institutions. Maggie was one of the more secure and confident participants when talking about her body:

> Like in my school, um, I wouldn't classify as fat but I'm definitely not super-skinny. I'd be classified as a kid in between. If anything I would just be chubby. I don't really mind. Chubbiness is okay. I don't like being a stick I do care about my health, like not too much about my appearance although I would like to keep it up a bit. It's mostly for my health because if I die of a heart attack I don't want it to be so much as because of my weight. I'm like way, like, a nine if not a ten. I don't want to sound over-confident about my body, but, like it's not as good as super-fit people or like the Olympics or what other people would see but I'm just happy enough that I can do what I can. Like I can function, I can work out for a fair amount of time if I really put my heart into it, and I'm glad that if I actually got determined enough then I could actually achieve, like, of course, everyday stuff because I want my body to be good enough to at least be able to do everyday stuff without over-exhausting itself.

I was overwhelmed by the beauty of Maggie's response because it reflected the primary purpose of this project: to explore and subsequently view health behaviors from a

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balanced and improving perspective, being concerned with adolescents' health and wellness outcomes, rather than focusing on their failure in meeting physical activity, dietary, and weight guidelines.

Body Image Conversations

A theme common among participants' body image conversations was recalling conversations they heard and/or had with significant others. During the analysis process, I separated the body image conversation codes by gender and found a significant difference in the number of body image related conversations recalled by girls versus boys. Each of the nine girls spoke about a conversation, while only one boy recalled a very brief conversation between his two sisters when he used to be a "professional eavesdropper" (Hunter). The girls recalled conversations among their peer group or family members, which involved a friend or family member complaining of her weight, while others expressed their disagreement with the source of his or her complaint:

> Gwen: My best friend, he is a little big, not too bad, but I was just like, "You're fine the way you are. If people like you for who you are, they're going to be with you, and, if they don't, they're just going to walk away and ignore you." He's like, "Yeah, you're right. I don't really need … I was like, "You don't really need people to be telling you you're fat or you're ugly", putting him down because of his weight. You know? . I'm like, "You don't need that negative energy around you." He's like, "Yeah, you're right. Thanks." And I stand up for him when people tell him that he's fat. I was like, "What about if you were him? You know? You wouldn't like people saying that to you." You know? And it does put him down. He cries. Even his mom puts him down because of that, too. She's like … well he is gay, too, and, like, his mom was just telling him "You're fat, you're gay, you shouldn't be like this. I thought I was going to raise a straight kid."

> Maggie: Some of the girls, they're like, "I'm starting to get a little bit of a paunch", they think they're getting a little chubby, which they aren't, but most of the time … when the kids my age think …weight will go to their heads even though they'll think they're fat, they're not. Like most girls, "Oh, I think I'm gaining weight." "You are a stick: nothing is going on." That happens, especially a lot with girls, they especially care about their weight, not only for their friends

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> but also a lot for popular guys or something like that. They really … they want the praise from their friends: "Oh, you look so good", "I like your four-pack", or "Wow, you look so pretty, I like your torso". I've never heard a kid actually say 'I like your torso but … Yeah, or guys say, "Dang, she's hot now" or "Now she's skinny, now she's hot."

> Mary: My sister, she's not fat at all or anything and she's not even that big and she's always saying "Oh, I need to lose weight" and stuff and she's tinier than me. I don't know. It kind of makes me upset. I'm, like, "You don't need to worry." She doesn't like the way she looks. I just try to build her up. I'm like, "I'm fine with me and I'm bigger than you." Because they see all these people on TV, how they look, and they're really skinny and they're really pretty and I think people just let it get to them, like, "Oh, I want to be like her" or something like that. Sometimes I do, too, I'm like I wish I could be like that, but then I think you have to be happy with what you have and if you work at it you can look good. I just tell her and even myself, just remember what they do to get like that. I'm doing whatever I can do here.

These excerpts demonstrate how the adolescent culture seems saturated by body image concerns, in particular for girls. Ata and colleagues (2007) describe the adolescent years as a developmental period in which adolescents become acutely aware of their weight and body. After hearing girls reflect so clearly on past body image conversations, I do think girls are highly impacted by these conversations, which seems to occur on a consistent basis. In the following passage, Kelly describes her emotions when her friends struggle with body issues, as well as the discomfort and frustration she feels when friends compare themselves to her:

> I have a friend and she, like, "I want to look so skinny in my dress" and everything and I'm like, "You're perfect, you're beautiful, don't say that, don't say that, just like yourself for who you are." Well, they're like "You're a good friend but I really think I should lose weight." Like I said, "You're beautiful." Like I hear from a friend, she tried to starve herself once. I'm like, it really put me down when … well, she really got desperate to lose weight. It hurt me, too, but I, like, no one's perfect and I kind of, like, told her "You're beautiful in your own way so don't do this, really, don't do this, don't hurt your body on doing this, just do your own thing." I usually just plan stuff we can do like doing fun stuff and enjoy being active, too. I don't like hearing that. I want to be supportive. She's like, "I want to be skinny like you" and everything. I feel like, for some

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> reason at the time, at the moment, I'm like, "You want to be just like me? Don't do that. I'm your friend." Like I said, "you're beautiful no matter what."

Kelly, seemingly comfortable in her own body, tries to remain sympathetic to her friends' struggles, yet expresses frustration when they continue to put themselves down:

> My friend, she wants to lose weight. I mean she looks fine. It kind of bothers me how she says that, like, "You're perfect" well, you're not perfect but "you're not fat or anything" and she's always saying, "I want to look like you" and everything, like kind of putting me on the spot. I always tell her, "No, no, you look good. Don't judge yourself because of that. Don't do that." We usually we go for a walk afterwards and talk about it. She always says she eats a lot. I don't know. I really don't care if you eat a lot, like "you're fine." I mean "there's nothing wrong with you or anything". I just don't like the fact that she's always saying that, that "I want to look like you" and kind of like putting me on the spot like I said. I'm just like when people are saying I want to be skinny and everything, I kind of like usually when I have my friends, we're probably in a group talking, they usually do bring up the weight and when they say I want to be skinny and everything I know … I'll always have a feeling they're going to point to me. I just kind of back out because I don't want to be on the spot, I don't want to be the one looking perfect because I'm not perfect … you know?

Kelly provides insight into the group talk that seems common among adolescent girls. Normative body ideals appear to be encouraged by the girls' peer group and to an extent, family members. While such standards are virtually impossible to attain, these ideals are being accepted and internalized by adolescent girls in Muscatine, independent of weight status or ethnicity. Given the large number of recalled body image related conversations within such a small sample, it is evident that body image dialogue is common and often practiced within girl peer groups.

Body Image Memories

In addition to recalling conversations regarding body image, participants also reflected on particular instances concerning body image. Again, more girls spoke about such stories than did boys. One difference between the codes of 'body image conversations' and 'body image memories' was that the conversations were more likely

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to take place with friends, while memories more commonly involved family. The memories were often discussed following our conversation about defining body image. While I was vigilant in using the term body image, given that was the direction our conversation was taking, many participants talked specifically about weight. Megan, in this lengthy excerpt, reflects on memories concerning her entire family's body experiences:

> My sisters were real thin and everything so it's like it was just me who was chubby and then my mom decided that when my dad decided to eat healthy, my mom said she was going to start on Weight Watchers again. There was one night I remember, we were out to eat and she had eaten so much and she was like, "Oh my gosh, I can't do this anymore. I need to go on Weight Watchers. I can't keep eating bad and gaining weight" and she just started going on Weight Watchers and she did it. So I asked if I could do it and she said it was really up to me. She said, "I just don't want you losing too much weight" but she didn't want me to lose weight just to eat healthier so that's what I did. Then I started getting really, really skinny and then she started getting mad and she was like, "You need to start eating regular again" and that's kind of the reason that I gained a little bit of weight back. What she says right now is I should stay the way I am and just kind of work on my stomach or something, just exercise more and I'll be fine, that's what she says. Yeah, because I was saying the other day I said I need to go on another diet again and she said, "No! You don't need to go on another diet! That's bad, you're growing still," she said, "you can't be doing that." But like Emma is a little heavier now but she's been going to college and she's been busy because she's been in Des Moines at Drake University so she's been real busy you know. She's not, like, huge but she's just a little chubby. And Libby, she's still pretty thin; she's always been thinner. Emma is always like, "I need to lose weight." I'm like, "So do I" and she's like, "No, you don't", she's like, "You don't need to lose weight," and I'm like, "Okay." I don't know. I've always been self-conscious about everything.

Megan mentions her dad, mom and two sisters as she reflects on this memory. It is evident that her family's actions, conversations, and body dissatisfaction had a direct impact on her own preoccupation with weight. Mary, also mentioning how her family impacted her bodily self-perceptions, provides an example of how such self-perceptions change and evolve over time:

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> Probably like in sixth grade, I think it was, I liked how I looked and stuff. I wasn't big but I wasn't really small, but I was fine with my body then. When I was kind of growing up, like this year, whenever my parents tell me to watch out or when I eat because sometimes my dad will mess around or something and he'll be like, "Oh, look at that, you're going to be bigger than me." It makes me kind of insecure and stuff. I tell them how I feel about it. I'm like, "I don't like you saying that. I'm not fat-fat but I'm not really little." But my parents, they throw out, saying that I need to watch what I eat and stuff. It kind of made me feel bad, you know. They say I'm lazy and sometimes it makes me feel bad. My dad or my mom most of the time will be like, "You guys are lazy, you guys need to out doing stuff." They think I just sit around all day doing nothing but I don't. My parents say I'm lazy and stuff.

Parents act as primary role models for their children by modeling acceptable behaviors and providing their children with messages that are consistent with their own personal beliefs or worldviews (Rodgers & Chabrol, 2009). As primary socialization agents, Mary and Megan's parents communicate messages, directly and indirectly, to their girls regarding their appearance and eating behaviors. Direct comments include: commenting on a child's weight; encouraging the child to diet; commenting on a child's food choices; intentionally hurtful comments; comments made 'as if to be helpful'; and general discussions about weight issues (Fulkerson et al. 2002; Haines, Neumark-Sztainer, Hannan, & Robinson-O'Brien, 2008; Neumark-Sztainer et al., 1998). Indirect comments occur when a parent comments on his or her own weight/eating behaviors or when the parent engages in and models such behaviors, which was demonstrated with Megan's mom. Parents' behaviors and comments have been linked to adolescent dieting, restriction and weight-loss attempts, disordered and high-risk eating, and increased engagement in risky behaviors (Dixon, Adair, & O'Connor, 1996). As a result, parents' attitudes, thoughts, and own behaviors can be particularly influential on adolescents' attitudes toward their body images, as is evident in Megan and Mary's stories. From my research, it is apparent that parents' behaviors and beliefs form long-lasting impact on

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their children's body image experiences, given the number of body image memories recalled by participants.

Self Pride

The unstructured interview guide approach yielded a theme that was more abstract than some of the other themes mentioned above. While interview questions did not directly ask participants to talk about their personal goals or speak about personal satisfaction, I used follow-up questions and additional probing as a way to promote personal empowerment for each participant. For example, when Gwen shared that she was making an effort to eat healthy, I provided the following response:

> I am hearing you say that eating healthy is something that you're proud of, and something you've been able to do? That's a really good one, that's really good. And I would add, after hearing everything else you've said, being a really good friend is something else you do a great job with.

By utilizing these positive statements, I felt I was able to foster a sense of competence and empowerment within many of the participants, reflected in their responses organized into two codes: (1) proud of body; and (2) goals.

Proud of Body and Self

Each of the 18 participants shared their thoughts regarding various aspects of themselves they were proud of, including aspects such as their strength, independence, stamina, leading a healthy lifestyle, pushing themselves, sporting success, overcoming personal challenges, cooking skills, and school performance. When participants did struggle with describing aspects of themselves that instilled a sense of pride or sense of value, I would ask them to take a minute to think of three things they were proud of. Thinking in terms of a list and/or numbering thoughts seemed to help many participants

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speak about many of the topics during the interviews. One of my first participants used a scale from '1' to '10' to rate his satisfaction with his overall health, physical activity level, current eating habits, and body image. I used this approach during the rest of my interviews and found it to be effective in eliciting their sense of satisfaction with themselves. It also provided an entry point to discuss reasons they rated their satisfaction on the lower end or discuss what things they would like to improve and/or change to increase their self-rating. Throughout our conversation, Megan consistently spoke about making an effort to engage in healthier behaviors. When asked what she was most proud of, Megan responded:

> I have been trying to eat healthier. I've been trying to, a little bit, trying to exercise a little more, like, even during the school year, I've been staying in activities. And … <**Pause**> I can't even say sleep because during the school year I get, like, no sleep. But just living a healthy lifestyle, I guess – I've been trying to anyway. I've been trying to. Yeah, I'll go and get sometimes. I think, I shouldn't be eating this but I do anyway. <***Laughs***> But for the most part I try to eat healthy. I don't always and I think that's how everybody is.

Megan, proud of her efforts to lead a healthy lifestyle, taps into an issue many individuals face when making behavioral changes, adhering to and maintaining a healthy lifestyle. Megan's response is insightful as she indicates an awareness that choosing healthy behaviors takes hard work and persistence. Furthermore, Megan mentions an internal battle taking place when she decides to eat ice cream. However, rather than beating herself up for eating ice cream every now and then, Megan is able to calm this battle and develops a sense of pride in her effort to lead a healthy life.

Kelly, reflecting on her past substance abuse issues and time spent in an in-patient treatment center, indicates that she is proud of how far she has come since her alcohol addiction days:

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> Now being sober and actually being more active than I was in the past, I am really proud of myself. I'm more with my family probably than just two months ago. Yes, so I'm really happy right now, and school's about to start and my birthday's coming up and everything. I'm ready. <***Laughs***> Everything just seems to be going in the right way. I feel pretty confident in keeping all this up. I've been going for two months already so right now I know I can do it.

Kelly expresses pure joy in her journey to establishing positive health behaviors. While substance abuse was unique to Kelly's story, feeling confident, being happy, and holding a family role were highlighted as sources of pride among many participants. More common was a sense of pride in physical qualities and sport successes. For example, Hunter explains that he is proud of his physical strength; a strength that connects Hunter to his dad:

> I am really strong and one of the reasons my dad calls me his right-hand man is because I'm a really good heavy lifter. I can lift a lot, like a lot, and it really helps with construction and whatnot because my dad brings in plywood and drywall and whatnot. And my dad's friend can't … can pick up one and me and my dad will pick up two or three at a time and it really helps.

When asked to list three things he was most proud of, James states:

> This year in wrestling 'cause I did really good in wrestling like four times and we won, like, ten. I'm in shape. I don't get tired really fast.

While a wide range of answers were given to the question, "What are you proud of?", participants took time to reflect on the question and construct insightful responses, some seeming wise beyond their years, but all finding value in themselves. Given the richness this question inspired on the first day of interviews, I decided that for the remainder of the interviews, this question would be the final question I asked, in hopes of leaving participants with a positive sense of self.

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Goals

Participants also demonstrated self-pride by describing goals they had set and subsequently met through hard work, persistence, and dedication. When I probed about future goals, a common theme was setting goals related to future sport participation and collegiate aspirations. Ruby and Hunter have goals of playing sports, basketball and baseball respectively, through high school, at the University of Iowa, and at the professional level. Kelly, with her love for art, aspires to attend college on an art scholarship. Kelly mentioned a more immediate goal of joining the soccer team and then making the team when she enters high school. Rachel was one of the few participants to mention a goal specific to weight loss and provide insight to a reward when she reaches her goal:

> I want to commit to get a healthier body and lose some weight so I'm in the healthier range, as my doctor would say. Right now I'm working on to lose at least 20 pounds and also my mom said I could have my ears pierced, like up here, so that's going to encourage me to get to that goal so I can have a reward to look forward to. Just thinking, like after I've done it, I'll just feel so much better.

From these conversations, setting goals seemed to provide participants the direction needed to pursue healthy actions and enhance participants' motivation to maintain healthy lifestyles. Additionally, participants acknowledged they set their own goals, demonstrating that they were in control of their own goals and felt competent in making progress toward their goals. Finally, participants mentioned sharing their goals with significant others, suggesting they felt connected to peers, family members, coaches, and teachers since they were being held accountable for achieving goals.

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Adolescent Culture

Adolescence is a time of substantive physiological, cognitive, and social development and change. Such changes do not occur in isolation, but develop in various social settings. As students, adolescents spend a large portion of their days within the school environment. While the socio-ecological environment is discussed below, there are two codes that seem to fit best within a unique theme of the adolescent culture: (1) troubled times; and (2) helping others/advice.

Troubled Times

Each of the 18 participants described particular instances when they faced challenges regarding their health experiences. Common among their responses were stories of being injured, being overweight, not having friends, emotional struggles, and being bullied. Given the prevalence of such stories, I have classified these troubled times into the theme, *adolescent culture.* While some stories may have appeared more intense and traumatic than others, each participant's sense of well-being seemed to be influenced by a personal struggle. Hunter, Gwen, and Maggie have experienced and/or been witness to seemingly painful events in their young lives:

> Hunter: My dad was a fighter his whole life. He street fought: he's been smacked in the head with a crowbar, he's been shot at, he's been stabbed. My dad's been through a lot and I guess he says he doesn't want me to have the life that he had, he doesn't want me to fight, but he wants me to know how to protect myself and defend myself when I need to. So I need to be strong. My dad said if somebody punches me, "If somebody starts a fight, finish it." So one time, another kid made fun of my family life, he punched me in the stomach and I cracked him in the jaw and he just fell. So now I go to therapy for anger management. See, my therapist helps me because I actually listen and I absorb what he's saying. He's a good therapist…We had a different therapist but the only problem with her was my therapist, my old therapist, was she told my parents that some of the punishments were not very good punishments and so my parents got mad and they took me out of that therapy and put me in this one and he comes over to our house every Tuesday and Thursday.

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This story provides additional context to why Hunter sees baseball as an escape from his family, as his family life seems filled with many events sparking great emotional upheaval. While I was deeply affected by Hunter's story, I took solace in knowing he has a therapist who listens to him and has sport as his own personal safe haven. While not a victim to bullying herself, Gwen shared a story about how her best friend is bullied at school and at home:

> He has talked to me about how people are pressuring him to lose weight. His mom and other people are telling him that he's fat and stuff like that. Basically they're just teasing him. I just told him, "You're fine the way you are. Obviously I wouldn't be your friend just because of one little detail." He's like, "Thanks, you're a really good friend" and stuff like that. I just feel really bad for him because of what people say to him and even his own mom. His own mom tells him, you know, "I thought you were going to be straight and why, when did you start liking guys?" and stuff like that. He ran away from his home… He took charge of himself. He needs, instead of putting up with his mom at home, he decided to go to his aunt's house because when he's with his aunt he just feels like he can just be himself and it makes him feel good and it makes me feel good that he's happy with his aunt… People at school say he's ugly, he has red hair – he does have red hair – and he's a fire crotch. That's what people say about him. And you know the thing that makes me upset mostly about it is that sometimes they don't even say it to his face, they just say it behind his back and he hears it from other people and then it gets him more upset because … you know. I hate it when guys just don't have the guts to go and say it to anybody's face. I'd rather prefer somebody tell me to my face what they really have to say rather than say it behind my back. It just shows that you're not a really good friend at all.

Gwen, one of the more mature, talkative, and inquisitive participants, spoke passionately about how difficult the middle school environment can be for students falling outside the norm. Having witnessed her friend being bullied, Gwen rises above the middle school mayhem and describes what she feels is important during middle school, remaining non-judgmental and a good friend to her peers. Maggie, another inquisitive mind, has been bullied since her elementary years for being a loner. In this excerpt, she describes a particular event that occurred in the past year:

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> At the beginning of the school year I had this binder and my mom and I do this thing called decoupage. It's really fun. We printed out my names, like my nickname is 'Micki' since I just wanted a shorter name and so we printed it out in red letter and we used drippy font so it looked like a bloody name. So we decoupaged it onto my binder and I thought it was pretty cool. So I went to school and about the third day of school this girl, she looks at the binder and she's like, "Why does it look like blood?" and I'm like, "'Cause blood's cool." "Cause blood is cool," and she's like, "No, it's not" and I'm like, "Well, that's your opinion." And then a few days later I wanted to be moved because the same girl and her friend, who is just as annoying, were talking about me.

After sharing this story and many other examples of when she had been teased, Maggie says she does not care what other people say or think about her. She described herself as an independent thinker, not influenced by what others thought about her. While I admire her resiliency and autonomy, the bullying events seemed to make an impact on experience, as much of our conservation revolved around what others girls thought about her.

Helping Others/Advice

Despite the turbulent events described above, the adolescent culture also seemed to consist of middle school students helping others and/or offering advice to those who were struggling with their own health experiences. While not directly asked during the interview, the excerpts coded as 'helping others/advice' seemed to be a large part of how participants connected with others. Gwen and Kelly share stories when they have helped their friends be active, while Carrie describes how she helps younger children at camp to be healthy:

> Gwen: I definitely encourage my friend, the one, he thinks he's too fat, in gym class we did have eight weeks of volleyball and he's like, "I don't want to play." He's like, "I'm not good" and stuff like that. I was like, "You're playing with me." He's like, "All right." So he's the first one to serve and his serves are, they're good. I think they're better than mine honestly. His serves were just really good. I was like, "You did great out there; you're not bad at all." He's like, "Really? Thanks!" It just made his day and he's happy he's playing

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> volleyball. The thing I like about him the most is that I can always go to him 'cause he's gay so we can talk about boys and he wouldn't care. He's just that perfect gay best friend, definitely. I do push him to go get out there, you know. I do tell him to go swimming with me at the pool here so we go. Whenever I go he goes most of the time.
>
> Kelly: I totally help my friends. <***Laughs***> I guess I go for a walk for, like, walk around the Mississippi River, just talk and kind of have fun but I don't put them on the spot, like "Go run a mile" or anything. Just kind of do something we both enjoy together. Just kind of like, do easy things all the time. Yeah, they need support…I'm active I'm finding something that I really like to do and I help friends on finding what they like to do and support them, too, on that. So I'd probably just say, like I said, what do they enjoy doing and if they say "I enjoy playing football" I'd be, like, let's go play some football, sort of from there.
>
> Carrie: Now I'm working for this lady and she has kind of like a summer camp and daycare place, for kids in fifth grade, going into sixth grade. I would ask them, "How do you want to be healthy? Do you want to keep yourself up in shape or do you not really care about what you do with your body?" I tell them you'll just feel better because you're doing stuff, you're not just at home… You have to get up and do something, I think that helps you. It helps you keep your body up to shape.

For many participants, physical activity provided them the dual opportunity to enhance their own health and sense of well-being, as well as contribute to significant others' health and well-being. These specific excerpts and themes running among the thematic codes illustrate the modern, multi-dimensional concept of health, evidenced by how a sense of well-being is reflected in optimal functioning, health-related quality of life, meaningful relationships, and a contribution to society.

<u>Socio-ecological Environment</u>

While the socio-ecological environment has been evident throughout this chapter and will be discussed in Chapter Five, I feel it is important to briefly discuss some commonly cited aspects of participants' socio-ecological environment. Family, friends, and the physical (natural and built) environment were the most commonly discussed aspects of participants' socio-ecological environment. In addition to influencing their

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health behaviors, family and friends were cited as role models for participants' health. When I asked Kelly who her role models were for health, she described her sister and best friend:

> My sister, her name's Hillary, she's like … yeah, she's my role model. I don't know. She's always been there for me like I've always been there for her, like in her relationship. I really look up to her, she tries her best to be a healthy role model for me. I have a very true friend, a very close friend, Mary. She's involved with soccer, too, she's supportive. When I go hang out with her we sometimes play soccer, too. We talk about everything. We have so much in common. She's adopted too. Yeah, and … I don't know. She's … we share secrets and everything. I don't know. She's, like, the good friend that I really want to keep. I'm lucky I got her. I guess I know my mom told me once we were at an adoptive party and we were playing tag and we've been best friends since that. I don't remember that but I guess we have.

When I asked Matt the same question, I was not surprised to hear him speak of a family member who was managing diabetes:

> My older cousin. He's sixteen. Cause he used to be fat but then they told them that he had … that he was like super-close to getting diabetes and he stopped doing what we has doing and he's one of the skinniest of our family. He changed a lot, eating, like he ate this soup that was made of vegetables. Cabbage and celery and all that. Yeah, and he ran two miles every single day.

For many days following our conversation, I struggled with this particular interview. I was glad to hear Matt talk about a role model, but after hearing the extreme behaviors Matt learned from his cousin and was currently engaging in himself, I worried for his personal health.

Steven and Ross both talked at length about the presence of cliques at school. Steven shared a negative story regarding peer cliques at school, which negatively influenced his ability to be active. Ross acknowledged that cliques exist, but there are spaces that equalize the hierarchy:

> Steven: This is sort of like a social-type of thing, but like a place where I'm going to call it we call it "preps" at our school, they're the popular kids who are athletic

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> and they can do everything and the teachers love them and all that stuff, where they can't be there because we, me and my friends and a lot of other people, we hate them all because they drive us up a wall and they're athletic and they can do anything. We're not as athletic but you know we still want to do stuff but a lot of times we get excluded and whatnot. So just a place that is not with those people. Well no … well, if there's a teacher that does athletic, … Like a coach or something or does stuff like that then they're automatically the teacher's favorites, and then I guess if they ask for help or something they'll gladly give it to them and then we're sort of pushed aside until they're not there or something. I guess it's sort of like a wealthy class-type of thing, there's the rich would be the preps and then there's middle and then there's lower class. I guess you would say it's basically what it is for middle school I guess, and the rich get first dibs.

> Ross: Well, there are groups. Like you had the jocks who follow jocks and then you have band and music that are really good but they don't do anything outside or are active. But it's like you have your own group so I think necessarily it doesn't matter if you're outside all the time because you can always find that group to rely on. But no, the groups don't always stick together. No, definitely not because … have you ever heard of S.O.A.P.? Students of Active Prayer. I go to that. I just started that this year. I went out of my box again. It's, like, wow. And everybody is there – everyone. There's no discrimination on who you are or where you've been, what you've done. You can always find someone who will go with you.

Finally the physical and built environments were more commonly discussed as barriers rather than facilitators to physical activity. The community resources were identified as a barrier due to over-crowding, poor maintenance of space, and inflexible hours of operation. For example, the bowling alley is closed three days of the week, so participants would like to see the alley opened more often. Participants noted that places should be open on the weekends and later in the evening so they have a chance to attend after extra-curricular activities are done. The south end of Muscatine and areas near the YMCA were identified as unsafe spaces due to crime, gangs, and low-income housing. Muscatine also has a no pool ordinance for homes in the city due to space, so participants felt this was a barrier because they could not have their own pools. The winter season was noted as the season when participants were least active. The snow, cold, and ice kept

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participants inside where they have a lack of resources available to be active. Each one of these barriers was considered when planning and designing the middle school student health intervention.

Summary

This chapter discussed the emergent codes and themes that provided the framework for the proposed grounded theory discussed in the next chapter. Chapter 5 articulates the development of the framework for the conceptual model, provides an explanation of how the results informed the CHAMPS intervention, and discusses the project's limitations, implications, and offers suggestions for future directions.

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CHAPTER V

CONCLUSIONS

Introduction

The purpose of this chapter is to discuss a proposed conceptual model that emerged from the results provided in Chapter Four. Additionally, I describe the "Choosing Healthy Actions in Muscatine Public Schools" (CHAMPS) Intervention to illustrate how the findings from this project were used to guide the development of the intervention, which began in March 2012 and will continue through February 2013.

This project explored health from a multi-dimensional and integrated perspective, viewing physical activity participation, nutrition, and body image as contributors to overall health and wellness. In exploring health, I generated a conceptual model to represent how rural adolescents experience health. While I set out to develop a theory grounded in the physical activity, body image, and nutrition-related experiences of 18 adolescents, it was beyond the scope of this project to test the psychometric properties of the three theoretical constructs that emerged from the data analysis process. Rather, it is a proposed conceptual model, representing the health experiences of the 18 participants that emerged from this project and is discussed below.

Despite the abundance of existing health and wellness literature, much of the research is driven by measurement, rather than situating health and wellness within the context in which they occur and are experienced. In an effort to contextualize such experiences, I felt the choice of grounded theory methodology was appropriate because I was able to explore health from the naturalistic perspective of adolescents' lived experiences as recounted by their personal stories.

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The Model of Embodied Health and Wellness

The proposed framework for explaining participants' health experiences is visually presented in Figure 2. I chose to use the triangle shape to demonstrate how the framework was built from the ground up. The base of each triangle includes examples from the open coding process, while the second and third levels include axial and selective coding examples, respectively. The top level of each pyramid represents the constructs I created based on the data analysis process: (1) personal health behaviors; (2) eco-sociocultural influence; and (3) everyday experience. As evident in Figure 2, the top levels of the pyramids do not have a closed tip because the constructs alone do not explain the participants' experiences. Rather, I propose that these three constructs provide a unique conceptual framework for understanding and explaining health experiences. The goal of this project was to construct a theory grounded in participants' experiences. I did not set out to test the psychometric properties of the proposed theory, but rather attempted to explain and understand participants' experiences from an innovative lens. Given this aim, I propose a conceptual model that is useful in representing the health experiences of the 18 adolescents who participated in this project. While I am not suggesting that the proposed framework has been validated or demonstrates reliability across various populations, I use the three proposed constructs to describe the conceptual beginnings of a promising model that, in the future, may be applicable to individuals' health experiences in different contexts.

The conceptual Model of Embodied Health and Wellness (MEHW; see Figure 3) emerged from the codes and themes identified in Chapter Four. I merged the 28 conceptual themes from Chapter Four into three constructs of higher order concepts: (1)

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personal health behaviors; (2) eco-sociocultural influence; and (3) everyday experience. The model identified in this project did not emerge as a step-by-step or progressive process, but instead developed in a circular, collision-like fashion. In the depiction of the model, these constructs appear in a funnel for two reasons. First, the movement within a funnel is a circular, swirling, rotating whirlwind of activity. The interaction between and among these three constructs is just that: a complicated, whirlwind interaction of individual and socio-cultural experiences that ebb and flow from day to day. Secondly, these daily dynamic interactions are blended together and as a result are channeled into creations of embodied health and wellness experiences. The MEHW demonstrates a holistic approach to health and wellness by attending to the connection of how social, psychological, emotional, physical, and behavioral aspects of health interact to affect the broader, yet embodied, sense of health and wellness.

Embodiment

Embodiment represents the way in which the body comes to take on meanings and is experienced in a particular way as a result of these created meanings (Sparkes, 1997). The term embodiment is useful to this project because it inherently connects the mind and body, while also expressing the interplay of the whole person and the external world (Einstein & Shildrick, 2009). Thus, embodiment reinforces the multi-dimensionality of health and wellness, reflected in the social, psychological, emotional, physical, and behavioral aspects of health and wellness. Since the embodied self is in a constant state of flux, MEHW speculates that embodied experiences of health and wellness are continually being negotiated, normalized, challenged, or solidified based on the interaction of personal health behaviors, eco-sociocultural influence, and everyday

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experience.

Model of Embodied Health and Wellness Constructs

The relationship between and among the three proposed constructs is a collaborative process such that each of these constructs influences and is influenced by the others. These constructs are woven together and best explain health and wellness when their interconnectedness is included in the explanation. The embodied experiences of health and wellness are not isolated events, but rather occur as a result of the complex interplay of personal health behaviors, eco-sociocultural influence, and everyday experience. The inner and overt workings of the individual (e.g., thoughts, attitudes, emotions, behavior), the eco-sociocultural environment, and the day-to-day construction and/or management of experiences interact and are intertwined to create one's embodied sense of health and wellness.

Personal Health Behaviors

Given my interest in exploring how physical activity and body image influence adolescents' overall health and wellness, I chose to focus on physical activity and body image. It was beyond the scope of this project to include and explore all possible health behaviors, so I narrowed my focus to physical activity and body image. Researchers interested in using MEHW are encouraged to choose health behaviors relevant to their study aims. I do not suggest physical activity and body image are the only health behaviors that can be understood by MEHW. However, I perceive this construct to include the actions that individuals take toward their health. While I propose that personal health behaviors are action-based, these behaviors do influence the multi-dimensional nature of health. Thus, the health actions an individual chooses to take can

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influence his or her emotional, social, intellectual, or spiritual health. Several participants shared various action-based strategies they took to maintain or change aspects of their health. These included, but were not limited to: type of food consumed, losing weight, amount of physical activity, and sport participation (see Figure 2). While my focus was narrowed to physical activity, body image, and nutrition, participants' action-based behaviors influenced their overall health, reflected in the emotional, mental, social, spiritual, and physical domains of wellness. When I asked Gwen what she liked about being physical active, she responded:

> I like the idea of meeting new people, you know, learning different skills, and sportsmanship. It, you know, it shows you a lot. Plus, you know, you stay out of trouble when you're in sports, so it's a good thing. I enjoy that you're burning off calories there. After all you have a great time in the gym and you feel better from the workout. I would say just it makes you feel better, getting out there, having fun, keeping my mind healthy, and having time to myself sometimes.

Gwen's response indicates that the action of participating in physical activity provided her the opportunity to achieve optimal health. For Gwen, being fit is not the only benefit she gains from being active. Rather, she experiences emotional ('feel better'), mental ('keeping my mind healthy'), social ('meeting new people'), spiritual ('time to myself'), and physical ('burning off calories') benefits. Despite Gwen alluding to the multi-dimensionality of health and wellness, I do not believe Gwen made the connection between physical activity and optimal health. Like Gwen, many of the participants did not appear to be aware of how their physical activity and body image experiences influenced their embodied health and wellness. While the terms 'health' and 'wellness' were rarely mentioned by participants, I believe they talked around the concepts by sharing how physical activity and body image affect their emotional, mental, social, spiritual, and physical states.

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From a feminist research perspective, I believe that adolescents' understanding of health and wellness can be developed through consciousness-raising activities and experiences. For example, health teachers can develop and teach a unit on the sociocultural construction of body ideals and engage adolescents in conversations about how the media's portrayal of such body ideals impacts their emotional, mental, social, spiritual, and physical states. Physical education teachers and coaches can encourage students to participate in active dialogue regarding the reasons they choose to be active. Strelan, Mehaffey, and Tiggemann (2003) suggest individuals who engage in exercise for appearance-related reasons, such as weight control, tone, or attractiveness, experience increased body dissatisfaction more often than individuals who engage in exercise for enjoyment, health, or fitness reasons. Students should be encouraged to participate in activity for enjoyment and for health and fitness reasons, which may improve their body satisfaction. By sharing experiences and being encouraged to resist socially constructed body ideals, adolescents may come to discover that issues they believed to be personal do, in fact, have social bases and solutions.

The multi-dimensional and integrated health and wellness concepts are personal factors. When comparing the emergent themes with existing literature, I found that participants' personal health behaviors could be understood, in part, by the tenets of Self-Determination Theory (SDT; Deci & Ryan, 1985). SDT is a theoretical framework that attempts to understand individuals' motivation toward a task and explain different motivation profiles associated with behavior regulations. Motivation is based on a set of innate psychological needs, including self-determination, competence, and interpersonal relatedness (Deci & Ryan, 1985). Extrinsic motivation leads a person to perform an

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activity to achieve an instrumental outcome, such as winning. Intrinsic motivation is "the natural tendency to engage in interesting activities, to seek and achieve optimal challenges" (Weiss & Ferrer-Caja, p.126). An individual possesses the need to feel competent, autonomous, and socially related making behavioral decisions. If individuals are intrinsically motivated and believe they have high ability, competence, and social support, they are likely to be motivated to complete behaviors. SDT also attends to how social and cultural factors facilitate or undermine people's sense of volition and initiative, in addition to their well-being and the quality of their behavioral performance. Conditions supporting the individual's experience of autonomy, competence, and relatedness foster the most volitional and high quality forms of motivation and engagement for activities, including enhanced performance, persistence, and creativity. When any of these three basic psychological needs is unsupported or thwarted within a social context, SDT proposes an individual will experience a robust blow to their wellness.

Common among participants' stories was their need to feel competent, (dis)connected, and in control. For example, participants felt it was important to succeed in the activities they participated in (competence), felt (dis)connected to their peer and family members when participating in physical activity or discussing body image, and wanted decision making power regarding their food and physical activity choices (in control). During our conversation, Kelly frequently talked about high quality relationships she has with friends. In the following excerpt, Kelly's basic psychological needs are being met as she alludes to experiences that support her competence, connectedness, and feeling in control:

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> I have a friend, Beth, who's involved with soccer, too, she's supportive. When I go hang out with her we sometimes play soccer, because we are both pretty good at it. We have so much in common. We talk about everything, like our bodies sometimes. We share secrets and tell each other what bothers us about the way we look, not all the time but there are times we do. I don't know. She's, like, the good friend that I really want to keep. I'm lucky I got her. We just like to do things we want to do.

Kelly's competence is reflected in her soccer skills, while connectedness is demonstrated in her close friendship with Beth, and feeling in control is alluded to in her ability to engage in activities she prefers to do. However, SDT does not fully capture participants' health experiences. Common among participants' responses was the desire to be alone, separated from the social environment. For Mary, dance provided her the opportunity "to get away from my family…it's quiet time." Thus, adolescents do not always feel the need to be connected to others, but sometimes want to be disconnected from others. While SDT provides a theoretical framework connecting the fulfillment of basic psychological needs to motivation, MEHW posits that health behaviors provide competence, control, and (dis)connectedness opportunities that shape embodied health and wellness experiences.

<u>Eco-Sociocultural Influence</u>

Considering the multiple sources, like peers, family, school, organizational programs, that influence adolescents' health behaviors, it is important to understand how these sources impact embodied health and wellness experiences. When comparing my findings to existing literature, I found similarities between my results and the existing literature regarding socio-ecological models. Socio-ecological models have provided a structure by which relevant factors may be categorized into multiple levels of influence (Lee & Cubbin, 2009). These models suggest that multiple levels of factors, within the

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intrapersonal, social, cultural, and environmental domains interact to influence specific health behaviors. Furthermore, because influences on health behavior interact across these different levels, multi-level interventions should be most effective in changing behavior.

In an attempt to incorporate the influence of the individual, social, and environmental factors, ecological models have built on the work of developmental psychologist, Urie Bronfenbrenner. Bronfenbrenner (1977) proposed a broader approach to explain the intervening influences within, between, and external to individuals that can change human development. Bronfenbrenner suggests the understanding of human development "requires examination of multi-person systems of interaction not limited to a single setting and must take into account aspects of the environment beyond the immediate situation containing the subject" (p. 514). Bronfenbrenner differentiated the external influences into levels of settings, from the most proximal setting (i.e., microsystem) to the most distal setting to the individual (i.e., macrosystem). The microsystem consists of the relationships between an individual and the immediate setting where an individual acts and develops. According to Bronfenbrenner, the place, time, physical features, activity, participant, and role are all elements that make up the setting. An example of a microsystem relationship would be a child who plays the role of a student while in the school setting. The second level, the mesosystem, consists of the relationships among the major settings containing an individual at a specific point in one's life. For today's youth, the mesosystem may encompass interactions among family, friends, school, and sports. The third level, the exosystem, extends the mesosystem by including both formal and informal social structures. These structures

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may not directly contain the individual, but do influence the immediate settings within which he or she exists. The mass media, governmental agencies, communication and transportation facilities, and neighborhood are all examples of structures in the exosystem. The fourth and final level, the macrosystem, describes the overarching institutional patterns of an individual's culture. The economic, social, educational, legal, and political systems act as macrosystems. According to Bronfenbrenner (1977), these systems carry "information and ideology that, both explicitly and implicitly, endow meaning and motivation to particular agencies, social networks, roles, activities, and their interrelations" (p. 515). Bronfenbrenner's broader approach provides a useful framework for understanding the complex interaction between individuals and the changing environments in which they exist.

Some social ecological models have been developed specifically for physical activity behaviors (McLeroy, 1988; Spence & Lee, 2005). McLeroy (1988) proposed a five-level model that includes: intrapersonal factors (e.g., motivation, self-efficacy); interpersonal factors (e.g., social support, social norms); institutional factors (e.g., school); community factors (e.g., park and recreation department); and public policy factors (e.g., local and federal laws). While the intrapersonal factors are more commonly examined and established as determinants of health behaviors, these broader factors are thought to promote and/or limit physical activity participation (Sallis & Owen, 1999; Stokols, 1996). An individual's ability to engage in healthy behaviors is influenced by the cues and opportunities these factors present.

These social ecological models, in their broadest sense, incorporate the intra-individual, inter-individual, and the extra-individual levels. Recent health and obesity

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literature suggests the dynamic relationships among individual, social, and environmental factors influencing health behaviors (Blanchard et al., 2005; Giles-Corti & Donovan, 2002). At the interpersonal level, studies have shown that adolescents regard health as their own responsibility, are knowledgeable about behavioral risk factors, and perceive limited access to facilities as a barrier to physical activity participation (Giskes et al., 2005; Utter et al., 2006). At the social level, significant others, like peers, family, and teachers can influence adolescents' health behaviors. Use of family, school, healthcare provider, and health education support were significantly associated with meeting physical activity guidelines and adopting better dietary behaviors (Bull et al., 2006; Riley, Glasgow, & Eakin, 2001; Simons-Morton, Parcel, & O'Hara, 1988). Leatherdale and colleagues (2006) found that grade school students were more likely to smoke if their mother or friends smoked. At the environmental level, neighborhood safety, access to facilities, lack of sidewalks and transportation, and weather can influence adolescents' health behaviors (Hohepa et al., 2006; Pretty, Imison, & Reimann, 2003). Furthermore, Reidpath and colleagues (2002) suggest that the social determinants (i.e., SES) and environmental determinants, like density of fast-food outlets, interact to create environments in which the poor have increased exposure to high-fat, low nutrient-dense foods.

Findings from this project revealed the presence of numerous intrapersonal, interpersonal, institutional, community, and public policy factors of influence on health behaviors. Intrapersonal factors included self-perceptions of the body, enjoyment of activity, self-talk statements, and health status. Participants cited support from peers, family members, classmates, teachers, doctors, and coaches as influential interpersonal

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factors. I classified school lunch, physical education class, and summer camp as institutional factors, while the YMCA, bike trails, and the park and recreation department were examples of community factors. Finally, participants identified the pool zoning ordinance and the Healthy Kids Act as significant public policy factors influencing their health behaviors. While the current social ecological model literature examines the influence of various socio-ecological factors, I think the literature can be strengthened by turning greater attention to the cultural context in which health behaviors occur. Many social ecological models suggest that societal and cultural factors distally impact individual health behaviors. The proposed MEHW construct of the eco-sociocultural environment accounts for a more proximal, commanding influence that the cultural context may have on health behaviors.

The myriad of identified influences suggests adolescents' personal health behaviors are in constant interaction with forces inside and outside of their control. The MEHW proposes that the eco-sociocultural environment, personal health behaviors, and the everyday experience are in a constant, tumultuous collision with one another such that the three constructs cannot be separated from one another. Even if adolescents are not consciously aware of how the environment is influencing their daily, embodied health and wellness experiences, the environment's influence is ever-present. The MEHW further suggests that while the environmental influence is always present, the salience of its presence fluctuates from situation to situation. Given the highly contextualized and subjective experiences of health and wellness, the environment's influence will vary based on the situation in which health and wellness experiences occur.

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I prefer the term ‘eco-sociocultural influence’ to ‘social ecological’ because the former is more powerful in attending to the natural and built ecological environment, as well as providing a focus on the social and cultural factors of influence. I see this influence as one that provides contextual opportunities and constraints that affect the meaning and occurrence of health experiences. As described in previous chapters, social constructionism assumes that all knowledge is historically and culturally situated and is a product of social interchange (Gergen & Gergen, 2003). Social constructionist scholars are interested in understanding how people come to describe, explain, or experience the world (Gergen, 2003). Knowledge is argued to be socially constructed and agreed upon as truth, rather than developing from facts and categories (Bohan, 1997). The social constructionist approach proposes that socio-cultural forces have powerful constitutive effects on a person’s body and psyche (Riley et al., 2008), which alludes to health and wellness being an embodied experience as the body comes to take on meaning from potent socio-cultural forces. Furthermore, Wolszon (1998) suggests that soaking up cultural norms is inevitably a part of life, so the cultural context does have a powerful and reciprocal relationship with the body and health behaviors. Given the inevitable presence of culture in daily life, the MEHW accounts for a more comprehensive environmental influence, an influence that includes and is mindful of the physical, social, and cultural environments.

Everyday Experience

The final construct within the MEHW is the everyday experience of health and wellness. To my knowledge, the everyday experience is not a concept that exists in current health promotion or sport and physical activity psychology literature. This

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construct emerged from the various health themes that referred to the ebb and flow of physical activity, nutrition, and body image experiences, given various life situations and fluctuations in daily living. Participants often spoke of how their experiences in the physical activity/sport domain carried over to affect their moods, behaviors, cognitions, and experiences in other domains of life. For example, Cole spoke about how he used running as a way to cope with different stressors. He shared a story of when he decided to run the trails after having a fight with his brother. Cole mentioned that trail running allowed him to clear his head, develop a plan to deal with the fight with his brother, and changed his mood for the better. This example illustrates how Cole's mood fluctuated as a result of his run. In a very short time period, Cole went from feeling angry and frustrated before his run to feeling calm and composed after his run. Using running as a coping strategy helps Cole deal with the day-to-day stressors he encounters.

The MEHW posits that the everyday experience of health crosses domain boundaries such that the physical, social, emotional, behavioral, and mental experiences in one area of life influence the physical, social, emotional, behavioral, and mental experiences in other areas of life. The benefits Cole experienced in the physical domain (i.e., trail running) carried over to influence his experiences in the social domain. In dealing with the fight (a social domain example), Cole felt calm and composed (i.e., emotional and mental experiences) and took action by speaking with his brother and apologizing for the fight (i.e., social and behavioral experiences). Thus, domains of living are not separate entities, but rather, are integrated and exist as co-entities. I include an excerpt from Mary's interview to illustrate how her bodily experiences fluctuate on a continuum from a negative body image experience to a more positive body image

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experience. Mary's body image experiences differed depending on the setting in which they occurred. The first excerpt reveals Mary's experience at home:

> …My parents tell me to watch out or when I eat because sometimes my dad will mess around or something and he'll be like, "Oh, look at that, you're going to be bigger than me." It makes me kind of insecure and stuff. I tell them how I feel about it. I'm like, "I don't like you saying that. I'm not fat-fat but I'm not really little." But my parents, they throw out, saying that I need to watch what I eat and stuff. It kind of made me feel bad, you know. They say I'm lazy and sometimes it makes me feel bad.

Mary's body image experience at home is negative and has a damaging effect on her embodied health and wellness experiences as her body takes on the meaning of being big, lazy, and in need of surveillance. Additionally, her emotional and mental domains of wellness are tarnished as she feels insecure and bad about her body. Despite the destructive nature of this exchange with her parents, Mary's best friend, Kelly (also a participant), provides an opportunity for Mary to feel an embodied health experience at the opposite end of the continuum:

> Kelly: My true friend she wants to lose weight. I mean she looks fine…and she's always saying "I want to look like you" and everything, like kind of putting me on the spot. I always tell her, "No, no, you look good. Don't judge yourself because of that. Don't do that." We usually we go for a walk afterwards and talk about it. I mean "there's nothing wrong with you or anything." I just don't like the fact that she's always saying that…

Kelly, unlike Mary's parents, supports Mary's embodied health experiences by taking the time to talk with Mary and encouraging her not to compare herself to others. These excerpts are included to demonstrate that health, wellness, and specific health behaviors are not static, concrete structures, but rather embodied experiences that often ebb and flow throughout the day, based on the interplay between the whole person (body *and* mind) and the external world.

While I created the personal health behavior construct to include the more

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obvious actions of health, like physical activity participation and eating habits, I created the everyday experience construct to capture the subtle nuances that accompany health behaviors. I see the everyday experience encompassing the feelings, meanings, and thoughts that seem inherently linked to behavior. I believe the embodied experience comes from the feelings, meanings, and thoughts that are associated with behaviors, regardless of whether or not we consciously attend to these feelings, meanings, and thoughts. For example, participants often replied with "I don't know" to several questions during the interview. Upon reflection, I feel that this response may be given when individuals do not consciously attend to the feelings, thoughts, or meanings they attach to their behavior. For example, participants seemed to struggle when responding to questions about their personal body image, but had very little trouble discussing how the sociocultural environment influenced idealized bodies. Thus, the "I don't know" response seems to indicate that participants were either not willing to disclose how the sociocultural environment influenced their own body image or were not mindful of how the sociocultural environment influenced their day-to-day experiences with their own bodies. For example, Matt replied that he did not know how he felt about his body image, but later discussed his desire to lose weight, which was then followed by his disclosure that he was proud of how strong his body was. This example demonstrates the conflicting ebb and flow experience Matt has with his body. At times, he is satisfied with his body's strength but at other times, unhappy with his weight. Many of the participants experienced conflicts similar to Matt, such that their everyday experiences of health behaviors influenced their day-to-day mental, social, and emotional capacities.

Despite the attention, or lack thereof, to the meanings, feelings, influences, and

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thoughts associated with body image behaviors, participants' bodily experiences seemed to hit high and low notes at various times throughout the day. In Mary's case, the peak of her everyday body image experience occurred when she was with Kelly, while the pit of her embodied experience occurred at home, illustrating a roller coaster of highs and lows she experienced in her daily life. The proposed framework for the MEHW suggests the internal and external worlds are perpetually unstable and forever shifting, providing the opportunity for embodied health and wellness experiences to transform multiple times every day.

Application of Embodied Health and Wellness

While the purpose of this project was to generate a conceptual understanding of rural adolescents' health experiences, I felt it was important to demonstrate the application of the MEHW to one of the participant's shared experience. I maintain that each one of the 18 participants' experiences is of equal importance, and no one experience should be dismissed or silenced. However, it is beyond the scope of this project to apply the MEHW to each of the participants' lived experiences. Given the depth and breadth that Gwen provided during our conversation, I chose to apply the MEHW to her experiences (see Figure 4). The figure includes excerpts from Gwen's interview to illustrate how her story informed each one of the MEHW constructs: personal health behaviors, eco-sociocultural influence, and the everyday experience. The three constructs then collide with one another as illustrated in Figure 3.

Gwen's personal health behavior excerpts demonstrate the social, physical, emotional, and affective health benefits she receives from being active. For Gwen, physical activity contributes to the multi-dimensional notion of health and wellness,

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feeling better about herself, enjoying activity, being socially connected by going to the YMCA with her mom, and giving the physical effort needed to stay active. Additionally, Gwen indicates a balance of physical activity and nutrition, which is consistent with health promotion guidelines (CDC, 2009).

The eco-sociocultural excerpts included in Figure 4 illustrate the ecological, social, and cultural interactions that Gwen has with external sources. It is important to note that Gwen interacts with these external influences, suggesting a reciprocal relationship between Gwen and her environment. The climate, the adolescent culture which is reflected in the teasing excerpts, and significant others' behaviors, conversations, and presence are associated with Gwen's embodied health and wellness. For example, Gwen is aware that her best friend is bullied because of his weight, hair color, and sexual preference. By providing sympathy, support, and encouragement for her friend, Gwen is empathetic, resilient, and strong, which I believe impacts her own health and wellness. Her own social, emotional, intellectual, and affective domains of wellness are influenced by the close connection she shares to her friend's lived experience.

Finally, Gwen's embodied health and wellness is influenced by her everyday experiences as a Hispanic, overweight adolescent girl living in Muscatine, Iowa. Gwen's sense of health and wellness is seemingly affected by her frequent worry about her personal health and her decision to lose five to seven pounds for her 15th birthday. When asked what strategies she was doing to meet her long-term weight loss goal, Gwen replied that she was working out five days a week, choosing healthy food options, and not snacking between meals. Thus, Gwen's everyday experience of health is influencing

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her ability to reach her longer-health goal. Additionally, Gwen's daily role as a middle school student also seems to inform her embodied health and wellness.

Gwen applies the lessons she learns from observing others and interacting with classmates to various dimensions of her own health and wellness. Gwen spoke about her decision to be a person who refrained from teasing others, who made an effort to befriend others, and to speak her mind when others were being treated unfairly. Gwen stated, "I just basically like to talk to everybody, I'm just that kind of a person. I don't really like to be in one certain group because groups have drama … And I stand up for him when people tell him that he's fat." These examples suggest that Gwen's social and intellectual dimensions of health were influenced by events occurring in her daily life. Gwen's determination to carry out her self-determined social role (i.e., social health) and cognitive awareness of others' life situations (i.e., intellectual health) are shaped by her everyday adolescent experiences. While Gwen's insightful and mature responses may suggest she has the skills to deflect experiences that would impact her health in a negative way, there were times her sense of health was shaken by negative experiences. For example, Gwen stated that she "was shocked" when her test results indicated that she had high cholesterol and glucose levels. When I asked her how she felt about hearing this news, she replied that she was scared, upset, and isolated herself from her family and friends for a few days. Her test results influenced her affective, cognitive, and social aspects of health. These excerpts demonstrate the ups and downs Gwen experienced in her everyday life. These everyday experiences, in combination with personal health behaviors and eco-sociocultural influences, illustrate the ebb and flow of one's embodied health experiences. The embodiment of health is comprised of both positive and negative

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events and fluctuates as a function of the subjective, lived reality in which one exists.

Choosing Healthy Actions in Muscatine Public Schools

The results from this project were used to inform the "Choosing Healthy Actions in Muscatine Public Schools" (CHAMPS) intervention. While social ecological models have been used to study physical activity determinants of rural adolescents, few studies have engaged adolescents in the formative research phase when developing and implementing physical activity interventions. This project engaged adolescents in the formative research phase by exploring their health behaviors as reported in the interviews. The information gained from these interviews was shared with the CHAMPS research team in an effort to develop a health intervention based on the needs and interests suggested by Muscatine adolescents. The design, delivery, and evaluation of CHAMPS is a collaborative effort of researchers from the Departments of Health and Human Physiology, Epidemiology, Community and Behavioral Health, and Neurology.

CHAMPS Program

The CHAMPS intervention planning was finalized in February 2012 and was implemented at the beginning of March 2012. The programming will run from March to May 2012 and then again from September 2012 to February 2013. With personnel support from the Muscatine YMCA, the intervention is expanding upon an already-in-place programming that the YMCA provides for West and Central Middle School students in Muscatine.

CHAMPS Morning Programming

Prior to February 2012, the YMCA provided physical activity programming to middle school students once a week before school, from 7:45 am to 8:30 am. Despite the

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school day not starting until 8:30 am, many students are dropped off around 7:45 am due to parents' work schedules. Prior to the programming provided by the YMCA, many students would sit around for 45 minutes, before the school day began. The YMCA program is located in the schools' gymnasium and is available to all interested middle school students without cost. Within the program, staff from the YMCA organize and supervise various activities including basketball and dodge ball. The intervention expanded the programming by providing funding to the YMCA to support the morning physical activity programming three days a week, again from. The CHAMPS research team used the findings from my project to expand and improve the morning physical activity programming. For example, participants mentioned they would like to try out various dance classes and play large group games, so these activities have been included in the programming.

CHAMPS Afternoon Programming

In addition to the morning program, CHAMPS provided funding to the YMCA for after-school physical activity programming two days a week from 3:30-5:15 pm. This programming includes a supervised walk from the schools to the YMCA, which is approximately one mile from each school. High school students supervise the middle school students on their walk to the YMCA. Once at the YMCA, students have the opportunity to participate in any of the age appropriate programs or use the cardio and strength training equipment. Based on participants' preferences to have gender specific programming available, the programming provides a 'Girl Power' class for girls and a 'Guy Thing' class for boys. Since conversations also yielded information about the barriers to eating healthy, the intervention provides healthy snacks to middle school

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students during the physical activity programming. Finally, transportation to activities was a common barrier noted by participants. Following their participation at the YMCA, CHAMPS provides students free transportation to their homes.

CHAMPS Conclusion

In supporting students' autonomy and providing free of cost opportunities, gender specific programming, and transportation, CHAMPS reduces the barriers and encourages the facilitators identified by this project's participants. While CHAMPS does not provide summer programming, the Muscatine VERB Summer Scorecard Program is working with the CHAMPS research team to ensure the summer physical activity program is tailored to meet the physical activity needs and interests expressed by middle school students. Engaging participants in the formative phase of the research design allowed CHAMPS to identify and attend to factors, such as barriers and desired physical activity opportunities, needed to promote positive health and health behaviors among Muscatine adolescents.

Implications and Future Directions

This project yields various implications and insights for future directions. The methodological choices I made allowed me to explore adolescent health from a novel perspective that generated a conceptual model grounded in the adolescent voice. Rather than examining health, physical activity, nutrition, and body image from the more commonly used, measurement-driven approach, I shed new light on embodied health experiences by utilizing an innovative methodological approach. By exploring the personal, social, and cultural construction of how health-related thoughts and behaviors develop in rural adolescents, I discovered how adolescents understand and practice health

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behaviors. Additionally, participants' stories revealed how their embodied health and wellness experiences are shaped by various social, cultural, and ecological factors.

I recommend that researchers in the health promotion and the sport and physical activity psychology fields begin using theoretical perspectives and methodologies that are consistent with community-based participatory research as endorsed by the Office of Behavioral and Social Sciences Research (OBSSR) (Creswell et al., 2011). The OBSSR calls for the practice of alternative theories and methodologies within health science research as a way to improve the quality and scientific power of health science data. While quantitative methods are useful in examining relationships among psychological, social, and cultural factors influencing physical activity participation, qualitative methodologies, such as grounded theory and narrative analysis, provide insight into the highly subjective and contextualized individual experiences of embodied health and wellness.

Since this project provided the beginnings of a conceptual model, future research can be conducted to measure and test the proposed constructs that inform the framework for the MEHW. While the current state of the MEHW is not fully supported in its usefulness as an established theory to predict or explain health, my future plans include measuring, testing, and evaluating the three proposed constructs. Appendix E provides suggestions for how the CHAMPS intervention can measure and attend to personal health behaviors, the influence of the eco-sociocultural environment, and the everyday experience.

The CHAMPS intervention is focused on the health behaviors of physical activity and nutrition. My role in CHAMPS is to contribute to the design, implementation, and

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evaluation of the physical activity component. Thus, the suggestions provided in Appendix E are tailored specifically to physical activity. According to Linnan and Steckler (2002) providing assessments to evaluate the effectiveness of health interventions helps public health professionals explain why certain results were achieved. The goal of CHAMPS is to promote participation in physical activity and engagement in healthy eating among middle school students. The assessments provided in Appendix E serve as suggestions for evaluating the success of CHAMPS in promoting middle school students' participation in healthy behaviors. Before discussing each of the proposed framework constructs, it is important to mention the importance of evaluating the process of delivering an intervention. Baranowski and Stables (2000) list eleven components that are essential to process evaluation (see Appendix E). Attending to each of these components can help ensure the successful delivery of a health intervention. Suggestions for how each of these components can be assessed within the CHAMPS intervention are provided in Appendix E.

The overarching goal of CHAMPS is to promote positive health behaviors in Muscatine middle school students, specifically physical activity. Since CHAMPS has no intention to evaluate participants' levels of physical activity, monitors like a pedometer or accelerometer would not be useful to assess the promotion of physical activity participation. The number of CHAMPS activities that students participate in can assess physical activity participation, which represents the personal (action-based) health behavior construct.

A physical activity scorecard can be used to monitor the number of CHAMPS activities a student participates in. The scorecard can measure CHAMPS's targeted

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personal health behavior of physical activity. A scorecard and instructions are provided in Appendix E. The number of times a participant attends the before school programming, walks to the YMCA after school, and the number of activities he or she participates in at the YMCA can be recorded to assess physical activity participation. The total number of activities a participant attends can be summed for each month, providing insight into whether participation remains stable, decreases, or increases throughout the intervention. The total numbers of activities that CHAMPS presents to participants should be monitored to provide insight into the number of opportunities participants have to be active. A high number of opportunities available would suggest greater promotion of physical activity.

I provide a conceptual framework for assessing how the eco-sociocultural environment influences CHAMPS participants' physical activity participation. I see a conceptual model being useful in assessing the eco-sociocultural environment because the model can account for various socio-environmental and personal factors that interact to influence individual behavioral patterns. The CHAMPS intervention takes a socio-ecological perspective in an effort to understand how multiple factors within multiple levels of influence impact middle school students' health behaviors. Thus, I recommend the CHAMPS intervention use a conceptual framework that accounts for intrapersonal, interpersonal, community, societal, and cultural influences to assess the impact various eco-sociocultural factors have on participants' healthy behaviors. Appendix E provides examples of how the CHAMPS intervention can assess the various eco-sociocultural influences on participants' physical activity. While many ecological models suggest that societal and cultural factors (i.e., the macrosystem) are more distal in their influence on

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health behaviors, the proposed framework for the MEHW suggests that societal and cultural factors may have as much or potentially a more substantial impact on individual's health behavior than the more proximal factors of interpersonal and community influences named by many ecological models. The amount of influence from various factors within the multiple levels will vary among individuals, depending on their life situations and everyday experiences. Given this variation, it is important that future work with the proposed framework take a comprehensive approach, as suggested in Appendix E, in accounting for the influence of the eco-sociocultural environment.

To answer the OBSSR's call for alternative methodologies, I believe the best way to capture the everyday experience is through the use of a free-writing journal. I would provide CHAMPS participants with a journal and ask them to journal about their day. I believe this journal would capture students' relatively immediate, and sometimes spontaneous, assessments of their daily experiences. This journaling would provide insight into how health experiences ebb and flow over time, while also enabling participants to recall events in great detail that may result in new and rich insight into the complex phenomenon of health. Given the ever-changing context of adolescents' lives, I believe journaling can provide insight into some of the daily nuances that influence their physical activity experiences. Since these nuances may be difficult for adolescents to recall during an interview or on a questionnaire, I believe the more immediate action of writing in a journal can capture telling information about health experiences.

While the sample size was appropriate for qualitative research, generalizability is limited to adolescents in this particular geographic region. As this project was guided by the vision of making a significant contribution to the health of adolescents living in

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Muscatine. The term verisimilitude can be used to assess the quality of realism or truthfulness I presented to the experiences that participants shared with me. By attending to participants' views, feelings, and actions as well as the context in which they occur, I hoped to capture a version of participants' health experiences that was similar to the truth of their lived experiences (i.e., verisimilitude) (Sparkes, 2002). While the current status of the proposed theoretical constructs may not be generalizable to other populations, I maintain that I honored participants' experiences by authentically exploring and presenting their stories in a way that contributes to their health experiences. Once suggestions and strategies are established that attend to each of the categories, future research can apply the MEHW to health experiences within various populations, including but not limited to the elderly, cancer patients, youth in different geographical locations, athletes, or individuals with various chronic illnesses.

While I attended to possible gender and ethnic differences, the application of a grounded theory approach revealed that an adolescent culture appears to be an important correlate of adolescent physical activity, nutrition, and body image experiences. While the sample was ethnically diverse, many of the Hispanic and Mexican-American participants were adopted, suggesting they have assimilated into the dominant white culture. However, Hispanic, Mexican-American, and Caucasian boys and girls described similar experiences, suggesting a commonality among their shared experiences, which I propose is an adolescent culture. Future research should further explore this notion of an adolescent culture to uncover and reveal the long-lasting impact it may have on individuals' health-related thoughts and behaviors, and sense of well-being.

This project produced important practical implications as well. Engaging

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adolescents in the formative research phase allowed the CHAMPS research team to gain insight into the barriers, facilitators, needs, and interests that were important to adolescents' health. Without this knowledge, the research team might not have targeted their efforts to the factors cited as most important and/or common by participants. This project provides the health promotion field with a practical example of how health interventions can be delivered and practiced in a way to support a healthy lifestyle, based on the needs and interests of the target population.

The results from this project imply that adolescents are uncertain when asked to define health, physical activity, healthy eating, and body image. If health care professionals want to change and/or target such health behaviors in the adolescent population, an educational component should be included to raise their knowledge about these health behaviors. I found that the use of these terms was not always effective in understanding the embodied health and wellness experience because participants seemed unfamiliar with some of these terms. On occasion, I had to re-word my questions or re-direct my line of questioning, to elicit information on the topics covered during the interviews. I recommend that researchers immerse themselves in the culture and environment in which they hope to understand gain a better sense of the jargon and terminology used to discuss topics of interest.

Additionally, through the use of the interview method, participants shared very personal and sensitive information with me. This project revealed that adolescents experienced emotional and psychological distress surrounding their personal and family health events. These emotional and psychological reactions demonstrate that adolescents are invested in and concerned about their own and significant others' health and wellness

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experiences. I believe future health and wellness research should use one-on-one interviews to fully understand health experiences, as experiences tend to elicit emotional responses. Speaking to the multidimensionality of health, such emotional experiences should not be ignored, down played, or dismissed.

One area of this project that warrants further investigation is the need to evaluate the effectiveness of the CHAMPS health intervention. While the design and delivery of health interventions are often theoretically sound, the ability to evaluate the effectiveness of the intervention remains a challenge for health promotion researchers. I recommend the CHAMPS research team evaluate the intervention to determine the program's effectiveness and sustainability in promoting positive health and health behaviors for participants.

Summary

This chapter articulated the proposed framework for the Model of Embodied Health and Wellness that is an important addition to the health promotion and sport and physical activity psychology literature because it demonstrated a successful utilization of unique methodological choices in exploring adolescent health and wellness. In explaining how the findings informed the CHAMPS intervention, I illustrated this project's effectiveness in turning theory into practice. Project implications and future directions were also discussed. This new knowledge can be integrated into the existing health and wellness literature, and can inform the practice of health promotion. The exploration of the contextualized, embodied experiences of health and wellness can help health care professionals improve overall quality of life among rural adolescents.

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Figure 2. Building of Proposed Framework

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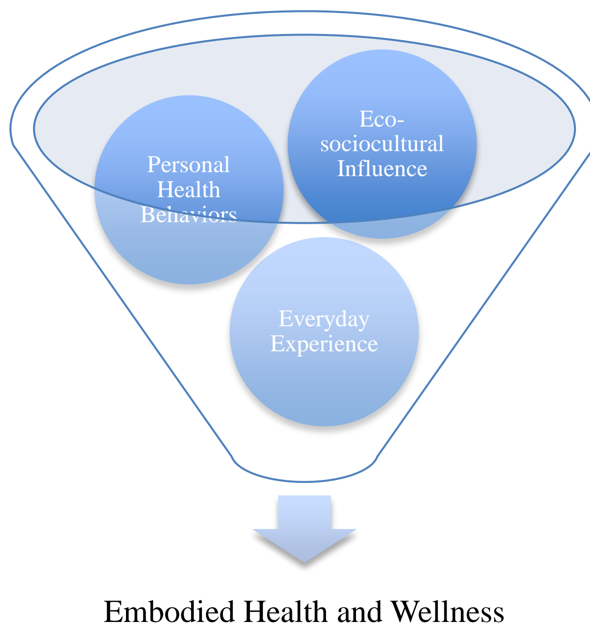
Figure 3. Model of Embodied Health and Wellness



Embodied Health and Wellness

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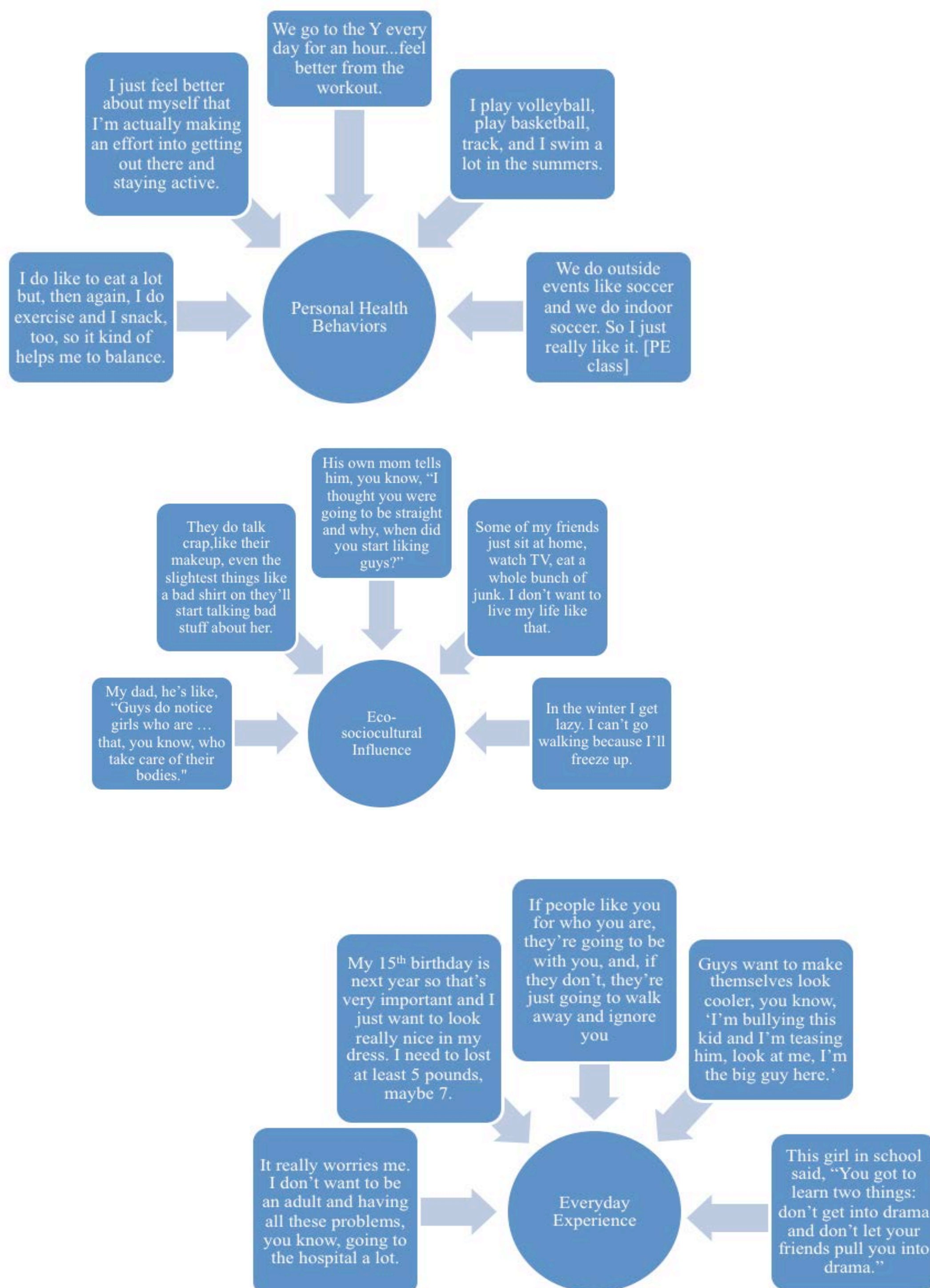
Figure 4. Embodied Health and Wellness Application: Gwen



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APPENDIX A

INTRODUCTION TO PARTICIPATE PHONE SCRIPT

My name is [NAME] and I am with the Muscatine Adolescent Health Survey study. I am calling you because your child was a participant in Phase Two of that study. We invite your child to participate in a new research study. The purpose of this study is to explore students' views about physical activity and body image. We hope to use the information gathered from this study to develop a summer health program based on the needs and interests expressed from students.

Approximately 10 to 20 people will take part in this study conducted by researchers at the University of Iowa. If you agree to permit your child to participate, we would like him/her to participate in an individual interview with a researcher from the University of Iowa. The interview will take place at the Muscatine Heart Clinic. The interview will last approximately 60 minutes. During the interview, your child will be asked to talk about his/her opinions and experiences with physical activity, nutrition, and body image. Your child is free not to answer any question(s) he/she would prefer not to answer during the interview. Your child will be paid for being in this research study.

Taking part in this research study is completely voluntary. If you decide not to permit your child to be in this study, or if your child stops participating at any time, your child won't be penalized or lose any benefits for which he/she otherwise qualifies.

Would your child be interested in participating in this study?
If YES:

We have some dates and times available for you and your child to meet with the researcher conducting this study. You will need to accompany your child to the meeting. You and your child will be asked to review additional information about the study and to sign a consent document if you agree to participate. Your name and contact information will be given to the researcher conducting this new study. Her name is Joanna Morrissey and she will be contacting you within the next week to answer any questions you have about the study and to schedule a time for you and your child to meet with her.
If NO:

Thank you for your time and your consideration of this study.

If you have any questions about the research study itself, please contact:
Joanna Morrissey at 319-321-7277 or the Muscatine Heart Clinic at 563-264-3886

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APPENDIX B

INFORMED CONSENT

Project Title: Understanding Health Image through the Eyes of Rural Adolescents

Principal Investigator: **Joanna Morrissey**

Research Team Contact: Joanna Morrissey
Work: (319) 335-7315

Muscatine Heart Study Clinic
(563) 264-3886

- If you are the parent/guardian of a child under 18 years old who is being invited to be in this study, the word "you" in this document refers to your child. You will be asked to read and sign this document to give permission for your child to participate.
- If you are a teenager reading this document because you are being invited to be in this study, the word "you" in this document refers to you. You will be asked to read and sign this document to indicate your willingness to participate.

This consent form describes the research study to help you decide if you want to participate. This form provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights as a research subject.

- If you have any questions about or do not understand something in this form, you should ask the research team for more information.
- You should discuss your participation with anyone you choose such as family or friends.
- Do not agree to participate in this study unless the research team has answered your questions and you decide that you want to be part of this study.

WHAT IS THE PURPOSE OF THIS STUDY?

This is a research study. We are inviting you to participate in this research study because you have participated in Phase Two of the Muscatine Heart Study in the past.

The purpose of this research study is to explore middle school students' views of health behaviors, including physical activity, nutrition, and body image. Individual interviews will be used to explore participants' views regarding these health behaviors. The information gathered from the study will be used to develop a summer health program for students in the Muscatine community.

HOW MANY PEOPLE WILL PARTICIPATE?
Approximately 15 to 20 people will take part in this study being conducted by researchers at the University of Iowa.

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HOW LONG WILL I BE IN THIS STUDY?

If you agree to take part in this study, your involvement will last for approximately 60 minutes for an in-person interview.

WHAT WILL HAPPEN DURING THIS STUDY?

We would like to use information collected about you in the Muscatine Heart Study along with the information you provide for us in the current study to better understand students' views on physical activity and body image.

You will be asked to take part in an individual interview with the primary researcher. During the interview you will be asked questions about the things you like and dislike about physical activity, about eating and nutrition, and about body image and how you feel about your appearance. The interview will take about 60 minutes. We will make an audio recording of the interview. If there are any questions during the interview that you do not want to answer, you are free to skip that question.

Based on your preference of location, the interview will take place, in a private room, at either Central Middle School or West Middle School in Muscatine, IA.

We collected your name and phone number from your Muscatine Heart Study file to contact you.

Audio Recording

One aspect of this study involves making an audio recording of your interview. The audio recordings are being made to help the researcher understand your views and to verify that information collected during the interview is correct. Only members of the research team will have access to the recordings. The recordings will be kept in the locked office of the principal investigator and electronic files will be kept on a password-protected computer accessed only by the principal investigator. The recordings will be destroyed at the end of the study.

WHAT ARE THE RISKS OF THIS STUDY?

You may experience one or more of the risks indicated below from being in this study. In addition to these, there may be other unknown risks, or risks that we did not anticipate, associated with being in this study.

The interview will ask about your body image experiences. You may be uncomfortable talking with the researcher about your personal experiences. The researcher will provide a safe and welcoming environment to ensure you are comfortable sharing their responses and you may skip any questions you do not wish to answer or end the interview at any time.

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WHAT ARE THE BENEFITS OF THIS STUDY?

You will not benefit from being in this study. However, it is hoped, that in the future other people may benefit from the information collected in this study.

WILL IT COST ME ANYTHING TO BE IN THIS STUDY?

You will not have any costs for being in this research study.

WILL I BE PAID FOR PARTICIPATING?

You will be paid for being in this research study. You will receive $20 in Chamber Bucks at the start of the meeting with the researcher prior to the interview.

WHO IS FUNDING THIS STUDY?

The US Center for Disease Control and Prevention (CDC) is funding this research study through funds to support the University of Iowa Prevention Research Center for Rural Health which has provided a grant to conduct this study. This means that the University of Iowa is receiving payments from the CDC to support the activities that are required to conduct the study. No one on the research team will receive a direct payment or increase in salary from the CDC for conducting this study.

WHAT ABOUT CONFIDENTIALITY?

We will keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people such as those indicated below may become aware of your participation in this study and may inspect and copy records pertaining to this research. Some of these records could contain information that personally identifies you.

- federal government regulatory agencies,
- auditing departments of the University of Iowa, and
- the University of Iowa Institutional Review Board (a committee that reviews and approves research studies)

To help protect your confidentiality, we will use a personal identifier in the form of a 4-digit number to identify the information we collect for this study instead of your name. The personal information linking you to the number is kept in a secure database to which only authorized personnel have access. All other information are secured in file cabinets in locked rooms and in password protected computer files. If we write a report or article about this study or share the study data set with others, we will do so in such a way that you cannot be directly identified.

IS BEING IN THIS STUDY VOLUNTARY?

Taking part in this research study is completely voluntary. You may choose not to take part at all. If you decide to be in this study, you may stop participating at any time. If

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you decide not to be in this study, or if you stop participating at any time, you won't be penalized or lose any benefits for which you otherwise qualify.

WHAT IF I HAVE QUESTIONS?

We encourage you to ask questions. If you have any questions about the research study itself, please contact: Joanna Morrissey at (319) 335-7315. If you experience a research-related injury, please contact: Joanna Morrissey at (319) 335-7315 or at the Muscatine Heart Study Clinic (563) 264-3886.

If you have questions, concerns, or complaints about your rights as a research subject or about research related injury, please contact the Human Subjects Office, 105 Hardin Library for the Health Sciences, 600 Newton Rd, The University of Iowa, Iowa City, IA 52242-1098, (319) 335-6564, or e-mail irb@uiowa.edu. General information about being a research subject can be found by clicking "Info for Public" on the Human Subjects Office web site, http://research.uiowa.edu/hso. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above.

This Informed Consent Document is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You are not waiving any legal rights by signing this Informed Consent Document. Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Subject's Name (printed):

____

Do not sign this form if today's date is on or after EXPIRATION DATE: 06/04/12 .

________________________________ ____________________

(Signature of Subject) (Date)

Parent/Guardian's Name and Relationship to Subject:

____

(Name - printed) (Relationship to Subject - printed)

Do not sign this form if today's date is on or after EXPIRATION DATE: 06/04/12 .

______________________________________ ____________________

(Signature of Parent/Guardian) (Date)

Statement of Person Who Obtained Consent

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I have discussed the above points with the subject or, where appropriate, with the subject's legally authorized representative. It is my opinion that the subject understands the risks, benefits, and procedures involved with participation in this research study.

(Signature of Person who Obtained Consent) (Date)

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APPENDIX C

INTERVIEW GUIDE

Opening Statements to Participants: Today I would like to hear your opinions about what you think about your physical activity and body image experiences. Everything you say will be confidential. I am audio recording this session only because I want a summary of what has been discussed today. If you have any concerns about the information presented during the interview, I can provide information about services available to you as needed.

If you have any questions or need further clarification from me at any time, please feel free to ask me. First I would like to get to know you a little better. Can you share with me a hobby or interest you have?

Transition Statement: Great. Now let's start our discussion talking about physical activity. [NOTE: The following questions are included to represent possible questions that will be asked during the discussion. Since an unstructured/open approach will be used within the interview, the discussion and line of questioning will be directed by the conversation with the participant.]
<u>Physical Activity Questions:</u>

1. When I say the words physical activity, what kinds of ideas and/or things come to mind?*
2. How much physical activity do you think you should get? (Daily? Weekly?)
   a. Would you like to change the amount of time you spend being active?
3. What do you think the benefits of being physically active might be for you?
4. What do you think might happen if you are not physically active?
5. What do you personally like about physical activity?
6. What do you personally dislike about physical activity?
7. Can you identify people who you think influence your physical activity?
   a. What kinds of things do these individuals do to help you be physically active?
   b. Can you think of anything these individuals do to prevent you from being active?
8. What kind of changes would you make, if you could, to your school or community that would help make it more likely to be physically active?

Transition Statement: Thank you for sharing your thoughts about physical activity. Now, I would like to hear about your views and experiences with body image. I understand that it may be difficult to discuss such a personal topic and if you feel that you do not want to answer certain questions, which is fine. However, I would like very much to hear from you so I can better understand your experiences. Rather than me asking questions, I want to listen to you, so please share any thoughts or opinions with me.
<u>Body Image Questions:</u>

1. How would you define the term 'body image'?
   - What do you think it means to have a positive body image?

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- What do you think it means to have a negative body image?

2. Is body image a topic you normally talk about with others?
3. What do you think are important aspects of body image?
4. What do you think a typical boy/girl your age should look like?
5. How do you feel about your body most of the time?
6. What/Who do you think has influenced the way you feel about your body?
7. How important is your appearance when it comes to how you feel and think about yourself?
8. Have you ever felt pressure from others about your body?
    - Can you describe to me some pressures you feel about your body?
    - How do comments about your body make you feel?
9. Do you think that boys have different feelings about their bodies compared to girls?
10. Do you think physical activity affects your appearance or health?
11. What do you feel you could do to improve your body image?

Summary: Considering what has been discussed here today, is there anything else you would like to add or discuss?

We are just about finished. I think we had a really good discussion here today.
I want to thank you again for your time. Feel free to see me afterwards if you have any questions or concerns about our discussion or the project in general.

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APPENDIX D

DEBRIEFING STATEMENT

I would like to extend my gratitude to you for participating in my research project. I appreciate the time and effort you put into speaking with me today. The purpose of this statement is to explain to you the goals of the present project. In this project, I wanted to better understand your physical activity and body image experiences. The results of this study will be used to help understand how adolescents define and make meaning of physical activity and body image. The information you shared will also be used to develop a summer physical activity program within the Muscatine community. The program will be based on the interests and needs you shared with me today.

Thank you again for participating in this study. If you have any questions about the study, please contact me 319-321-7277.

Thank you again,

Joanna Morrissey
University of Iowa graduate student

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APPENDIX E

ASSESSING MEHW IN CHAMPS

Step One: Process Evaluation

Component	Definition	CHAMPS Example
Recruitment	Attracting participants, agencies, implementers for corresponding parts of program	Introduce CHAMPS to PE classes, YMCA, community organizations
Maintenance	Keeping participants involved in the programming and throughout the data collection process	Provide incentives to participants; Assess satisfaction once a month
Context	Attend to aspects of the environment of an intervention	Attend to climate; Assess quality of resources
Resources	The materials or characteristics needed to attain project goals	Grant funding; YMCA and personnel support
Implementation	Extent to which the program is implemented as designed	Monthly check-in with before & after school programming
Reach	Extent to which the program contacts or is received by the targeted group	Count number of participants present at before & after school programming, at YMCA events
Barriers	Problems encountered in reaching participants	Ask CHAMPS personnel to complete monthly evaluation survey
Exposure	Extent to which participants view or read the materials that reach them	In PE class, ask students if they have heard of CHAMPS PA programming
Initial Use	Extent to which a participant conducts activities specified in the materials	Record number of CHAMPS activities a participant participate in
Continued Use	Extent to which a participant continues to do any of the activities	Record duration of participants' participation
Contamination	Extent to which participants receive interventions from outside the program	Account for sport/rec participation; NFL Play 60

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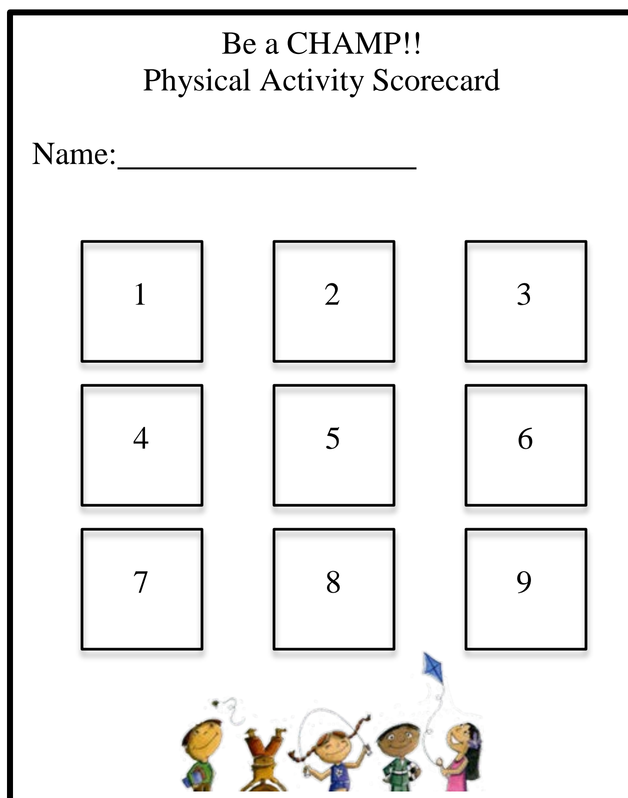
Step Two: Assessing Proposed MEHW Constructs

Personal Health Behavior: Physical Activity



Be a CHAMP!!
Physical Activity Scorecard

Name:____________________

1	2	3
4	5	6
7	8	9

DIRECTIONS:

CHAMPS staff will give you a sticker for each CHAMPS activity you participate in. Be sure to place your sticker on your scorecard. Once your scorecard is full, return your card to a CHAMPS staff person. You will get to choose a prize and be given a new scorecard.

Blue Stickers: Before school CHAMPS activities

Green Stickers: Supervised Walk to the YMCA

Red Stickers: Activities at the YMCA

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Eco-sociocultural Influence

1.) Intrapersonal Assessment

Factor	Description	Application to CHAMPS
Psychosocial	Attitudes, beliefs, knowledge, self-efficacy, preferences of PA	• Interview a sample of middle school students pre- and post-CHAMPS • Distribute CHOICES questionnaire pre- and post-CHAMPS to assess predisposing, reinforcing and enabling factors of PA
Biological	Genetic make-up; heredity; health status; functional status	• Provide various/modified versions of PA opportunities for students who are not physically fit so they can still participate • Since a CHAMPS goal is to reduce risk for chronic illness, assess health status pre- and post-CHAMPS
Behavioral	Lifestyle factors; current PA patterns; actions taken that support/inhibit PA	• Interview a sample of middle school students to ask what behaviors they took that supported/prevented participation in CHAMPS • Brief pre- and post-test survey to assess current PA patterns

2.) Interpersonal Assessment

Factor	Description	Application to CHAMPS
Individuals in students' social networks	Family, friends, coaches, teachers	• Focus group discussion or questionnaire to assess how significant others influenced participation in CHAMPS (e.g., model, reinforce, support, prevent) • Assess perceived norms for PA (norms in Muscatine, in school, at home, among peers; at YMCA)

3.) Community Assessment

Factor	Description	Application to CHAMPS
Resources in the community that influence PA	Built and natural resources available for PA in Muscatine and in CHAMPS programming	• Assess safety of supervised walk to YMCA (quality of sidewalks) • Assess quality of equipment at CHAMPS programming and at YMCA • Assess ease and safety of CHAMPS bussing • Assess students' use of YMCA activities/equipment and CHAMPS activities

4.) Societal and Cultural Assessment

Factor	Description	Application to CHAMPS
Macrosystem factors that influence PA	Mass media/advertising, social and cultural norms around PA; policies and laws that regulate/support PA	• View daily television programming in Muscatine to assess portrayal of PA in media • Assess YMCA policies to assess students' accessibility to programming/equipment • Interview/observe students & social networks to assess cultural PA norms; particularly networks involved in CHAMPS programming

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Everyday Experience: The Personal Reflective Journal

Instructions: Please use this journal to record your thoughts, feelings, or reflections you have throughout the day. You can write about your day in any way you wish, writing as much or as little as you want, writing throughout the day or writing at the end of the day. If you miss journaling for a day or two, that is okay, just start journaling on the day that you pick up your journaling again. If you prefer to type and save your journal entries on the computer, you are welcome to do so. The information you supply in the journal will remain confidential and if the information is shared, your name will not be attached to the information.

Personal Reflective Journal

Journal Entry Number: ___________ Date:__________________________

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