The Experience of Being Physically Active for Middle-School Girls Who Had Reported At Least Average Levels of Physical Activity and Above-Average Barriers To Physical Activity

By

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THE EXPERIENCE OF BEING PHYSICALLY ACTIVE FOR MIDDLE-SCHOOL GIRLS WHO HAD REPORTED AT LEAST AVERAGE LEVELS OF PHYSICAL ACTIVITY AND ABOVE-AVERAGE BARRIERS TO PHYSICAL ACTIVITY

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ABSTRACT

The original purpose of this research was to describe the experience of being physically active for middle-school girls who had previously reported both high levels of physical activity and high barriers to physical activity on standardized measures of those variables. Five knowledge gaps about that experience were identified and incorporated into the research problem. The aims of the cross-sectional study were to describe each girl's intentions (what she was trying to do in relation to her experience), to detail the personal-social context of each girl's experience, and to describe the phenomena that structured the experience for the sample. Prior to data collection, relevant literature was set aside to enable the researcher to focus on data. Both convenience and purposive sampling strategies were used. After receiving written information about the study, parents or legal guardians consented to participation and girls assented. A preliminary study was done to screen 302 middle-school girls on standardized measures of physical activity (PA) level and barriers to physical activity. Thereafter, to attain a sufficient number of volunteers, inclusion criteria for PA level and barrier scores were modified and the sample description in the study purpose was modified as well. The modified purpose of this study was to describe the experience of being physically active for middle-school girls who had reported at least an average level of PA and above-average barriers to PA on standardized measures of those variables. The 10 participants were Caucasian female students at two middle schools in the Midwest, who met the modified inclusion criteria for PA level and barriers. Two in-depth interviews were done with each girl within a 4-week period. Interviews were recorded, transcribed, and analyzed using Porter's method of descriptive phenomenology.

Findings were organized in a taxonomy of the phenomena of the experience and a parallel taxonomy of the personal-social context of the experience. For the 10 middle-school girls, the six features of the personal-social context of the experience of being physically active were: (a) *realizing the extent to which certain things in my life influence me to be more physically active,* (b) *having my own reasons for being active,* (c) *explaining what it is like for me while I am being active,* (d) *realizing how things change for me when I have been physically active,* (e) *realizing that things get in my way of being physically active,* and (f) *realizing that things get in the way of being active for girls my age.* The four phenomena of the experience for the sample were: (a) *getting up and doing something to keep my body moving,* (b) *striving to meet my own goals in physical activity,* (c) *making physical activity fit my life,* and (d) *suggesting ways that girls my age could be active when things get in their way.* Findings were reported in sets, in which contextual features were paired with the phenomena to which they were most closely related. Although there were limitations in this work, the contributions were important. Findings addressed each of the knowledge gaps, enhancing descriptive knowledge of the experience of interest and enabling constructive critique of the construct of barriers to physical activity for middle-school girls. It was recommended that researchers forego use of the term “barriers to physical activity” in research with middle-school girls and focus instead on exploring “things that make it harder for you to exercise.” Practitioners and researchers should realize that each middle-school girl has unique circumstances that can impact her experience of physical activity, seek to understand those circumstances, and involve girls in creating measures for physical activity screening and in developing interventions to enhance physical activity for themselves and age-peers.

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Introduction

Practitioners, researchers, and policy-makers alike have voiced concern about the degree to which youth in the United States (U.S.) engage in physical activity (PA). PA is defined as "any bodily movement produced by skeletal muscles that results in energy expenditure" (Caspersen, Powell, & Christenson, 1985, p. 126). There are potentially devastating health consequences for youth who do not meet recommended daily levels of PA. However, in 2008, Troiano et al. found that only 42% of youth age 6-11 and 8% of adolescents age 12-19 met established recommendations for PA. That recommendation is to accumulate 60 or more minutes of at least moderate-intensity activity on at least 5 days of the week (USDHHS, 2008). In general, boys aged 6-19 are more likely than girls to attain sufficient PA to meet public health recommendations (Troiano et al., 2008). However, some girls remain physically active as they age and do meet PA recommendations (Eaton et al., 2012). If researchers can learn more about the experiences of girls who stay active as they approach adolescence, that new understanding could inform interventions designed to increase PA for other girls. Accordingly, the *original purpose* of this phenomenological study was to describe the experience of being physically active for middle-school girls who had previously reported both high levels of PA and high barriers to PA on standardized measures of those variables. Due to difficulties recruiting participants with both high levels of and high barriers to PA, the sample description embedded in the original purpose had to be modified. (Details are given in Chapter Three). The *actual* purpose of the work became that of describing the experience of being physically active for middle-school girls who had previously reported at least an average level of PA and above-average barriers to PA on standardized measures of those variables.

Chapter One is comprised of five sections. First, I give an overview of basic knowledge about PA in childhood; I begin with the relevance of PA to public health before considering demographic factors associated with PA and short- and long-term health benefits of PA for

youth. Next, I present the research problem with an overview of its significance for the health of the population and for the further development of knowledge. Then I present the rationale for addressing the research problem by conducting a descriptive phenomenological study. The philosophical origins and activities of Porter's (1998) method are detailed. In the fourth section, the specific aims are presented and explained as parts of the overall purpose of the study. The chapter concludes with a summary of the foci of each of the other four chapters of this work.

PA in Youth: A Public Health Issue

According to the U.S. Department of Health and Human Services (USDHHS), being physically active is imperative for persons who seek to improve their health and to reduce the risk of health problems (USDHHS, 2008). The USDHHS (2008) has emphasized that regular PA over months and years can produce long-term health benefits. The USDHHS (2008) generated guidelines to provide information and direction regarding the amount and type of PA that would benefit healthy people, persons at risk of chronic disease, and persons with chronic conditions or disabilities. Although the USDHHS made recommendations for adults aged 18-64 and for adults aged 65 and older, I focus here on the recommendations for youth aged 6 to 17.

Experts have advocated the promotion of PA among youth to instill lifelong behavioral patterns that could result in more active populations in the future (Sallis & Patrick, 1994). According to the President's Council on Physical Fitness and Sports (2008), children and adolescents should have more PA than persons of other age groups. Beyond the fact that they are inherently active, they require PA for growth and development. Finally, they need to be physically active to establish PA as an ongoing and lifelong part of daily life http://www.fitness.gov/be-active/physical-activity-guidelines-for-americans/.

Specifically, according to the National PA Guidelines for Americans (USDHHS, 2008), children and adolescents aged 6-17 should achieve at least 60 minutes of PA, seven days a week. Youth should spend most if not all of that time in moderate to vigorous aerobic PA, engaging in age-appropriate activities (USDHHS, 2008). Furthermore, according to the

guidelines, each of these types of activities should be done at least three times a week: (a) vigorous-intensity aerobic activity, such as running or jumping rope; (b) muscle-strengthening activity, such as climbing trees or playing tug-of-war; and (c) bone-strengthening activity, such as hopscotch (USDHHS, 2008).

Demographic factors associated with PA among youth. Whereas PA in youth has received a lot of national attention in recent years (http://www.healthlypeople.gov/2010; http://www.healthypeople.gov/2020), the factors that influence PA in youth are not clearly understood. However, gender plays a role; it is known that boys are more likely than girls to engage in recommended levels of PA. In a nationally representative sample in the U.S., gender differences in meeting recommendations for PA were demonstrated even in the youngest age group (age 6-11). While 48% of boys age 6-11 met recommendations, only 35% of girls age 6-11 met recommendations (Troiano et al., 2008). This gender-associated trend had been demonstrated consistently in a variety of U.S. samples and in nations other than the U.S. (Caspersen et al., 2000; Eaton et al., 2010; Li, Treuth, & Wang, 2010; Riddoch et al., 2004; Trost et al., 2002). For instance, Trost and colleagues (2002) measured PA levels with accelerometers in U.S. youth grades 1-12. In all grades boys engaged in more moderate to vigorous and vigorous PA than girls did. Using similar methods to study PA of 9- and 15-year old European youth, Riddoch and colleagues (2004) found that boys were more active than girls at both ages.

Furthermore, levels of PA among youth decrease with increased chronological age. The number of youth who meet recommendations decreases significantly between ages 10-16 for both genders (Eaton et al., 2008; Strauss, Rodzilsky, Burack, & Colin, 2001). In the nationally representative U.S. sample mentioned above (Troiano et al., 2008), 42% of all youth age 6-11 met recommended PA levels, but only 8% of adolescents age 12-19 met recommendations. While the decline in PA over time occurred for both genders, the decline in girls' PA was sharper than the decline for boys (Troiano et al., 2008). The findings of that cross-sectional study are

consistent with results of a longitudinal study also involving a nationally representative U.S. sample of youth (ages 2-19). Over a 10-year span (1993-2003), males of all races and age groups engaged in more PA than did females of the same age (Delva, O'Malley, & Johnston, 2006). In other similar studies, researchers have reached the same conclusion about the gender-based disparity in PA for girls (Brodersen, Steptoe, Boniface, & Wardle, 2007; Eaton et al., 2008; Metcalf, Voss, Hosking, Jeffry, & Wilkin, 2008; Nader, Bradley, Houts, McRitchie, & O'Brien, 2008; Rowlands & Eston, 2005; Sallis, Prochaska, & Taylor, 2000; Strauss et al., 2001). This consistent finding that girls are less likely than boys to engage in recommended levels of PA as they age is one of my main concerns as a nurse-researcher.

In addition to gender, racial/ethnic differences have been identified as factors influencing the extent to which youth meet PA recommendations. As part of The Health and Behaviour in Teenagers Study, Brodersen et al. (2007) conducted a 5-year longitudinal study with about 4300 middle-school students from London, about 1700 of the participants were female. PA was measured by self-report. Caucasian girls were more physically active than their African American and Asian counterparts. Whitt-Glover et al. (2009) drew a different conclusion based on data from the National Health and Nutrition Examination Survey (NHANES) for U.S. youth age 6-19, in which accelerometers were used to measure PA. Among youth age 6-11, non-Hispanic Blacks were significantly more likely than non-Hispanic whites to meet recommendations. That pattern was also observed among older youth (age 12-19), but those findings were not statistically significant (Whitt-Glover et al., 2009).

There are several possible explanations for the discrepancy between the findings of Whitt-Glover et al. (2009) and those of Brodersen et al. (2007). Whitt-Glover et al. (2009) speculated that minorities have responded positively to the national focus on eliminating racial/ethnic health disparities by engaging in higher levels of PA. This does not seem as plausible as two other explanations that I offer. First, Whitt-Glover et al. (2009) used an objective measure of PA from the NHANES, whereas Brodersen et al. (2007) relied on self-

report surveys. Second, there might be socio-cultural-environmental factors that enhance (or require) opportunities for more racial/ethnic minority youth ages 6-11 to engage in PA, compared to their non-Hispanic white counterparts.

Short-term benefits of PA for youth. There are short-term health benefits for youth who meet recommended levels of PA. Researchers have found a decreased likelihood of high body mass index (BMI) in childhood for active youth (Atlantis, Barnes, & Fiatarone Singh, 2006; Dencker et al., 2006; Ness et al., 2007). Researchers have also found a decreased likelihood of high blood pressure (Nielsen & Andersen, 2003), and hypercholesterolemia (Carnethon, Gulati, & Greenland, 2005) in adolescence. In addition to physical benefits of PA, there are psychosocial benefits for girls who meet recommended PA levels, including higher self-esteem (Pedersen & Seidman, 2004; Tremblay, Inman, & Willms, 2000), lower levels of depression (Motl, Birnbaum, Kubik, & Dishman, 2004; Tomson, Pangrazi, Friedman, & Hutchinson, 2003), and improved physical self-perception (Goldfield et al., 2007).

Long-term health benefits of PA for youth. In contrast, the long-term health-related benefits of PA in youth are not as clearly established. However, researchers have found that PA for youth is a significant predictor of PA during adulthood (Gordon-Larsen, Nelson, & Popkin, 2004). In fact, in a 21-year longitudinal study, Telama et al. (2005) found significant correlations between youth PA level and adult PA level 9, 12, 15, 18, and 21 years after baseline. These consistent findings are very important; they show that youth PA is predictive of adult PA. That is, youth who become active or stay active are most likely to be active as adults. In turn, there are health-related benefits for adults who are physically active. In fact, irrefutable evidence exists regarding the benefits of regular PA in adulthood. It reduces the likelihood of high BMI, cardiovascular disease, diabetes, depression, hypertension, and osteoporosis (Warburton, Nicol, & Bredin, 2006). Accordingly, there are good reasons to encourage PA among youth for short- and long-term health-related benefits, both physical and mental.

The Research Problem and Its Significance

With regard to knowledge about PA in youth, this study is focused on one particular research problem. That is, rather than exploring the experiences of youth as a basis for understanding how to promote PA, most researchers have developed their own constructs (such as levels of PA and barriers to PA), measured those constructs, and proposed or tested interventions to enhance PA based on those findings.

Copious amounts of research exist regarding PA in youth. While immersing myself in the literature, I started to notice a common word in research studies with youth – barrier. According to the third definition in the Merriam-Webster dictionary, barrier is defined as "something immaterial that impedes or separates" (www.merriam-webster.com). After careful study I realized that a variety of different theoretical models had guided PA research in middle-school youth as it related to barriers. Such theories included a social-ecological model (McLeroy, Bibeau, Steckler, & Glanz, 1988), the Transtheoretical Model (Prochaska & DiClemente, 1984), and the Health Promotion Model (HPM) (Pender, 1982, 1996). After further investigation of the models, I learned that the HPM (Pender, 1982, 1996) contained a construct about barriers, "perceived barriers to action," (Pender, Murdaugh, & Parsons, 2010, p. 47) where action meant promoting a health behavior.

"A theory presents a systematic way of understanding events or situations. It is a set of concepts, definitions, and propositions that explain or predict these events or situations by illustrating the relationship between variables" (USDHHS, 2005, p. 4). So, developing and evaluating research based on an applicable theory in most instances is typically the best practice for conducting research. However, this is not always the case. For example, because the HPM (Pender et al., 2010) has been used as a source of constructs, some PA research with youth has been focused on developing and testing these constructs: perceived barriers to action, perceived benefits to action (Grieser et al., 2006; Robbins, Pender, & Kazanis, 2003), and perceived self-efficacy (Wu & Pender, 2002; Wu, Robbins, & Hsieh, 2011). While estimating the extent of relationships among those constructs has been useful in further

validation of the HPM itself (Pender & Wu, 2007), it has not been particularly helpful in predicting levels of PA in youth (Taymoori, Lubans, & Berry, 2010). Furthermore, there is no evidence that the constructs of the HPM (Pender et al., 2010) have empirical validity in the lives of middle-school girls – that girls initiate talk about their barriers to PA or their self-efficacy with regard to PA and that their experience of being physically active is focused on barriers to PA.

As shall be argued next and explained in more detail in Chapter Two, studies of PA in youth, including those based on the HPM (Pender, 1982, 1996), the Transtheoretical Model (Prochaska & DiClemente, 1984), and a socio-ecological model (McLeroy et al., 1988) have been done without an understanding of how youth experience PA or what they are trying to do with regard to PA. From a phenomenological perspective, data about perceptions and actions are basic to understanding intentions, or what persons are trying to do with their experiences (Porter, 1994, 1998). Unfortunately, little is known about the perceptions, actions, and intentions of middle-school girls with regard to PA. Extant knowledge about PA in youth has emerged mainly from the perspectives of researchers rather than youth's descriptions of the nature of their experience.

Gaps in knowledge. There are five key gaps in knowledge that follow directly from the general lack of data about the experience of being physically active for middle-school girls. First, there is little information about girls' perceptions about PA (such as what it is like while they are doing PA) or the types of activities in which they engage in daily life. Accordingly, little is known about girls' intentions with regard to taking part in PA. Results of standardized measures of PA cannot serve as explanations of what girls are trying to do as they engage in PA.

Second, there are limited data about personal and social factors that could influence the experience of PA for middle-school girls. To date, researchers have encapsulated those factors within the construct of barriers. Perceived barriers to PA may play a role in limiting the amount of PA in which youth engage (Kimm et al., 2006; Taylor et al., 1999). Researchers have

documented a variety of perceived barriers to PA in middle-school age youth (Garcia et al., 1995; Grieser et al., 2006; Robbins et al., 2003; Robbins, Sikorskii, Hamel, Wu, & Wilbur, 2009; Taylor et al., 1999; Vu, Murrie, Gonzalez, Jobe, 2006). However, a score on a measure of barriers to PA is not an explanation of how a middle-school girl understands a given obstacle to her own PA. Critically, also, the focus on barriers has resulted in a lack of basic knowledge about a more positive contextual aspect – factors that could enhance a girl's opportunities to engage in PA.

Third, it is likely that some girls realize that they face obstacles to being physically active, although they go on to try to maintain or even increase their activity. Those intentions have not yet been revealed, because scholars have not asked girls to explain how they deal with obstacles to engaging in PA. Tappe, Duda, and Ehrnwald (1989) (in a study with high-school youth) and Kientzler (1999) (in a study with middle-school girls) recognized or identified that there are differences between high-active and low-active youth, with regard to the issues or obstacles that they faced. Little is known, though, about the intentions of middle-school girls who self-report as active and also report that they face obstacles to being active.

A fourth gap in the knowledge stems in part from two facts about most of the prior research on PA among youth. That is, study designs have been cross-sectional, and data have been in the form of responses to standardized instruments. In such studies, young people have not had a chance to reflect retrospectively about changes they already have experienced with regard to being physically active. Furthermore, when data consist only of closed-ended responses to standardized questions about current PA, respondents do not have a chance to reflect prospectively. To my knowledge, there are no studies revealing whether middle-school girls anticipate changes in being physically active as they age. Thus, current literature reflects gaps in both retrospective and prospective reflections of girls about being physically active.

The final knowledge gap I have identified stems from a general observation about the research literature and the recommendations about PA issued by national authorities. Adults

(practitioners, teachers, and parents) have viewed themselves as the experts on how youth can become more physically active and on the reasons that youth should do so (Kientzler, 1999). Middle-school girls who view themselves as physically active might have good ideas about how other girls who face obstacles could become physically active. However, as yet, few researchers have asked active girls how they would advise other girls to become more active.

Although I have presented these five gaps separately, they are likely interrelated in complex ways, reflecting the inherent complexity of the experience of being physically active for middle-school girls. I sought to begin to address these knowledge gaps and to reveal some of the complexity of that experience by proposing and conducting a descriptive phenomenological study of it. The specific rationale for using that approach for this study, its philosophical origins, and its activities are addressed in the next major section of this chapter. First, however, I establish the rationale for the study in terms of its significance to the public's health. Then I explain why each knowledge gap should be addressed relative to the public's health.

Public health rationale for addressing the identified knowledge gaps. Each of the five gaps in knowledge detailed earlier should be addressed to enhance awareness of the experience of being physically active for middle-school girls – awareness that could stimulate new ideas for improving the health of that population group in the short-term and in the long-term. With regard to the first gap, the lack of knowledge about girls' intentions with regard to taking part in PA, practitioners could use a description of those intentions as a framework for assessing intentions of other middle-school girls with regard to PA. Practitioners could also build on a richer understanding concerning the second gap. With richer data about variations in factors that influence the experience of being physically active, practitioners would be in a better position to individualize interventions to foster PA among middle-school girls. Addressing the third gap would have special relevance for practitioners and researchers who need to design interventions to enable girls to maintain high levels of PA in the face of issues that might hold

the girls back. Because such issues could be unique to each person, it is critical that interventions be crafted to accommodate those idiosyncrasies (Ryan & Lauver, 2002).

Public health interventions emanating from new knowledge about the first three gaps would necessarily be focused on the here-and-now of girls' daily lives and the uniqueness of their experiences. Although such efforts are critical, broader knowledge is also needed to address the fourth gap, pertaining to the lack of data on girls' perceptions about changes in their PA over time as well as their intentions to continue engaging in PA over time. A highlight of national recommendations about PA in youth is the need to engage in PA over one's lifetime (USDHHS, 2008). Accordingly, researchers need to explore the extent to which middle-school girls see themselves as physically active, or not, at later points in their lives. Furthermore, girls' retrospective reflections about how and why their activity has changed over time could shed light on reasons for the documented decline in PA as youth age.

Efforts to address the final knowledge gap would also be pertinent to the public's health. With the increased emphasis on community-based research (MacQueen et al., 2001), a key starting point is to explore perspectives of the community of interest. If the PA of middle-school girls is the focus, then they should be viewed as a community of interest; their perspectives should be sought out before interventions are designed to address their health issues.

Summary. As emphasized above, researchers have crafted and measured their own constructs pertaining to PA instead of exploring and describing the experiences of youth as a basis for understanding how to promote PA. Because fewer girls than boys remain active into adolescence, I have chosen to focus on the experience of middle-school girls. I have identified five gaps in knowledge about the experience of being physically active and considered public health benefits of addressing those gaps. Each gap suggests the need to explore the PA experiences of middle-school girls through in-person interviews of the type undertaken in qualitative studies. Although an overall goal of qualitative research is to understand how people experience and make sense of their lives, there are a variety of qualitative methods emanating

from different traditions, each with a different purpose. Next, I explain why I chose a particular method to develop new knowledge pertaining to those gaps.

The Fit between the Research Problem and a Method of Descriptive Phenomenology

I chose to use Porter's (1998) method of descriptive phenomenology, a method grounded in the philosophy of Edmund Husserl (1913/1962), because of its consistency with the focus of the research problem. I explain the rationale for that choice after presenting the philosophical basis for describing an experience and its personal-social context. Next, I give an overview of the method of descriptive phenomenology and comparing it to other common qualitative research methods. I conclude this section by summarizing the eight activities of Porter's (1998) method. In Chapter Three, I explain in detail how I used those activities to conduct this study of middle-school girls' experience of being physically active.

Philosophical rationale for describing the structure of an experience. Edmund Husserl (1913/1962) was a German philosopher whose early work, Ideas: General Introduction to Pure Phenomenology, published in 1913, launched the philosophy of phenomenology as it is known today. Husserl (1913/1962) viewed the world as one of "facts and affairs…of values…of goods, a practical world" (p. 93). The person experiences the world from a "natural standpoint" (Husserl 1913/1962, p. 92). That is, "I am aware of a world. . . . That means, first of all, I discover it immediately, intuitively, I experience it" (Husserl, 1913/1962, p. 91). Each person has unique experiences, but persons also share some common facets of experience. As Husserl (1913/1962) explained, "Whatever belongs to the essence of the individual can also belong to another individual" (p. 47).

Husserl (1913/1962) was a philosopher; he did not directly specify ideas for research methods. However, a number of later scholars have found methodological inspiration in his work. The philosophical principle that experience is both unique and shared has special relevance for descriptive phenomenological methods. As Kohak (1978) noted, "Though lived

individually, human acts do exhibit an analogous structure" (p. 5). Phenomenological methods, then, involve efforts to discern and describe the essential structure of an experience.

Philosophical rationale for describing the personal-social context of experience. Husserl (1913/1962) emphasized that the study of an experience must be grounded in an understanding of life-world, defined as "the world as experienced by a living subject in his particular perspective" (Spiegelberg, 1994, p. 146). According to Schutz and Luckmann (1973), sociologists who were heavily influenced by Husserl, life-world is that "fundamental and permanent reality [that one] simply takes for granted in the attitude of common sense" (p. 3). Life-world has a personal orientation. Referring to the person, Schutz and Luckmann (1973) said, "He alone remembers something, plans something for the future, speaks with himself" (p. 66). However, life-world also has a decidedly social orientation. A person takes it for granted that other people also experience the world and in fact, that one can "obtain knowledge of the lived experiences of my fellow-men" (Schutz & Luckmann, p. 4).

An overview of descriptive phenomenology as a research method. The descriptive phenomenologist sets aside constructs and theories pertaining to the experience to explore experience as it is lived. The method is concerned with identifying similarities and differences in the details of persons' experiences. The very specific findings are persons' intentions; the most general findings, the overarching patterns, are referred to as phenomena. According to Kohak (1978), a scholar of Husserl's philosophy, a phenomenon is "something like what a thing is in principle . . . [that is] directly presented in experience" (p. 9). Nonetheless, phenomena do not reveal themselves easily. As Husserl (1913/1962) noted, "It is all of it hard. It demands toilsome concentration on the data" (p. 259). The researcher uses the data given in experience as a resource, while trying to discern participants' intentions, or what they are trying to do relative to the experience, and then documenting that description of their experience.

A comparison of descriptive phenomenology to other qualitative methods. Because the purpose of this study was to explore and describe the experience of being

physically active for middle-school girls, a descriptive phenomenological method was deemed as especially suitable. I support that argument by briefly reviewing the nature of the other main qualitative methods, showing that they were not suitable choices for this study, beginning with the most closely related method, interpretive phenomenology.

Descriptive phenomenology is focused on the aim of exploring experience as it is lived. In contrast, interpretive phenomenology (Benner, 1994), which stems from Heidegger's (1927/1962) phenomenology of being, is designed to reveal the meaning of an experience. Unlike in descriptive phenomenology, the interpretive researcher does not critically analyze prior research or set aside extant perspectives on the experience before interviewing participants. Spiegelberg (1994) advised researchers to undertake interpretive studies only after more basic descriptive phenomenological work had been done. Hence, it would be premature to propose an interpretive study of being physically active, as the descriptive work has not yet been done.

I also concluded that the other common qualitative method, grounded theory, would not be an appropriate choice to achieve the purpose of this study. Grounded theory is oriented to discovering a basic social process and to explaining it in the form of a theory (Corbin & Strauss, 1990). My review of the literature did not suggest a reason to explore the experience of being active solely from a social perspective; in fact, there were good reasons to also consider its personal aspects. I could take both of those vantage points, the personal and the social, if I used a descriptive phenomenological method. As noted earlier, I found reasons to critique scholars' tendency to use certain theories, like the HPM (Pender, 1982, 1996), to explain facets of the PA experience. So, the grounded theory method was not an apt choice.

I concluded then that I should use a descriptive phenomenological method. However, there are a number of those from which to choose. Next, I review those other approaches and explain my rationale for choosing Porter's (1998) descriptive phenomenological method.

A variety of descriptive phenomenological methods. Like Omery (1983) and Beck (1994) before them, Porter and Cohen (2013) concluded that for health-related descriptive

phenomenological studies, most researchers have used method developed by psychologists, especially those of Colaizzi (1978) and Giorgi (1985). I summarize both methods.

The aim of Colaizzi's (1978) seven-step method is to achieve "a descriptive understanding of psychological phenomena by reflectively disclosing their meanings" (p. 68). The researcher explores personal assumptions about the experience of interest and discusses those with other people, using that material as a resource to develop interview questions. Articulate persons who have had the experience of interest are interviewed. A narrative description of the experience is produced, shared with participants, and modified if they find it inconsistent with their experience. Giorgi (1985) also proposed a psychological phenomenological method of four steps. Participants provide a description of an everyday scenario that is relevant to the experience of interest; the researcher analyzes the text, discerning meaning units, and weaving them into a narrative description of the experience.

Critique of psychological methods as a basis for developing a new method. Although many researchers have used the methods of Colaizzi (1978) and Giorgi (1995), Porter (1998) found discrepancies between those methods and Husserl's (1913/1962) philosophy. First, Giorgi (1985) considered his approach most suited to analysis of existing texts. Accordingly, Porter and Clinton (1992) found Giorgi's method appropriate for a study of an existing dataset of interviews about what it was like to move to a nursing home. However, Porter (1998) viewed Husserl's (1913/1962) emphasis on the phenomenologist's "sensory perception" (p. 114) as a rationale for obtaining data first-hand whenever possible. Thus, Porter (1998) has advocated and implemented studies involving a series of interviews with persons, situated in those places where they are living the experience of interest.

Second, although Colaizzi (1978) believed that research participants should evaluate the credibility of findings, Husserl (1913/1962) simply described a phenomenon as "intersubjective" (p. 387) in origin. To fully constitute the phenomenon, the phenomenologist should discuss it with persons who have some understanding of it from their own experience. Through such

conversations, "countercases" (Husserl, 1913/1962, p. 388) to the phenomenon are suggested, leading to deeper understanding.

Finally, although both Giorgi (1985) and Colaizzi (1978) advocated bracketing or set aside presuppositions and pertinent theories before analyzing data, neither methodologist advised the researcher to revisit the bracketed material and compare it to the findings. In contrast, Husserl (1913/1962) emphasized that culminating work as the only way to fulfill the "goal of science," which Spiegelberg (1994) described as "strengthening it internally" (p. 75).

Rationale for using Porter's method in this study. For the reasons named above, the descriptive phenomenological methods of Colaizzi (1978) and Giorgi (1985) were not suited to my goals for the present study. First, I thought it was important to directly interview girls about their experiences instead of asking them, for instance, to write a paragraph and analyze that, as advocated in Giorgi's method. Second, as a novice researcher, I knew I would have to work directly with my adviser to consider and re-consider the emergent findings – that it would not be enough to simply revisit findings with the participants to assess credibility or validity, as Colaizzi had advised. Finally, because research about PA in girls has been associated with constructs like barriers and theories like the HPM (Pender, 1982, 1996), I thought it would be fruitless to simply report my findings without comparing them to the prior literature. In Porter's (1998) method, as shall be explained, the researcher must (a) engage in interviews with participants over time; (b) discuss emergent findings with participants and other scholars; and (c) juxtapose findings with prior constructs and theories, recommending ways to enhance construct validity or internal consistency of theory.

For another reason, I thought that Porter's (1998) method would be useful in studying the particular experience of being physically active for middle-school girls. Because any given experience is nested in "concrete context – the stream of experience" (Husserl, 1913/1962, p.105), Porter (1994, 1995, 1998) specified that the researcher should create separate descriptions of an experience and its personal-social context, which is viewed in terms of life-

world (Porter, 1995). Giorgi (1985) and Colaizzi (1978), did not focus on context, advocating only the description of the experience. I wanted to explore the various personal and social factors that could influence girls' experience of being physically active, including things that could be problems for them with regard to being physically active. Life-world was an appropriate focus, because Schutz and Luckmann (1973) explained that it is "the taken-for-granted frame in which all the problems which I must overcome are placed" (p. 4).

Furthermore, I thought Porter's (1998) method would be a good choice, because it allows the researcher to describe the experiences of individuals as well as the experience of the sample. Neither Giorgi (1985) nor Colaizzi (1978) referred to individuals' experiences, referring only to findings that characterized the sample as a whole. Having worked with middle-school girls, I knew that they could be quite different from each other, and I wanted to bring out those differences instead of grouping them all together.

Finally, unlike either Colaizzi (1978) or Giorgi (1985), Porter (1998) followed Husserl's (1913/1962) emphasis on layering findings from specific to general. "Every essence has its proper place in a graded series of essences, a graded series of generality and specificity" (Husserl, 1913/1962, pp. 63-64). Likewise, Porter was inspired by Schutz and Luckmann (1973), who advised researchers to formulate the understanding of life-world in terms of "objectivated categories" (p. 180). So, in Porter's (1998) method, the researcher must create a categorical system, a taxonomy, to describe both the experience and its personal-social context, in terms of life-world. I thought that if I could present detailed findings of that type and disseminate them, I could make a good contribution, in view of the real lack of information about middle-school girls' experience of being physically active and the influences on their experience.

Porter's (1998) method. For the reasons mentioned above, I considered Porter's (1998) method as a better option for a descriptive phenomenological study of the experience of being physically active for middle-school girls than the other available methods. Porter developed the method from Husserl's (1913/1962) book, *Ideas: General Introduction to Pure*

Phenomenology, the works of renowned students of phenomenology (Kohak, 1978; Spiegelberg, 1965, 1994); and the work of the phenomenological sociologists, Schutz and Luckmann (1973). The method, which is designed to explore health-related experiences, involves eight activities (Porter, 1998). They are presented below in a numerical order, but they are not chronologically sequenced; the method is recursive and non-linear. I began to carry out Activities 1 – 3 at various times prior to collecting data, as explained below, continuing those activities throughout. I carried out Activities 4 – 8 during data collection and data analysis; in Chapter 3, I explain the particular things that I did with regard to each of those activities.

Activity 1. Explore the diversity of one's consciousness. In descriptive phenomenology, consciousness is the "theme of inquiry" (Husserl, 1913/1962, p. 104), that is, the researcher's main tool. Prior to engaging in any other research activities, the investigator explores the diversity of consciousness by practicing activities like "describing, comparing, , . . . and inferring" (Husserl, 1913/1962, p. 93), activities that are later used during data analysis. Thus, the researcher starts by practicing and reflecting on the diverse ways in which consciousness can be used to explore experience. One way in which I carried out this activity was to work with my advisers on a content analysis of responses to several open-ended interview questions. Data had been obtained previously in a pilot study with 25 girls, aged 10-13; the pilot study was done to assess readability and understandability of the AdVERB (an adaptation of the CDC's VERB™ survey) (Sass-DeRuyter, Riesch, & Porter, 2011). Although we did not use a phenomenological method in that pilot study, I had the opportunity to practice the activities of describing, comparing, and inferring during that time.

Activity 2. Reflect on experiences. The researcher transitions from that general reflection to a documented reflection on the experience of interest, adopting a skeptical attitude about understanding it with traditional methods and from traditional theoretical perspectives (Porter, 1998). After engaging in a critical analysis of the literature, the researcher concludes that a phenomenological study is necessary to improve the understanding of the experience of

interest. The five gaps in knowledge that I presented earlier in this chapter are one result of my work on this activity for this study. They represent "the rationale for investigating an experience and for seeking certain types of data in particular settings and circumstances" (Porter, 1998, p. 22). The purpose and specific aims are developed, as presented later in this chapter.

Activity 3. Bracket prior experience and knowledge about the experience. Bracketing is an ongoing process and can be thought of as a self-corrective mechanism. Bracketing is an essential component in descriptive phenomenology because the principal goal is to understand what participants are trying to do with the experience (Porter, 1998). In this process, the researcher identifies and suspends beliefs or assumptions that could prevent exploration of the experience without preconceptions or biases (Cohen & Omery, 1994). According to Kohak (1978), to bracket is "to break free of the entire categorical schema introduced by common sense and to recognize the reality of the world as neither 'subjective' nor 'objective' but as experience or, in Husserl's terminology, as phenomenon" (p. 37).

The researcher identifies and seeks to set aside existing perspectives on the experience of interest. That bracket is reported in the form of a thematic literature review. The researcher does not use constructs from the literature as starting points for exploring the experience of interest. Such terms are not incorporated in interview questions, unless one wants to know whether they are relevant to the daily lives of participants. Bracketing better enables the researcher to see phenomena as they emerge in data. It reduces the chance that researcher preconceptions become lenses through which data are seen (Porter & Cohen, 2013). Chapter 2 of this dissertation, the review of literature, represents my bracket on the experience of interest.

Activity 4. Explore participants' life-world. In this activity, the researcher spends time with people who are living the experience. Data of interest include participants' perceptions, actions, and intentions regarding the experience (Kohak, 1978; Porter, 1994, 1998). The researcher engages in a series of direct interactions with participants through interview and observation. A series of interactions is essential to better assure both data reliability and data

validity (Porter, 1998). That is, certain key questions can be asked at each interview if needed, to enhance reliability of data. Data validity can be better assured, because the researcher who has missed an opportunity to explore a key issue at one interview can easily pick up that topic at an ensuing interview. By spending time with people where they live experience, the researcher can best explore the experience and its personal-social context.

Activity 5. Intuit structures of the experience and life-world through descriptive analysis. In descriptive phenomenology, the word "intuit" means to discern the essence of an experience through careful consideration of data and inference (Porter, 1998). This is quite different from the usual definition of "intuition," as "knowledge gained without evident rational thought" (Mish, 2005, p. 658). In fact, intuiting involves those facets of consciousness mentioned earlier, that is, "describing, comparing, distinguishing, collecting, counting, presupposing, and inferring" (Husserl, 1913/1962, p. 93). In this method, it is essential that the same researcher who has obtained the data take the lead in analyzing the data. The researcher's experience during the interview is also a key source of data (Drew, 1989). Although others can help with comparison of the interview texts, the interviewer-researcher is in the best position to engage in the chief work of analysis. That work can be summarized in two sub-activities: (a) compare each participant's data about a given topic across all contacts with that person and (b) compare and contrast the data of all participants on that topic.

The overall goal of analysis is to "intuit the principle shared by the facts" (Porter, 1998, p. 21), to use data as a resource from which to describe the experience and its context. While engaged in this activity, it is difficult to differentiate data about the experience from data about its context (Porter, 1998). The researcher must listen carefully to participants' remarks and work to differentiate between what they are trying to do (intentions) and the reasons or influencing factors they associate with those intentions (context). The researcher also continually consults the original philosophical works about experience (Husserl, 1913/1962) and context or life-world (Schutz & Luckmann, 1973) to seek clarity.

Keeping in mind the different foci of those data, the investigator works concurrently to discern the *structure* of the experience and the *structure* of life-world. "How this commonness of life-world is constituted, what structure it has . . . must be carefully examined" (Schutz & Luckmann, 1973, p. 4). The structure is presented in the form of a taxonomy of three levels for both experience and context. Both deductive work and inductive work are required during analysis. Developing a taxonomy is not a linear process. Instead, the researcher moves across the levels of taxonomy to understand and describe the experience., as the researcher moves back and forth across the levels of the taxonomy to consider discrepancies or fill in gaps. Different terms are used to characterize the three taxonomic levels for experience and for life-world, as explained below.

With regard to data about the experience of interest, the *intention* is the fundamental focus of analysis; it is placed at the most specific level of the taxonomy (Porter, 1998). An intention is understood as the way that the person has sought to "grasp and mold experience" (Kohak, 1978, p. 110). Intentions may be unique to each individual or shared with others. By comparing data of all participants, the researcher recognizes similarities and differences among intentions and begins to create the three-level taxonomy. A set of related intentions is grouped into more a general level, a *component phenomenon*. A set of related component phenomena is grouped into a larger *phenomenon*, which represents a common pattern across the sample (Porter, 1998). Findings at all three of these levels (intention, component phenomenon, and phenomenon) comprise a taxonomy that represents the structure of the experience.

In conjunction with the taxonomy of experience, the taxonomy of the context of the experience emerges. The most specific level, the *element* (Porter, 1995), is a label given to a unique facet of a participant's life-world. By comparing data of participants and recognizing relationships among sets of elements, the researcher discerns the broader life-world *descriptor* (Porter, 1995), which may be shared by several participants. Working inductively and deductively, the researcher discerns relationships among a set of descriptors and contrives a

label, the life-world *feature* (Spiegelberg, 1994), to capture that relationship. In the feature, the researcher attempts to capture a facet of life-world that is common across the sample.

Activity 6. Engage in intersubjective dialogue about emergent findings. As findings emerge, the researcher engages in ongoing discussion with participants and other scholars. This happens in a variety of ways. During an interview, the researcher often experiences an insight about a participant's intention based on something the participant has just said. If possible, the researcher probes right at the time to learn more about the intention and its context, the reasons for or the influences on that intention. At such times, and throughout the interview, the researcher reminds the participant that the goal is to really understand what the participant is trying to do in relation to the experience. This re-focusing on the point of the process better ensures that the participant can partner with the researcher in the effort.

After the interview, while the researcher is reviewing the transcript or discussing it with a colleague, the researcher often notices that an opportunity was missed to explore an intention. The researcher then creates probes to use during the next interview. Also, as findings emerge, the researcher must engage in dialogue with at least one other scholar who has expertise in the method. Through dialogue, the researcher can question the emergent understanding of phenomena. All of these efforts, that is, discussing insights with both participants and other scholars, are efforts to enhance validity of the analysis (Porter, 1998).

Activity 7. Attempt to fill out the phenomena and the features. To "fill out the phenomena" (Porter, 1998, p.21), the researcher repeatedly discusses emerging ideas about facets of the taxonomy with participants and co-researchers for further clarity. This is a "recursive process" (Porter, 1998, p. 23), in that the researcher cycles repeatedly across reflection, bracketing, and participation in the life-world. The bracketed material is re-introduced and set alongside the findings. This allows for an improved understanding of both the constructs and the experience. Findings are discussed in relation to the bracketed literature to further develop empirical knowledge about the experience (Porter, 1998).

Activity 8. Determine uses for the findings. Husserl (1913/1962) emphasized that although "it is possible to give comprehensive descriptions of the nature of things," (p. 192), those descriptions must be useful; they must be relevant to scientific endeavors. He highlighted the need to reconnect phenomenological studies to other realms of science. "So long as this is not done," he said, "we have no result that we can call phenomenological" (p. 193).

Accordingly, in Porter's (1998) method, the researcher proposes particular uses for those findings in the discussion, pointing out how they address the knowledge gaps previously identified. Findings are discussed in relation to the bracketed theoretical and research literature to further develop empirical knowledge about the experience. Specifically, findings of a descriptive phenomenological study enhance understanding of an experience that has not yet been described. Findings should also offer insights to enrich scholars' understanding of relevant constructs and enhance empirical validity of such constructs. The researcher should specify a variety of uses for the phenomena, including implications for practice and research.

Summary of the Research Problem, the Purpose, and the Specific Aims

When Husserl (1913/1962) concluded that psychologists had limited understanding of the complexity of experience, he advocated exploration of phenomena (the essential structures of experience) as a new source of scientific knowledge (Spiegelberg, 1994). As noted earlier, there are reasons to view the experience of being physically active for middle-school girls as a complex experience about which little was known. Accordingly, I thought it was a good idea to study this experience using a descriptive phenomenology; I chose Porter's (1998) method.

According to Porter (1998), work emanating from a descriptive phenomenological method can generate a two-fold contribution to science. First, the approach enables the researcher to explore the intentions of persons who are living an experience and to view those intentions within the context of life-world. I realized that if I used this method I could address the first three of the five knowledge gaps that I detailed earlier. That is, I could learn from girls themselves about their intentions to engage in PA, the personal and social factors that

influenced their intentions, and, importantly, the nature of their intentions with regard to being physically active when things got in the way of that.

As noted earlier, I identified two other knowledge gaps: (a) few data on how girls see their own PA changing over time and (b) few data on how girls would advise other girls to become or stay physically active. Through this study, I thought I could obtain new knowledge about both of those issues, contributing to science by comparing my findings to the prior literature. Having critically analyzed the empirical validity of constructs used in prior research on PA in youth (as shown in Chapter 2), I could bring the critique full-circle after analyzing my data. Having learned from the girls how they saw their own experience of being physically active changing over time and how they would advise other girls, I would be in a position to suggest new approaches to health promotion of middle-school girls. I thought that it would be beneficial if I could offer suggestions of that type, based on my findings.

Prior to this study, researchers had not described the experience of being physically active for middle-school girls in general or the experience of a more specific group in which I have been particularly interested – girls who had reported high levels of PA as well as high barriers to PA. Thus, the *original purpose* of this phenomenological study was to describe the experience of being physically active for middle-school girls who had previously reported both high levels of PA and high barriers to PA on standardized measures of those variables. The specific aims of this study were: (a) to discern each participant's intentions regarding the experience of being physically active, (b) to explore the personal-social factors that influenced each participant's experience of being physically active, and (c) to report the phenomena of the sample's experience of being physically active and the features that characterized the context of their experience.

In this chapter, I have shown how I carried out activities 1 and 2 of Porter's (1998) method. In Chapter Two, I review literature pertaining to PA in youth in greater detail and discuss my personal experience of PA; that chapter constitutes my bracket (Activity 3). In

Chapter Three, I explain how I carried out the study (Activities 4-7). I present the findings in Chapter Four. In Chapter Five, I compare findings to the literature and propose uses for my findings, completing Activity 8, the final activity of Porter's (1998) method.

Chapter 2

Review of Literature: A Bracket on the Experience of Interest

As noted in Chapter One, the descriptive phenomenologist must set aside or bracket prevailing theories about the experience of interest and constructs typically used as variables in studies pertaining to the experience (Porter, 1998). The researcher must bracket both the prior literature and personal views about the experience before and during data collection so as to better capture the essence of the experience from participants' perspective. Porter (1998) used "bracket" as both a verb, that is, the work of setting aside constructs and theories, and as a noun, that is, as the product of that work. Having gone through the process of carefully reviewing the literature and identifying theories and constructs to set aside, this chapter is my bracket on the experience of being physically active for middle-school girls.

Chapter Two has five sections. First, I discuss the construct of PA and its validity. Next, I consider the theoretical models that have been used in studies about PA in youth. Third, I review and critically evaluate studies of PA in middle-school youth, incorporating critique of the empirical validity of the HPM construct "perceived barriers to action" (Pender et al., 2010, p. 47) when relevant. Next, I explain how findings of my review point to the five knowledge gaps identified in Chapter One pertaining to the experience of being physically active for middle-school girls. I conclude with my personal bracket on the experience of interest, recalling what it was like to be physically active as a girl and contemplating the continuing influence of that experience as a preparation for interviewing girls in my own research.

PA in Youth: The Construct and Its Validity

The PA Questionnaire for Children (PAQ-C) (Kowalski, Crocker, & Donen, 2004) was developed specifically to address the unique challenges of measuring PA in youth ages 11-14. One of the most challenging issues in measuring PA in youth is the nature of their PA patterns; they are typically highly variable, unstructured, and consist of short frequent bursts of PA (Bailey et al., 1995; Nilsson, Ekelund, Yngve, & Sjostrom, 2002). In addition, youth aged 11-14

demonstrate cognitive abilities that are concrete-operational (Going et al., 1999; Hands, Parker, & Larkin, 2006). They may have difficulty with accurate recall of important information about their PA, such as the time, the day of the week, duration, and intensity (Baranowski, 1998; Cradock et al., 2004; Matthews, 2002; Sirad & Pate, 2001; Tremblay et al., 2001; Trost, Ward, McGraw, & Pate, 1999). The PAQ-C (Kowalski et al., 2004) provides memory cues, such as lunch and evening activity items, to try to address these challenges.

Although the PAQ-C (Kowalski et al., 2004) was designed to try to overcome certain challenges associated with measuring PA in youth aged 11-14, it is nonetheless a highly structured one-time measure. Accordingly, it lacks the flexibility of a semi-structured interview, in which the interviewer can explore details about PA that youth might have difficulty recalling. Finally, youth can have problems correctly interpreting questions on a self-administered survey (Matthews, 2002; Trost, 2007; Welk, Corbin, & Dale, 2000). If they are uncertain about how to understand a survey question, they cannot ask for clarification, although they would have that opportunity during face-to-face interviews, such as in a phenomenological study.

Health Behavior Models

Health behavior theories and models attempt to explain why or why not individuals engage in health promoting behavior. Specifically they (a) specify the concepts that influence the desired health behavior outcome; (b) detail relationship(s) among the concepts; (c) indicate how to intervene to promote change; and (d) predict expected outcomes (Noar, Chabot, & Zimmerman, 2008). Several different health behavior models have guided recent research about PA in youth: The Transtheoretical Model (Prochaska & DiClemente, 1984), a social-ecological model (McLeroy et al., 1988), and the HPM (Pender, 1982, 1996). A brief overview of each of these models is detailed in the ensuing paragraphs. Later I review the literature about PA in youth in which each of these models was used.

Overview of three models. The Transtheoretical or Stages of Change model (Prochaska & DiClemente, 1984) has been a guiding model for some PA research with youth.

The basic premise is that behavior change is a process – it is not linear. As individuals try to change a behavior, they move through five stages: precontemplation, contemplation, preparation, action, and maintenance. Individuals may enter the change process at different stages, regress to earlier stages, or cycle through the stages repeatedly (USDHHS, 2006).

Gittelsohn et al. (2006) explained that the social-ecological model (McLeroy et al., 1988) would be the model for a large multi-center research project – The Trial for Activity for Adolescent Girls (TAAG). That model was the framework for three studies (Grieser et al., 2006; Staten, Birnbaum, Jobe, & Elder, 2006; Vu, Murrie, Gonzalez, & Jobe, 2006) that I will review later. The social-ecological model has a very different focus from that of the Transtheoretical model (Prochaska & DiClemente, 1984). According to McLeroy et al. (1988), researchers had overly emphasized the role of individual behavior in health promotion interventions, rather than focusing more broadly on the social and environmental context of persons' lives. "The use of terms such as 'lifestyle' and 'health behavior' may focus attention on changing individuals, rather than changing the social and physical environment which serves to maintain and reinforce unhealthy behaviors" (McLeroy et al., 1988, p. 353).

Finally, the HPM (Pender, 1982, 1996) was used as a framework for some studies included in this review. The HPM is "an attempt to depict the multidimensional nature of persons interacting with their interpersonal and physical environments as they pursue health" (Pender, Murdaugh, & Parsons, 2006, p. 50). The model posits that cognition, action, and environment influence health-promoting behaviors. According to Pender (1982, 1996), the HPM does not view fear or threat of illness as a primary source of motivation for health behavior. Instead, the HPM (Pender et al., 2010) is a "competence" or an "approach" oriented model, meaning that it is focused on the "move toward a positive valence of high-level health and well-being" (Pender et al., 2006, p. 37).

An earlier, influential model. The HPM (Pender, 1982, 1996) was based in part on Social Cognitive Theory (SCT) (Bandura, 1986), a pervasive theory that was a secondary

influence in the development of the TAAG intervention (Gittelsohn et al., 2006). In contrast to both the Transtheoretical model (Prochaska & DiClemente, 1984) and the social-ecological model (McLeroy et al., 1988), SCT is focused more on interpersonal influences on health behavior change (Glanz & Rimer, 2005). According to the theory, three main factors affect the likelihood that a person will change a health behavior: self-efficacy, goals, and outcome expectancies. Self-efficacy is the belief a person has regarding their own capability to organize and execute the needed action to succeed in a certain situation. According to the SCT (Bandura, 1986), people who believe they can succeed in a certain situation are able to change the behavior even if they are faced with things that get in their way. If people do not think they can control their health behavior, they will not be motivated to try to overcome problems that make it harder for them to engage in the behavior.

A key distinction between the SCT and the HPM. There is a major difference between the SCT (Bandura, 1986) and the HPM (Pender, 1982, 1996) upon which it is based. As noted in Chapter 1, the HPM (Pender, 1982, 1996) includes a construct of particular interest to me, “perceived barriers to action” (Pender et al., 2010, p. 47) as it relates to promoting a health behavior. Although the SCT (Bandura, 1986) references the idea of things getting in the way of achieving a health-promoting behavior, “barrier” is not one of its constructs. So, I delved into the literature to learn more about the HPM, which Pender first published in 1982 and revised in 1996.

Important details about the HPM. The revised HPM (Pender, 1996) is comprised of 11 concepts dispersed among three groups of factors proposed to influence health behavior: (a) individual characteristics, (b) behavior-specific cognitions and affect, and (c) immediate behavioral contingencies. The construct “perceived barriers to action” (Pender et al., 2010, p. 47) is included in the overarching group, *behavior-specific cognitions and affect*. The constructs in this group constitute an essential core for intervention research because they are modifiable (Pender et al., 2010). The construct “perceived barriers to action” (Pender et al., 2010, p. 47) is

defined in terms of personal obstacles or hindrances that interfere with the health-promoting behavior. "Barriers consist of perceptions about the unavailability, inconvenience, expense, difficulty, or time-consuming nature of a particular action. Barriers are often viewed as mental blocks, hurdles, and personal costs of undertaking a given behavior" (Pender et al., 2010, p. 47). This variable could have a direct effect on health-promoting behavior by blocking it or an indirect effect by decreasing commitment to a plan of action.

To assess the degree to which HPM constructs were predictors of health-promoting behaviors, Pender and colleagues (2002) conducted a comprehensive review of 38 studies in which either the original HPM (Pender, 1982) or the revised HPM (Pender, 1996) was used. The highest levels of empirical support were found for the constructs of perceived self-efficacy (86%), perceived barriers to action (79%), and prior related behavior (75%). Of those three constructs, researchers have emphasized the construct of "perceived barriers to action" (Pender et al., 2010, p. 47) in studies of PA among youth (middle-school students) and adolescents (high-school students). For that reason, I review that literature in detail next.

Perceived Barriers: The Construct and Its Validity in Studies of PA in Youth

In a comprehensive analysis of 54 studies, Sallis et al. (2000) found that perceived barriers to PA was the most consistently negative correlate of PA for children aged 3-12 years. Importantly, the construct of perceived barriers was viewed as one of the consistent modifiable determinants of PA in the Surgeon General's Report on PA (USDHHS, 1996). Conversely, in both studies, perceiving few barriers to PA was a positive correlate of PA (Sallis et al., 2000; (USDHHS, 1996). Thus, from both a positive and a negative standpoint, the construct of perceived barriers to PA has been a key variable in studies of PA with youth. Accordingly, it is essential to consider its empirical validity prior to undertaking a descriptive phenomenological study of the experience of being physically active for middle-school girls.

Construct validity is the extent to which a measure of the construct incorporates the attributes of the construct (Shadish, Cook, & Campbell, 2002). Shadish et al. (2002) described

this as “the first casual generalization problem” (p. 20) to which researchers must attend, because it involves generalizing from “observations and settings on which data are collected to the higher order constructs those instances represent” (p. 20). Appraisal of construct validity is no easy matter, because as Shadish et al. (2002) noted, “These constructs are almost always couched in terms that are more abstract than the particular instances sampled in an experiment” (p. 20). Researchers can make several errors in explaining a construct, including identifying it too generally or too specifically. Other errors include (a) labeling a construct incorrectly, that is, in a way that is not empirically valid; and (b) characterizing a measure as representative of one construct, when empirically, it represents more than one construct (Shadish et al., 2002).

Although it is vital that constructs be explicated prior to using them in a study, the scientist’s work is not finished at that point. As Shadish et al. (2002) observed, “Post study criticism of construct explications is always called for . . . because results themselves sometimes suggest the need to reformulate the construct” (p. 74). Porter (1998, 2000, 2005, 2007) has emphasized that construct validity is an especially important issue in her method of descriptive phenomenology. In fact, if there is strong evidence that a construct has empirical validity, there is no sound reason to collect more empirical data to describe the “observations and settings” of that construct in greater detail. A descriptive phenomenological study should be proposed only if an appraisal of the construct leads to the conclusion that its empirical validity could be enhanced (Porter, 1998).

To appraise the empirical validity of the construct of perceived barriers to PA, I began by doing a literature search in PubMed/Medline and CINAHL for studies in English published using the keywords “physical activity,” “barriers” and “youth.” I found 10 studies pertaining to PA in middle-school children (Clark, Spence, & Holt, 2011; Garcia et al., 1995; Grieser et al., 2006; Kientzler, 1999; Robbins et al., 2003; Robbins et al., 2009; Staten et al., 2006; Taylor et al., 1999; Thompson, Rehman, & Humbert, 2005; Vu et al., 2006). In the 10 studies the

researchers used a variety of theoretical models and methods and recruited samples with different characteristics.

I used three principles to cross-classify the 10 studies: (a) the middle-school population of interest (girls and boys, girls only, specific groups of girls); (b) the theoretical model (the HPM [Pender, 1982, 1996], another model, no model); and (c) the type of method (quantitative, qualitative, or both). I compared the studies on principles (a) and (b) and identified these 7 possible categories:

1. Girls and boys: Studies influenced by the HPM (Pender, 1982, 1996)
2. Girls and boys: Studies influenced by a model other than the HPM
3. Girls and boys: Studies with no specific theoretical framework
4. Girls only: Studies influenced by the HPM (Pender, 1982, 1996)
5. Girls only: Studies influenced by a theory other than the HPM
6. Girls only: Studies with no specific theoretical framework
7. Sub-populations of girls only: Studies influenced by various frameworks

After placing each study about PA in middle-school youth in one of those categories, I further classified them using principle (c) above, based on the method (qualitative, quantitative, or both). In Table 1, I show each group and the studies I view as relevant to that group.

Table 1

Research Articles Included in the Review of Literature

	Type of Method(s)		
Group of Studies About PA in Middle-School Youth	Quantitative	Quantitative and Qualitative	Qualitative
1. Girls and boys: Studies influenced by the HPM	Garcia et al., 1995 Robbins et al., 2009		
2. Girls and boys: Studies influenced by a model other than the HPM			
3. Girls and boys: Studies with no specific theoretical framework			Thompson et al., 2005
4. Girls only: Studies influenced by the HPM			
5. Girls only: Studies influenced by a model other than the HPM	Robbins et al., 2003	Grieser et al., 2006	Clark et al., 2011 Staten et al., 2006 Vu et al., 2006
6. Girls only: Studies with no specific theoretical framework		Kientzler, 1999	
7. Sub-populations of girls only: Studies influenced by various frameworks			Taylor et al., 1999

I designed the review to funnel downward from a general focus on PA in middle-school youth to a specific focus on sub-groups of middle-school girls. I begin by discussing the five groups into which I classified studies (#1, #3, #5 - #7). Next I highlight the two groups (#2 and #4) for which I did not find any studies. As will be evident, some researchers directly measured the construct of "perceived barriers to action," (Pender et al., 2010, p. 47) whereas others mentioned it only in passing.

Girls and boys: Studies influenced by the HPM. There were two studies in this group published 14 years apart. One was based on the original HPM (Pender, 1982), and the other was based on the revised HPM (Pender, 1996). Both studies used a different scale to measure perceived barriers to PA.

Garcia et al. (1995). Garcia et al. (1995) used the original HPM (Pender, 1982) as a framework for identifying differences in exercise-related beliefs and exercise behaviors of middle-school students (5th, 6th grade, and 8th graders). In a racially diverse sample *(N* = 286*)*, adolescent girls (8th graders) were more likely than pre-adolescent girls (5th & 6th graders) to believe that benefits of exercise outweighed barriers to exercise. The opposite was true of boys. That is, older boys (8th graders) were more likely than younger boys (5th & 6th graders) to believe that benefits outweighed barriers.

Of the 19 items in the barriers and benefits scale that Garcia et al. (1995) developed, 9 pertained to barriers. They defined "barriers [as] the perceived blocks or hindrances to action" (Garcia et al., 1995, p. 215). However, they did not provide the exact wording of any of the barrier items, failing to disclose how they referred to the concept of "barrier" in the items, whether in that way or using another descriptive phrase. This raises questions as to the empirical validity of the construct, as there is no clear evidence that the researchers and the participants understood the focus of the scale items in the same way. Uniquely personal barriers to PA were not addressed. That is, youth simply checked off barriers on the scale instead of having a chance to talk to a researcher about their issues and report them directly.

Robbins et al. (2009). Robbins et al. (2009) used the revised HPM (Pender, 1996) to guide a cross-sectional study, designed to identify and compare perceived benefits and perceived barriers to PA among middle-school boys and girls (*N* = 206). Specifically, they examined whether barriers and benefits to PA differed for youth based on (a) participation/non-participation on a sports team and (b) type of pursuit (active versus sedentary). A standardized 9-item barriers scale – The Adolescent PA Perceived Barriers Scale (Robbins, Wu, Sikorskii, & Morley, 2008) – was used. Scale items were reported. The three top barriers to PA for both boys and girls were: (a) having minor aches and pains from activity, (b) being tired, and (c) being too busy. It is unclear whether being tired referred to being tired before being active or afterwards. About 10% of the sample (11 boys and 14 girls) took the opportunity to list additional barriers to PA; asthma or trouble breathing was the most common barrier listed. Among sports team members, no gender differences in perceived barriers emerged, but among study participants who were not on sports teams, boys reported significantly fewer barriers to PA than girls did. Studies of this type do not yield important information about (a) how the barriers reported actually influenced PA in participants' daily lives or (b) the extent to which participants found ways to be active despite those barriers.

Girls and boys: Studies with no specific theoretical framework. I found one study to classify in this group. Thompson et al. (2005) sought to describe influences on physically active leisure of students and to examine barriers to PA. They did the study in elementary schools, junior schools (akin to middle schools), and senior schools (akin to high schools) in Nova Scotia. They did not refer to a theoretical framework, although that it is not unusual in most qualitative studies (Caelli, Ray, & Mill, 2003), and an exact definition of PA leisure was not provided. I focus on findings from the 7 junior school participants (4 girls, 3 boys; age 12). After completing a questionnaire in which they were asked among other things to list "the things that stop me from being physically active" and "the things that help me to be physically active" (p. 427), they took part in one interview lasting 30-60 minutes. "The major themes that influenced the

physically active leisure of the participants in junior school were organized and non-structured physical activities and friends" (Thompson et al., 2005, p. 428).

The empirical validity of responses was likely enhanced because Thompson et al. (2005) asked participants to list "things that stop me" (p. 427) instead of asking about 'barriers." However, the authors adopted the word "barrier" (p. 430) or synonyms such as "deterrent" (p. 430) when reporting findings, thus drawing their own conclusion about how to interpret participants' responses. For example, Thompson et al. (2005) said: "Another barrier to physically active leisure noted by one girl was that she was too old to start anything new: 'I would like to highland dance or something like that, but I'm too old to start'" (p. 430). From the standpoint of construct validity, it is problematic when researchers assume that their constructs are substitutes for participants' perspectives.

Thompson et al. (2005) claimed that they used a "phenomenological framework to guide data collection and analysis" (p. 20). However, for four reasons the work is best characterized as "generic qualitative" (Caelli et al., 2003, p.1), rather than as a phenomenological study. First, a one-time interview does not afford the chance to explore an experience in the depth required for a phenomenological study (Porter & Cohen, 2012). Second, there was no mention of the influence of a phenomenological philosopher such as Husserl (1913/1962) or Heidegger (1927/1962). Third, data analysis was guided by generic methodologists – Lincoln and Guba (1985), Merriam (1998), and Patton (2002) – rather than by a specific method of either descriptive or interpretive phenomenology. Finally, the aim was not to describe the essence of an experience (as in descriptive phenomenology) or the meaning of an experience (as in interpretive phenomenology) (Porter & Cohen, 2012). Instead, the goal was "to determine the themes that described the factors that influenced the physically active leisure in children and adolescents" (Thompson et al., 2005, p. 425). That aim is consistent with a generic qualitative method, in which data are sorted by content and categorized thematically (Caelli et al., 2003).

Girls only: Studies influenced by a theory other than the HPM. Five studies were included in this group. I will discuss them in this order: (a) quantitative studies (Robbins et al., 2003); (b) quantitative and qualitative studies (Grieser et al., 2006); and (c) qualitative studies (Clark et al., 2011; Staten et al., 2006; Vu et al., 2006).

Robbins et al. (2003). Robbins et al. (2003) conducted a descriptive, quantitative study to understand key barriers to PA perceived by middle-school girls (aged 11-14) who were physically inactive most days of the week. Pender was a co-author, but there was no mention of the HPM (Pender, 1982, 1996). One facet of the study was guided by the Transtheoretical Model (Prochaska & DiClemente, 1984), as explained below. Otherwise, no theory was mentioned.

Robbins et al. (2003) developed a 23-item measure of barriers to PA with a 1-5 (never to very often) Likert-scale. They noted that the measure was based on the one used by Garcia et al. (1995), but they did not explain how the two measures differed. Yet the differences must have been quite pronounced, since the scale used by Garcia et al. (1995) had only 9 items. Like Garcia et al., Robbins et al. did not report any of the actual items, so it was not possible to assess whether the scale was suitable for the items. Unlike Garcia et al., Robbins et al. (2003) did not define "barrier." However, like Garcia et al., Robbins et al. failed to explain how they operationalized the concept "barrier" in scale items.

Before Robbins et al. (2003) administered the instrument to a sample (see next paragraph), they conducted four focus groups (with 5-10 girls in each group) to determine if it included all relevant barriers. The "demographic characteristics [of focus group participants] were similar to those of participants" (Robbins et al., 2003, p. 208), but there was no specific information about the nature or extent of that similarity. Robbins et al. said that they made minor modifications based on focus group data, but they did not report those data or explain the changes they made. They reported a Cronbach's alpha of .86, but they did not explain how

they arrived at that assessment of reliability. Each of these issues pertaining to instrument development is a reason to question the validity of the barriers construct they measured.

After modifying the measure of barriers to PA, Robbins et al. (2003) administered it to a sample of 77 middle-school girls (aged 11-14) who were physically inactive (reporting less than 60 minutes of PA most days of the week) and not involved in competitive sports. In addition to the self-report measure of PA, Robbins et al. (2003) used asked participants to "indicate their physical activity readiness" (p. 207) by selecting one of five stages of change, a questionnaire item inspired by the Transtheoretical Model (Prochaska & DiClemente, 1984). The most common barriers to PA reported were: "I am self-conscious about my looks when I exercise" and "I am not motivated to be active" (Robbins et al., 2003, p. 209), although neither barrier was reported by more than 60% of the sample. Robbins et al. (2003) elected to retain only those 9 barriers with a mean score of at least 2.5 (the scale mid-point) that were also reported by more than 50% of the sample. That strategy enabled them to answer their research question: "What perceived barriers to PA are cited most often by relatively inactive, culturally diverse middle-school girls?" (Robbins et al., 2003, p. 208). However, by electing not to consider data reported by the other participants, it can be argued that they did not achieve the study purpose, which, as noted previously, was "to gain an in-depth understanding of the major barriers to PA perceived by girls of middle-school age" (Robbins et al., 2003, p. 208).

Finally, the girls who took part in the four focus groups were asked to suggest "approaches to overcoming the various barriers they confronted to being physically active" (Robbins et al., 2003, p. 209). However, those specific data, which could be important sources of intervention ideas, were not reported. Instead, Robbins et al. asked several "experts" (p. 209) in PA and adolescence, including doctorally-prepared nurses, to use those data to craft "clinician responses or strategies" (p. 209) to the purported barriers. Thus, although Robbins et al. (2003) tapped the expertise of middle-school girls with regard to how barriers could be overcome, they did not showcase the girls as experts about barriers to PA in their own right.

Grieser et al. (2006). Grieser et al. (2006) used both quantitative and qualitative methods in a study that was part of the TAAG project. As noted earlier, the TAAG project was guided by a social-ecological model (McLeroy et al., 1988). However, Grieser et al. did not mention a theoretical framework in the literature review. Participants were middle-school girls of various ethnicities living in six regions of the U.S. In this two-phase study, one sample (*N* = 80, 7th and 8th graders) took part in semi-structured interviews. Another sample (N = 130, 6th and 8th graders) reviewed a list of 54 physical activities and checked the ones they had done in the past 7 days, a week during the late fall of the year. The authors appropriately noted that findings pertaining to favorite activities could have been influenced by the season of the year.

There was a major discrepancy between the authors' list of "questions addressed" (Grieser et al., 2006, p. 2) and their list of "semi-structured interview questions [for which] data were presented" (p. 3). The "questions addressed" (p. 2) pertained to perceived benefits and perceived negative aspects of PA, as well as favorite physical activities. Yet, when highlighting four "interview questions" for which data were to be presented, Grieser et al. included this question: "Is there anything that gets in the way of you being physically active?" (p. 3). Although the focus of this question is consistent with the concept of barriers to PA, Grieser et al. (2006) did not report a section of findings about that interview question. (They did report a section of findings about each of the other three interview questions.) They mentioned the word "barriers" only once in the findings. They reviewed the three major "perceived negative aspects of physical activity": (a) injury (41%); (b) "sweating, embarrassment, and physical discomfort" (20%); and (c) "disliking certain sports or exercises" (20%) (Grieser et al., 2006, p. 5). Interview data reported to support those three categories were historical in nature; that is, girls said that they had sweated during prior activity and been embarrassed. Later, they explained why several girls did not want to take part in certain activities in the future, stating "Only a few girls (9%) spoke directly about embarrassment as a *barrier* [emphasis added] to physical activity" (Grieser et al., 2006, p. 5). They reported perceived negative facets of PA as historical data and

perceived barriers to PA as future-oriented data, but they did not directly differentiate between the two constructs. This raises questions about the validity of their construct of barriers.

Staten et al. (2006). Staten et al. (2006) used non-specified qualitative methods in a study that was part of the TAAG project (Gittelsohn et al., 2006). Staten et al. (2006) believed that if they could learn how girls categorized girls their age by type, researchers could use that information to target PA interventions to each segment and increasing girls' responses to those interventions. Girls *(N* =100) of various ethnicities (7^{th} and 8^{th} graders) participated in 1 of 13 focus groups at different geographic sites. Each focus group typically lasted one class period. Focus groups were done to identify and characterize *segments*, with a segment defined as a set of "individuals who share one or more common characteristic that is expected to correlate with physical activity" (Staten et al., 2006, p. 1). In the focus group each girl was asked to write down the "the different type of girls in your school" (Staten et al., 2006, p. 4). The paper cards were then shuffled and read out loud to the group. Participants then grouped the cards into similar types (segments). The moderator then led discussion about each segment. "The focus groups were developed, conducted, and analyzed based on the TAAG theoretical framework" (Staten et al., 2006, p. 4) and "a content analysis was performed" (p. 5). There was no further information about how the analysis was done, and no mention of reliability or validity of data or the analysis. Thus, from a methods standpoint, there are issues with the rigor of this study.

Staten et al. (2006) reported the foci of the seven questions used to generate responses in focus groups about each type of girl (segment). The word "barrier" was not incorporated in a focus group question, and participants were not asked about things that might be challenges to being active. However, without explanation, "barriers to participating in physical activity" (Staten et al., 2006, p. 6) was heading for a table in the findings. As shown in the table, Staten et al. (2006) reported that participants had identified barriers for 5 of the 6 segments of girls ("athletic," "preppy," "rebel," "quiet," and "smart" girls), although they did not identify any barriers to PA participation for "tough girls" (p. 10). Apparently, the topic of barrier came up during focus

groups, but moderators did not report asking anything more about it, and no actual data about barriers were included beyond those reported in the table. From the standpoint of construct validity, that approach is problematic. The researchers used the word "barrier" in the findings, but there was no report that the girls ever used the word. It is problematic when researcher assumes that their construct "barriers" can be directly substituted for participants' understanding of their data when there is no evidence that participants even mentioned the word "barriers."

Vu et al. (2006). As part of the TAAG project (Gittelsohn et al., 2006), Vu et al. (2006) conducted a qualitative study to identify the similarities and differences in girls' and boys' perceptions of girls' PA behavior. All participants were in 7th or 8th grade. Semi-structured interview guides and focus group discussion guides were informed by social ecology theory (McLeroy et al., 1988) and principles of social marketing. Both instruments were pretested with a small sample of girls and boys; both were "reworded [and] reorganized" (p. 3), but specific changes were not reported. Some participants (80 girls) took part in one semi-structured interview; others (100 girls and 77 boys) took part in focus groups. The typical length of interviews and focus groups was 45-60 minutes.

Vu et al. (2006) provided very little detail about data analysis strategies, and details that were provided do not suggest that they used a rigorous approach. "Data were analyzed using . . . a software program for analyzing text-based data" (Vu et al., 2006, p. 6). Software can be used to manage data, but only researchers can analyze data. Information pertaining to analysis was confined to one sentence. "Each line of transcript response was individually coded and content analyzed" (p. 6). No methodologists were cited; no examples were given as to how analysis was actually done. Furthermore, they reported individual comments of boys in focus groups as though they were comments of the group itself, such as "'It's nasty.' (Group of seventh grade boys)" (Vu et al., 2006, p. 7). Differentiating data of individuals in focus groups from group-based data is a very problematic part of implementing a focus group and reporting focus-group data (Duggelby, 2005), an issue that Vu et al. (2006) did not address.

In addition to reporting “perceptions of physically active girls” and “perceptions of motivators for girls to be physically active,” Vu et al. (2006) reported “perceptions of barriers for girls to be physically active” (p. 6). I focus here on the latter aim and the related findings. Like Robbins et al. (2003), Vu et al. (2006) did not define the term “barrier.” Furthermore, like Garcia et al. (1995) and Robbins et al. (2003), Vu et al. (2006) did not explain how they operationalized the concept of “barrier.” They could have done that by reporting the interview question they asked to elicit data about “barriers,” but they did not do so. Because the study of Vu et al. (2006) was part of the TAAG project, like the study of Grieser et al. (2006), it is possible that barriers data were elicited by this interview question, as stated by Grieser et al.: “Is there anything that gets in the way of you being physically active?” (p. 3). However, the reader should not be left to draw any conclusion about that without evidence.

Vu et al. (2006) reported percentages associated with the reports of barriers, but they counted focus groups and individual interviews as equivalent data units, raising questions about the actual meaning of the percentages. So, I chose not to cite percentages, but to report only the most common barriers to girls’ PA identified by both boys and girls. Of the girls (7^{th} and 8^{th} graders) who took part in interviews and focus groups, the most common barrier reported by more than half of the girls was boys (and things boys did). That is, boys hindered their ability to be physically active by making fun of them when they did not do an activity correctly or play a sport according to the rules. During focus groups with the boys, they agreed with this perception from the girls. That is, boys stated that they did things, like tease, to discourage the girls from being physically active. However, the most common barrier to girls’ PA that boys in the focus groups identified was “self,” that is, the girls themselves. According to the boys, girls did not want to be active because they did not want to get dirty, to sweat, or to break a nail; they also thought that girls were embarrassed or shy about being physically active.

Despite notable methodological problems, Vu et al. (2006) identified some barriers to being active. However, they did not ask girls to provide any recommendations to overcome

those barriers. It is essential that researchers ask girls about their recommendations because they are the experts about the experience of being physically active for middle-school girls.

Clark et al. (2011). Clark et al. (2011) conducted a qualitative study guided by a naturalistic, constructivist paradigm. The researchers sought to understand how 6th grade girls experience and make meaning of the ways in which they are active within their daily lives. For 5 weeks before interviewing participants, the researcher took part in "girls' art classes, physical education classes and unorganized outdoor schoolyard activities over the lunch hour" (Clark et al., 2011, p. 198) to build rapport. Then each participant (N = 8) was interviewed twice one month apart. Although the method of choice was an interpretive descriptive methodology (Thorne, 2009), data were coded and analyzed using a non-specified qualitative method (Lincoln & Guba, 1985). Two themes emerged: (a) "PA lets girls shine" (Clark et al., 2011, p. 201) and (b) "taking care of myself, inside and out" (p. 203). The authors concluded that PA was "intricately woven into the fabric of participants' daily lives and that girls' experiences reflected complex relationships with activity" (Clark et al., 2011, p. 201). The rigor of this study is questionable for several reasons. First, Spiegelberg (1994), the widely recognized expert in phenomenological methods, has asserted that one cannot concurrently do both description and interpretation. They can only be done sequentially, with description first. Second, because the literature review was heavily influenced by feminist perspectives, Clark et al. (2011) cannot claim that findings were atheoretical, as descriptive qualitative research is to be (Porter & Cohen, 2013). Furthermore, because the investigator took part in physical activities with the girls, it is difficult to differentiate her experiences from theirs. "The researcher and the participants interacted over a period of three months, and thus, it was understood that they influenced each other and co-contributed to the findings generated from this study" (Clark et al., 2011, p. 197). Finally, the findings are quite vague, leaving the reader with the impression that the authors did not fulfill their purpose, which was "to gain further insight into how girls describe

and interpret their physical activity experiences and the role it plays in their day-to-day life" (Clark et al., 2011, p. 194).

Girls only: Studies with no specific theoretical framework. Although Kientzler (1999) made no mention of "perceived barriers to PA" or even "barriers," this study was very influential for me. Kientzler (1999) observed that "adult researchers" (p. 394) had made many recommendations to increase PA for girls. "Although the suggestions might appear logical to adults, a child's perspective is lacking" (p. 394). Accordingly, Kientzler (1999) conducted a descriptive study, using both quantitative and qualitative approaches, to learn directly from girls how rates of participation in PA for girls could be improved. The sample (*N* = 106) consisted of 5th and 7th grade girls (aged 9-13) from three schools. Unlike the other manuscripts in this review, which were published in health-related journals, this paper was published in an elementary education journal. There was no mention of a guiding theory, but Kientzler gave a detailed definition of PA that was operationalized, as explained below.

Kientzler (1999) developed the Girls Physical Activity Survey (GPAS) to measure topics of interest that had not been included in other measures. Kientzler described efforts to enhance content validity of scaled items and reported a Cronbach alpha of .74 for one set of items and an alpha of .86 for another set. The GPAS also included different open-ended questions for "girls who reportedly participate in physical activity regularly" (p. 396) and girls who did not report regular PA participation. Regular PA participation, based on self-report, was defined as at least 3 times a week for 30 minutes (other than physical education class) during at least 9 months of the year. Girls who self-assessed as regular PA participants were asked to write an answer to explain why they did so. Those active girls were also asked for suggestions about how to "get more girls participating" (p. 397) in PA. The girls who self-identified as not regular in PA participation were asked to write an answer to this question, "Why don't you participate in physical activity regularly?" (Kientzler, 1999, p. 397). Data from open-ended questions were coded using "qualitative analysis" (p. 397). Although Kientzler (1999) did not reference a

particular method, two persons coded data in a strategy typical of content analysis. Inter-rater reliability for data from open-ended questions ranged from .87 to .93.

There was no mention of "barriers" in any scaled items for either group of girls – those who self-identified as regular or not regular in PA. For girls who were not regular in PA, scaled items were prefaced by phrases such as, "'I would be more physically active if . . .'" followed by a recommendation extrapolated from research" (Kientzler, 1999, p. 397). Thus, Kientzler (1999) asked girls who were not very active about their views of "expert" recommendations to increase girls' activity. This was an interesting strategy that others have not used, to my knowledge.

The following were the most frequent responses for low participation in PA by girls who self-identified as non-regular participants: "conflict with other activities" (72%), "I can't find a sport that I like" (37%), "I don't feel like it" (32%), "I have a chronic ailment" (asthma, injury) (27%), "I am not competitive" (24.7%), and "I don't want to embarrass myself" (20%) (Kientzler, 1999, p. 398). The most common suggestion (54%) from girls who were regular in PA to get more girls involved was to "teach girls the benefits" (p. 398) of participating in regular PA. The active girls also suggested that more girls would take part if adults could "make it fun" (39%) and "tell them they can do it with friends" (35%) (p.398).

Sub-populations of girls only: Studies with various frameworks. Taylor et al. (1999) conducted a qualitative study to explore middle-school girls' reasons for participating or not participating in PA. The sample *(N* = 34*)* included African-American and Latino girls (aged 11-15) at two sites; the sample was divided into six focus groups, and each group met once with a trained facilitator. The questions (most of which were closed, rather than open-ended) were developed from literature reviews and interviews with "coaches, teachers, parents, and scientists" (Taylor et al., 1999, p. 71). Taylor et al. mentioned only positive facets of focus groups, such as "eliciting candid and frank discussion" (p. 71). Issues such as "dominating participants" (Kroll, Barbour, & Harris, 2007, p. 697) that could pose challenges in adolescent groups were not even mentioned.

There were other issues about the rigor of the study. This was a generic qualitative study; no specific method was reported. Data were analyzed using the "principles of an established protocol" (p. 73); no examples were given to show how data were analyzed, either by an individual researcher or by a team. Without that explanation, it is difficult to understand how "six consistent themes emerged across the sites" (p. 73). Taylor et al. (1999) did not mention the word "barriers" in the literature review or incorporate the term into any interview questions; however, they incorporated that construct into the findings, raising questions as to their validity. "Three themes were related to barriers to physical activity, and three themes were related to motivators and facilitators of physical activity" (p. 73). The themes that were related to barriers were: "attitudes and experience related to physical education class; activity, appearance, and self-image; and lack of opportunity and accessibility" (Taylor et al., pp. 74-75).

Summary: How the Findings of This Review Relate to Five Gaps in Knowledge

As shown in Table 1, I did not find (a) any PA studies about middle-school boys and girls that were influenced by a model other than the HPM (Pender, 1982, 1996) or (b) any PA studies about middle-school girls that were influenced by the HPM (Pender, 1982, 1996). Of the 10 studies, only 2 had been guided by the HPM (Pender, 1982, 1996) and both were with all youth, not just girls. Of the 6 studies involving middle-school girls, 5 were influenced by theories other than the HPM (Pender, 1982, 1996), with the 4 studies associated with the TAAG project influenced by a social ecological model (McLeroy et al., 1988). Although only 2 studies were directly influenced by the HPM (Pender, 1982, 1996), the ever-present word "barrier" associated with that theory surfaced in 7 of the 8 other studies, all published in health-related journals. It is quite interesting that Kientzler (1999) was the only researcher who did not mention the word "barrier" and the only researcher in the group who emphasized the need for girls' perspectives about issues associated with PA to take precedence over those of perceived adult experts.

I identified issues with validity of the construct of "barrier" in all studies except that of Kientzler (1999) and issues with rigor in all 10 studies. The latter is not an unusual finding, as

every study has limitations. Having concerns with the construct validity is one of the major reasons for conducting descriptive phenomenological research. As mentioned previously in this chapter, construct validity is the extent to which a measure of the construct incorporates the attributes of the construct (Shadish et al., 2002). Different concerns exist with construct validity and have been identified in the review of literature: (a) the construct may be identified at too general of a level or too specific of a level; (b) the wrong construct might be used altogether; (c) the researcher may be really measuring two or more things, and calling it one; or (d) the researcher may be measuring many things that are all different but calling it all barriers (Shadish et al., 2002). As is evident in my review, I identified examples of each of these issues.

Other relevant studies and constructs. Although I have emphasized the impact of the 10 articles I reviewed pertaining directly to PA in middle-school youth and especially to the construct of perceived barriers to PA, several other articles and constructs have also been instrumental in my work. I review them here.

First, Tappe et al. (1995) conducted a quantitative study with high-school (mean age=15 year, 9 months) students to examine barriers according to PA level. While this research did mention that the construct perceived barriers was applicable to several theories, there was no mention of a specific theory guiding this research. Male and female participants *(N=236)* completed an un-named barrier questionnaire. The barrier questionnaire was developed from the literature and a pilot study. No information was provided about the pilot study other it was in an open-ended format. Nine barriers were identified and included in the questionnaire, however no exact wording of the barrier items were included. That is, they did not disclose how they referred to the word "barrier," raising concerns about the empirical validity of the construct. Students rated each barrier on the questionnaire in regard to whether the barrier prevented them from being physically active on a 9 point Likert Scale (1=not at all true; 9=very true).

Of particular interest, findings suggested that perceived barriers to PA differed according to PA level. Youth who were not high-active differed from high-active youth in degrees of

perceived benefits of and perceived barriers to PA. That is, adolescents who reported low levels of PA perceived time constraints as a greater barrier to PA than did adolescents who were high-active. Adolescents who were not high-active were more likely to report a "lack of desire or interest" (Tappe et al., 1989, p. 154) as something that kept them from being physically active. In contrast, high-active high-school students thought that "sickness or injury" (Tappe et al., 1989, p. 154) were a greater barrier to their PA involvement.

From my perspective, the overall findings of the review were consistent with the five gaps in knowledge I mentioned in Chapter One. Researchers have not sought to understand the experience of middle-school girls who are physically active despite high-barriers to PA. Instead they have measured various constructs of the HPM (that is, benefits, barriers, self-efficacy, personal factors) (Allison et al., 2005; Bungum, Pate, Dowda, & Vincent, 1999; Garcia et al., 1995; Grieser et al., 2006; Motl et al., 2002; Pender et al., 2002; Robbins et al., 2003; Robbins et al., 2009; Tappe et al., 1989; Taylor et al., 1999; Tergerson & King, 2002; Vu et al., 2006; Wu et al., 2003). In most instances, the constructs have been measured with standardized instruments, although several researchers used focus groups to explore ideas about the constructs. Although researchers have tested the validity of some constructs, no one to date has explored the empirical validity of these constructs for middle-school girls. Whereas knowledge has been gained through those studies, they were not designed to capture the essence of the experience of interest in this study.

Finally, with regard to the 10 studies I reviewed, none of the researchers had used a descriptive phenomenological method to explore the experience of being physically active for a specific group of middle-school girls – girls who had previously reported both high levels of PA and high barriers to PA on standardized measures. That is, based on this review, I concluded that the purpose I had in mind for my research was novel and ground-breaking. I also had reason to believe that my findings could foster a deeper understanding of concepts and constructs relevant to PA in middle-school girls, because I would be exploring and describing

the nature of the girls' own experiences. As a woman who was once an active middle-school girl, I also had reason to believe that the girls' experiences would be interesting and compelling.

A Bracket on the Researcher's Relevant Experiences

In descriptive phenomenology, the researcher is the principal instrument (Husserl, 1913/1962; Porter 1998). In preparation to interview physically active middle-school girls who report barriers to do so, it was essential that I clarify my own understanding of the experience of interest and the aspects of the research questions that had personal significance. That is, I had to relate the studies experience of interest, to my personal and previous experiences that have influenced my greatly. This is a necessary step in Porter's (1998) method because there might have been some relationship between my previous experience and the participants in the study.

I would like to reflect on my experience of being physically active despite reporting things that made it more challenging to do so during my younger years. I will reflect also on my experiences of working with high-school girls who were active as part of an organized team. My role as a coach could influence my view of the importance of the role of team physical activities. Finally, I will reflect my experience of practicing as a nurse practitioner in the clinical setting.

I have been physically active for as long as I can remember. I grew up in an active home with active parents and siblings. I remember my mom telling me from early on that people would always comment on how muscular I was, even as an infant, and how I could never sit still. When I was old enough to ride a 2 wheel bike, I would ride with my dad while he ran around the neighborhood. At the end of his route, we would run laps around the block surrounding our local park. I worked my hardest to beat him.

My childhood memories are filled with instances of being active. I recall my parents always walking places instead of driving. It seemed like we always would ride our bikes or walk to my grandparent's home. I was always part of different types of organized activities, such as gymnastics, hockey, swimming, basketball, soccer, through the local park and recreation department for our city. At times I despised my family's eagerness to be active and to instill that

behavior in us kids. Despite the normal grumbling as a kid about having to walk somewhere, I liked being active and thought of it as fun.

Like other girls, middle-school brought with it many things that I had to deal with. I have a twin sister who has not always been the kindest to me over the years. While that has now changed, there were many instances in middle-school and high-school when she would publicly embarrass me in front of others. See my twin was very popular, and in my opinion, the prettier and better twin. She never seemed to struggle like I did. I was un-popular with few friends, in my opinion unattractive, and had a face full of acne.

For me, I have never lacked desire to be active and in return, have always been active. However, I have struggled with being a part of organized activities. The most challenging thing that got in my way of being active by being a part of an organized activity was truly in regards to peers. Being un-popular was very hard for me to deal with. It was even more difficult because my sister was so popular. One fear I can recall very vividly was that I was always afraid of not having anyone in cross country practice to stretch with. While we all kind of ran together in different packs, that was not the case for stretching. Sometimes my only friend would not be at practice, and then I dreaded that time when we were required to stretch. Another vivid, painful thing that made it more difficult for me was the meets. Sure I would run and that would be fine, but it was the time spent riding on the bus and the time before and after I ran. What would I occupy myself with so that I did not appear to be lonely or just un-popular? I was also worried about my parent's realizing that I was not popular. At the meets, they would see all the other members of the team interacting with one another including my sister, and there I would be, with my only friend. Sometimes these circumstances did not outweigh the love I had for running. Eventually by my senior year of high-school, the circumstances surrounded with being on the cross country team over rode the good things about running. I did not join that year.

While I did struggle with certain components of organized PA, during my adolescent I was always part of teams. Soccer was an organized activity that I spent much time doing. Not

only was I on my school's team, I was also on different club teams during the off-season. I often traveled on weekends in my later high-school days for games. I am not exactly sure about the role that organized team sports played on my activity level. While I know that it certainly made me more active during that time, I think I would have been active without the activity. I can remember of period in middle-school when we did not have organized sport teams during school. During that time I would ask my mom every day to take me to the YMCA. Most days she would. I would spend my hour of being physically active most times by running. I can remember a particular instance when she would not take me. I cried. I am not sure exactly why, but I did.

Despite my concerns with peers when being active, being physically active truly was a large part of developing me during that time. While I struggled with circumstances surrounding organized sports, I was actually quite good at certain physical activities. In gym class, I was always the girl picked first and often times picked before many of the boys were. I took great pride in that and because of that, was a fierce competitor. I was the sweaty girl with the pony tail who tried her hardest to keep up with the boys. I also took great pride in knowing that I was strong. In my English class during junior year, a boy challenged me to arm wrestle him. I beat him instantly. I also received Varsity letter's as a freshman, which was pretty uncommon. For me, being active was an escape. It was a way to validate to myself that I was good at something. Being active was the part of my day that I looked forward to the most. Despite being a honor roll student in high-school, I can recall a few times during my senior year when I would skip a few class periods. I typically did this when I knew that I would have other things to do that evening and in return would not have a chance to be active. During that time that I would skip school. I would go to the YMCA so I could get my workout in for the day.

In later years during college, my reward for working to a certain point in my homework would be allowing me to exercise. I loved that time. I started to prefer to be active by myself. I also noticed that my shift of why I was active started to change. In previous years, I was active

because I liked it. It was an added perk that I had a healthy body and maintained a healthy body weight in doing so. During my college years, I struggled with my motivator for being active. It was not longer to have a healthy heart and strong bones and muscles, it was to be thin. During that time, I exercised more than ever. It was my goal to exercise 6 days a week including double workouts on a few of those days. Most weeks I met that goal. During that time, PA was still an escape for me. While my motivator may have not been pure, I still enjoyed being active.

While I was helping coach a high-school varsity soccer team, I learned another aspect of PA in youth. These girls were active in most cases because they wanted to. While it was a voluntary decision to be part of the team, (it was not a requirement for school), I would think in most instances the girl chose to be a part of the team. These were girls, at least during the season, that were meeting PA recommendations. These were girls in most instances that did have things that got in their way of being active, but were physically active. I never asked them why they were part of the team.

I do remember hearing the girls during practice talk about homework and extra-curricular activities that they were involved in. I also remember the girls that I would consider to be popular and the girls who were un-popular. My heart always led me to the second type of girl. I could relate. That was the girl I tried to help more. I wanted the experience of being active to be a positive one for her, just like it had been for me years back. The head coach I worked with encouraged the girls to be active in the off-season. In return, most girls who were part of the team were physically active during the off-season. They typically also played on different teams during the soccer off-season and did other physical activities to stay in shape for the season. In my opinion, these were physically active girls. This team that I coached was the same team I played on during high-school.

In more recent years, my love for being active has not faded. However, other demands have interfered and often times won. On most days, my daily duties and obligations require

most of my time in the day. Unfortunately, being physically active is the activity that I most commonly omit.

While I have been studying for my doctorate degree, I have been providing care to the community as a family nurse practitioner. Prior to that, I worked as a registered nurse in a local hospital. While I have provided care to youth during that time, the things that stick with me most are from the parents of the youth. I have heard so many moms talk about wanting to help their daughters lose weight. With further questioning, I learn that in most instances the girls were active prior to middle-school and in return not overweight. However, upon entering middle-school their PA drastically changed. I remember one teenage girl who had a healthy body mass index and was part of sports teams. During her routine yearly exam, her mother expressed her concern for her daughter about "how fat" she was. I remember my patient looking shocked to hear her mom say this. I was shocked. I felt bad for the girl. I have always wondered about that girl and how those words affected her.

As noted earlier, Husserl (1913/1962) urged phenomenologists to reflect upon their own experiences before preparing to investigate the essence of an experience. Porter (1998) incorporated that advice into the descriptive phenomenological method she developed, highlighting it as Activity #1 of the method. Writing this reflection about my experience of PA was helpful in preparing me to interview the participants in this study.

Conclusion of the Bracket

In this chapter, I described my perspective on the literature relevant to PA in middle-school girls. In doing so, I presented my review of 10 studies in which researchers had either directly used the construct of "perceived barriers to action" (Pender et al., 2010, p. 47) or mentioned it in some way. I also presented my own reflections about my previous experiences that I believe are related to the experience that I wanted to study for my dissertation. In the next chapter, I present the methods I used for my descriptive phenomenological study of the

experience of being physically active for middle-school girls who had previously reported both high levels of PA and high barriers to PA on standardized measures of those variables.

Chapter 3

Methods

The purpose of this phenomenological study was to describe the experience of PA for middle-school girls who had previously reported both high levels of PA and high barriers to PA on standardized measures of those variables. As contended in Chapter 1 and shown in Chapter 2, little is known about the nature of that experience. In fact, five specific gaps in knowledge were identified, a deficit that should be remedied so practitioners can tailor interventions to enhance PA for similar girls. As shown in Chapter 1, Porter's (1998) descriptive phenomenological method was selected as the most appropriate approach to address the research problem. The specific aims of this study were: (a) To discern each participant's intentions regarding the experience of being physically active, (b) to explore the personal-social factors that influenced each participant's experience of being physically active, and (c) to report overall phenomena that characterized the sample's experience of being physically active.

This chapter is comprised of three sections. The study design is first detailed. Next, data collection procedures are explained. Finally, the data analysis process is detailed.

Design

This study had a cross-sectional design. The plan was to conduct two in-depth interviews within a 4-week period with each participant. As noted in Chapter 1, Porter's (1998) method involves eight activities (see pages 16-22). I had started to carry out Activities 1 – 3 prior to collecting data. I continued Activity 3 (bracketing) during data collection, as shall be explained. In this chapter, I explain how I carried out each of the other activities (4 – 8) during data collection and data analysis.

Sampling

Non-probability sampling is recommended for qualitative studies to enhance the potential validity of the work. That is, rather than randomly sampling from the population, the investigator must deliberately identify potential participants who have had or are having the

experience of interest (Morse, 1986). However, beyond that general notion, Porter's (1998) method has more stringent criteria for sampling. Because it is a goal of the method to explore the differences of participants' experiences (see Specific Aims 1 and 2) as well as the similarities across the sample's experience (see Specific Aim 3) (Porter, 1998), the sample has to be delimited based on specific demographic characteristics (Porter, 1998). The careful development of inclusion criteria based on those characteristics is particularly important in work with relatively rare populations (Porter, 1999), as was to be the case in this study. That is, as explained earlier, it was likely that relatively few girls would report both high levels of PA and high barriers to PA on standardized measures of those variables. So, to study the experience of PA for that particular group, I had to establish inclusion criteria specific to several demographic variables: gender, age, and scores on the measures of PA and barriers to PA.

Accordingly, I used a two-stage sampling strategy. First, I selected recruitment locales based on my own convenience, to obtain accessible volunteers (Porter, 1999). Second, I used purposive sampling, seeking volunteers who met particular inclusion criteria.

Convenience Sampling. I chose two Midwestern middle schools as locales for recruiting participants, because the schools were accessible to me and the school administrators allowed me to engage in recruitment activities on school premises. I was already known to the administrators of both schools as a nurse who was doing research with youth.

It was not necessarily my intent to seek participants from schools that were different in certain respects, but it did work out that way. One site was a private middle-school in an urban area. It was my impression that most students at that school were White. The other site was a public middle-school in a rural area. Again, it seemed to me that the students at the rural school were more diverse than their urban counterparts. However, according to the U.S. Census Bureau, both middle schools were in counties comprised primarily of non-Hispanic whites – approximately 91% in the rural county; approximately 90% in the urban county (http://quickfacts.census.gov/qfd/index.html).

Purposive Sampling: Demographic Characteristics. Luborsky and Rubinstein (1995) defined purposive sampling as a "practice where subjects are intentionally selected to represent some explicit predefined traits or conditions" (p. 104). These were the inclusion criteria: (a) female; (b) age 11-14; (c) able to read, speak, and write in English; (d) having had a high-active score per the PA Questionnaire for Children (PAQ-C) (Kowalski et al., 2004) (See Appendix A); and (e) having had a high barrier score per the Adolescent PA Perceived Barriers (APAPBarriers) Scale (Robbins et al., 2008) (See Appendix B). I briefly review the rationale for each criterion next.

Whereas the number of youth who meet recommended levels of PA plummets for both boys and girls with increased chronological age, girls are less likely than boys to meet recommended levels of PA (Caspersen et al., 2000; Eaton et al., 2010; Li et al., 2010; Riddoch et al., 2004; Troiano et al., 2008; Trost et al., 2002). The decline in PA is greatest among girls who are 11 to 14 years old (Troiano et al., 2008). Furthermore, girls of that age-range are all in middle-school. Being in middle-school itself is a time of transition between elementary school and high school. I thought it would be ideal for everyone in the sample to be in middle-school, so that could be viewed as a shared part of the personal-social context of the experience of being physically active.

Participants had to be able to read, write, and speak in English, because all study materials, including the standardized measures of PA and barriers to PA, were in English. The participants also had to provide informed assent and take part in interviews in English. There was no specific screening for this criterion, however. It was assumed that girls who were willing to complete the standardized measures could meet this criterion. Finally, as noted earlier, scholars have reported differences in barriers to PA for high-school students who are high-active and youth who are not high-active (Tappe et al., 1989). However, researchers have not explored the specific experiences of being physically active for either of those sub-sets. I

wanted to start by describing the experiences of girls who had reported being high-active while also reporting having high barriers to PA.

So, I sought to recruit girls from the two middle-schools with certain characteristics. Participants were to be aged 11-14 with scores on standardized measures within the parameters for “high-active” (meeting recommended levels of PA) and “high barriers” to PA.

Purposive Sampling: Sample-Size Considerations. In-depth phenomenological studies with a series of interviews can require only 6 to 10 participants, whereas qualitative studies involving a few brief interviews of a few questions can require 30 to 60 participants (Morse, 2000). The anticipated sample size for this study was set between those parameters, set to include at least 8 and no more than 25 girls, in keeping with the plan to conduct two interviews per participant. To set an adequate sample size, the criterion of theoretical saturation or redundancy (as used in grounded theory) (Corbin & Strauss, 1990) was not applied. Theoretical saturation is inconsistent with the phenomenological premise that every person has a unique perspective on the experience of interest (Husserl, 1913/1962). Enrollment in a phenomenological study could be continued indefinitely, because every new participant would be expected to offer some new data (Porter, 1998). Hence, a decision about sample size was made prior to starting recruitment, and the decision was based on practical reasons.

Purposive Sampling: Screening for PA Levels and Barriers to PA. I began by identifying potential volunteers from the two middle-schools who met inclusion criteria (a – c), for gender, age, and English ability. After obtaining IRB approval (see Appendix C), I recruited them for a preliminary study, in which they would complete standardized measures of PA level and barriers to PA, so that I could determine if they met inclusion criteria (d) and (e). After obtaining informed consent from a parent or legal guardian (See Appendix D) and informed assent from each girl (see Appendix E), girls completed those instruments during a physical education class at school. Completing the preliminary study was a big undertaking; I was assisted by my adviser, Dr. Riesch, and doctoral students from the Riesch Research Group.

For two reasons, based on the literature, I knew in advance that I would have to screen about 300 girls to obtain a potential sample of up to 25 participants. I calculated the sample size for the preliminary study as follows, following procedures Porter (1999) recommended for qualitative studies with rare populations. First, according to Troiano et al. (2008), about 25% of girls age 11-14 who meet PA recommendations are likely to be high-active. Second, about 35% of girls who meet recommended PA levels are likely to have a high-barrier score on the APAP Barriers Scale (Robbins et al., 2008). Based on that, to have a sample of up to 25 girls who met the most stringent criterion (high barriers), I would need to identify about 74 girls who also met recommended PA levels. To find those 74 girls, I would have to screen about 300 girls.

The process of screening about 300 girls required careful planning with the school administrators and teachers and the cooperation of the girls' parents and the girls. We screened 302 girls, 70 girls in the urban school and 232 girls in the rural school. The study was introduced to girls at each school. Study introduction at the rural school occurred over 2 days; at the urban school occurred over a half of a day. Because of the different sample size at both of the locations, the rural school required two screening sessions; the urban school required one. At both schools, the screening sessions occurred over a period of one week. Complete results of the preliminary study (Sass-DeRuyter & Riesch, 2011) are reported elsewhere; only the findings pertaining directly to this dissertation research are reported here.

As indicated above, I did the preliminary study to screen participants for the primary study, that is, for the descriptive phenomenological study of the experience of being physically active for certain middle-school girls. Next, I explain how I used the results of the preliminary study to determine which girls were eligible to participate in interviews by virtue of meeting inclusion criteria (c) and (d) pertaining to reported levels of PA and barriers to PA.

Determining Eligibility to Participate in Interviews. Eligibility to take part in interviews was determined in a three-step process. First, I gave the parents of the 302 girls screened in the preliminary study and the girls themselves the opportunity to decide if they were

interested in participating in two interviews about the experience of being physically active. To determine if they were interested, a question was included on the consent form for the preliminary study. The question asked them about their interest in participating in a future study (see Appendix D). The parent or guardian of 277 girls (91.7%) indicated the girls' interest in participating in two interviews about the experience of being physically active. So I considered those 277 girls as potential volunteers for the phenomenological study.

The second step in determining eligibility was to figure out how many of those 277 girls met both inclusion criteria (c) and (d) – that is, how many had reported both high levels of PA and high barriers to PA. Initially, I adopted the values recommended by the instrument developers as cut-points for determining eligibility to participate in interviews, that is, to take part in the primary study reported here. That is, to be classified as high-active [to meet inclusion criterion (d)], girls had to have a score ≥ 3.5 on the PAQ-C (Kowalski et al., 2004). Second, to be classified as reporting high barriers to PA [to meet inclusion criterion (e)], girls had to have a score ≥ 2.5 on the APAP Barriers Scale (Robbins et al., 2003). Of the 277 girls screened in the preliminary study, only 7 (2.53%) met both criteria (d) and (e).

I had established stringent inclusion criteria based on the cut-points established by the developers of the PAQ-C (Kowalski et al., 2004) and the APAP Barriers Scale (Robbins et al., 2003). However, I realized that even if all 7 of the eligible potential participants agreed to take part, the sample would be smaller than I had hoped. I would have less than 8 participants, when I had hoped to have at least 8 and as many as 25 girls in the study. Accordingly, I would be somewhat hampered in fulfilling the methodological goal of exploring diversity within commonality (Porter, 1998).

So, to address this problem, I had to take a third step. I met with Drs. Riesch, Porter, and Henriques. To expand the pool of potential volunteers we decided to change the cut-points for inclusion criteria (d) and (e). Because the research problem was focused on a critique of the construct of barriers to PA, we decided that the cut-off point for barriers should be as high as

possible. We established a new criterion on the APAPBarriers Scale (Robbins et al., 2003), a score ≥ 2.33, which still ensured that all participants were in the upper quartile of the sample. Compared to our decision about the barriers cut-off point, we agreed to a greater reduction in the cut-off point for PA level. The median score on the PAQ-C (Kowalski et al., 2004) was 3.14. We changed the cut-off point on the PAQ-C (Kowalski et al., 2004) to a score ≥ 3.14. Although this change meant that not all participants would be "high-active" as defined by per Kowalski and colleagues (1997), all potential participants would have reported levels of PA above the 50th percentile for the sample.

After inclusion criteria (d) and (e) were modified, I identified an additional 21 potential participants who met all inclusion criteria. Thus, the total number of eligible volunteers was 28, which was 10.11% of the 277 girls who (a) had taken part in the preliminary study and (b) had expressed interest in participating in two interviews about the experience of PA. At this point, it was more appropriate to describe the sample as *middle-school girls who had reported at least an average level of PA and above-average barriers to PA on standardized measures of those variables*. The purpose of the study was necessarily modified accordingly.

Human Subjects Considerations

The protocol for this study was approved by University of Wisconsin-Madison Health Sciences Institutional Review Board (#2011-0347). (See Appendix C for approval letter.) Parental consent and child assent were obtained prior to any data collection, following the process described in the next section, after recruitment procedures are explained.

Recruitment and Informed Consent / Assent

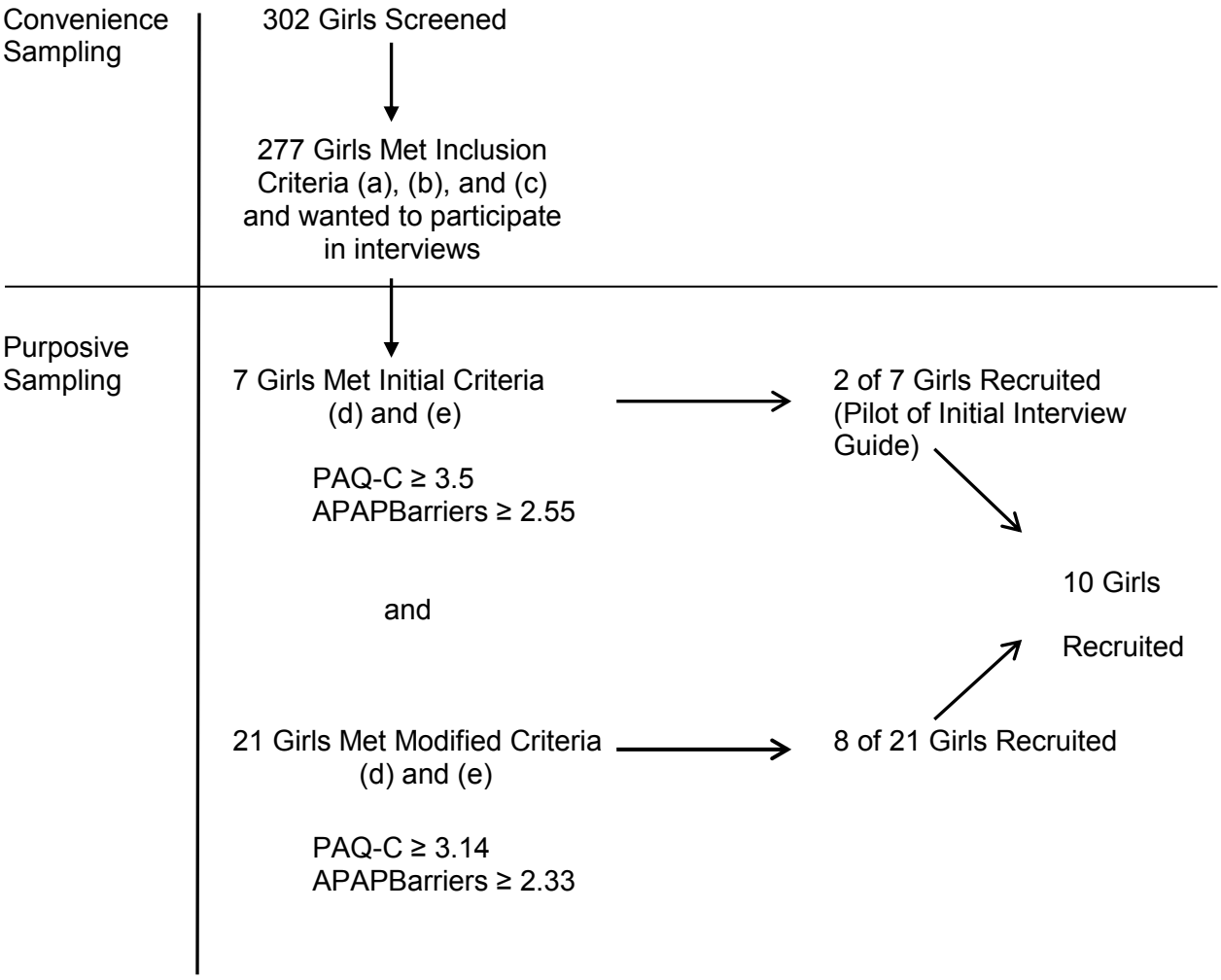
Recruitment was done in two waves over a period of 10 months, as explained below. However, I sent the same recruitment materials (see Appendix F) to parents using their preferred modes of communication, as established during the preliminary study. Of the 277 girls screened, the parents' preferences were: (a) mailed letters (n = 129), (b) e-mail (n = 76), (c) telephone call (n = 14), and (d) any two or all three of the other modes (n = 72).

First Wave of Recruitment. Following IRB approval I began recruiting participants with whom to pilot the Initial Interview Guide. (See p. 64 for the process used to develop the Interview Guide.) I sent recruitment materials to 3 potential participants of the 7 girls whose standardized scores had been at or above the initial cut-off points for high PA and high barriers to PA. I had no responses after 2 weeks, so I sent recruitment materials to the remaining 4 potential participants. Two parents/legal guardians responded expressing an interest in participating on behalf of their daughters.

Second Wave of Recruitment. After we modified inclusion criteria (d) and (e), 21 more girls met all eligibility criteria. I sent a letter to their parents (see Appendix G), explaining that I was still interested in interviewing their daughters, but that I had to complete another requirement first (successfully defend dissertation proposal). After I defended, I began active recruitment for additional participants. To do this, another letter was sent to the parents/legal guardians via their preferred mode of communication (see Appendix H). Of the 21 parents / legal guardians that I contacted, 8 replied, stating that their daughters were interested. See Figure 1, showing interfaces between the two stages of sampling, the procedures used to determine eligibility during and after the preliminary study, and recruitment of participants for the dissertation research.

Figure 1

A Flow Diagram of Sampling, Screening, and Recruitment



Informed Consent and Assent. Prior to the first interview with each girl, I arranged a meeting with the parent via her or his preferred mode of communication; the meetings took place at an agreed-upon private location at the girl's school, a public library, or at the home. I reviewed the Informed Consent (see Appendix D) with the parent, explained the aims and procedures of the study, and answered any questions. After each parent signed the informed consent, I presented the assent form to the girl, read it aloud, explained aims and procedures, and answered any questions. All 10 girls whose parents had given informed consent also assented to participation. I was not acquainted with any of the girls or their parents. Participants were offered an honorarium of $15 after each interview to acknowledge the value of their time.

Participants were assured of their rights to privacy and confidentiality. I explained what I would do to keep their data secure. I informed both the parents and participants that the participants did not have to answer certain questions if they did not want to do so and that they could withdraw from the study at any time with no repercussions. I reviewed the signed consent and assent forms with participants at both interviews to remind them of their rights as participants and to ensure that study participation was voluntary. Although there were no overtly sensitive topics in the interview questions, it was possible that a girl could experience emotional discomfort when speaking about being physically active. If that happened, I was prepared to tell her that she did not have to answer the question and that she could withdraw from the study if desired. As a nurse practitioner, I would have assessed her to ensure that she was not in danger of hurting herself or others. None of those situations materialized during interviews, although I did suspect during a first interview with one girl (Ellen) that a particular topic was somewhat sensitive to her. So I discussed that with my adviser and planned how I would approach the issue on the second interview, as explained later (See Data Collection: Interactions during Interviews, p. 72).

Interview Guide

Although the researcher is viewed as the main instrument in Porter's (1998) method, an interview guide is developed prior to data collection to better ensure that data of similar types are obtained from all participants. This is helpful, because responses to each question can then be compared across the sample. For this study, I created an Initial Interview Guide that I piloted with the first 2 participants and a Revised Interview Guide that I used when interviewing the other 8 girls. Next I explain how I developed both guides.

The Initial Interview Guide. Consistent with Porter's (1998) method, I knew that I had to design an interview guide with questions that could elicit data of particular types – data pertaining to perceptions, actions, and intentions about the experience of interest and its context. So, I needed to use open-ended questions to allow the girls a chance to describe their experience of being physically active, such as "What do you get out of being physically active?" I also needed questions that would help the girls explain things about their lives that they thought had influenced their experience. Compared to questions about the experience itself, it was harder to come up with contextual questions, as I explain next.

Bracketing while developing the Initial Guide. While considering potential questions, I had to continue Activity 3 of Porter's (1998) method. That is, I had to bracket or setting aside key constructs from the literature, especially the construct of barriers to PA. I wanted to learn about things that the girls saw as barriers, but I needed to understand those things in the way they understood them without my word as an influence. So, I bracketed by following a specific strategy (Porter, 1998). I deliberately avoided including the word "barrier" in developing questions about their experience, so that they would respond from their own frame of reference. However, to ensure that I obtained contextual data about things that might hold them back from engaging in PA, I decided to include this question. "Do things happen that make it harder for you to be physically active?" Finally, to ensure that I could fulfill Activity 7 of the method and

compare my findings to relevant constructs (Porter, 1998), I created this question, which I deliberately asked after the others, “What does the word ‘barrier’ mean to you?”

Furthermore, I explored the girls’ perspectives pertaining to two other constructs that had been measured in quantitative studies of PA. Specifically, questions and probes were used to further gain an empirical understanding of (a) perceived benefits of PA (such as, “What do you get out of being physically active?”) and (b) self-efficacy relative to PA (such as, “Do you think you can be physically active?”). Having the opportunity to set aside the labels associated with these constructs and invite the girls to talk about their own perceptions, actions, and intentions was rewarding and interesting.

Attending to content validity. Although I used my knowledge of the literature as a basis for developing the Initial Interview Guide, the questions did not emerge from the literature per se. I spent a lot of time reviewing my research problem and purpose, thinking about what I wanted to really learn from the girls, and talking to my advisers about possible questions. I created a series of about 10 different versions, refining each version based on feedback. I worked on substance issues with Dr. Riesch and Dr. Colbert, who have expertise in PA and adolescence. I worked with Dr. Porter on format so the questions could be useful in interviews. One doctoral student research group reviewed the questions for content, and another student research group reviewed them for format and appropriateness in qualitative interviewing. After that work and feedback from various sources, I concluded that the Initial Interview Guide had a reasonable degree of content validity – that I could use it as a basis for exploring the experience of being physically active with middle-school girls. The IRB approved the Initial Interview Guide to use as a pilot with the first 3 participants recruited for the study. However, the Initial Interview Guide was just used with the first 2 participants. (See Appendix I, Initial Interview Guide.)

Piloting the Initial Interview Guide. In qualitative studies, it can be useful to pilot the interview guide to better ensure that questions elicit pertinent responses. It is customary to do this as an informal process during interviews with the first few participants, but I took a more

formal approach, piloting the Initial Interview Guide with the first 2 participants recruited into the study. To pilot the guide, I simply asked both girls each question on the Guide. Next, I explain how I appraised the outcome of the pilot and my rationale for making some changes in it.

Appraising Pilot Results and Creating a Revised Interview Guide. It was helpful to pilot the guide for three main reasons. First, the pilot gave me a chance to determine if the questions had elicited data pertaining to the study aims. To do that, I made a table listing each IRB-approved interview questions in a row, inserting each response by the first 2 participants in the appropriate cell. (See Appendix J). The Porter Research Group reviewed and discussed the table to determine if the questions had elicited useful responses, as another step in appraising the content validity of the interview guide. I considered all suggestions provided. For instance, as noted above, the Initial Interview Guide included a question to elicit data about barriers without mentioning the word barrier: "Do things happen that make it harder for you to be physically active?" Because it had elicited a yes-no response from both girls, I revised it to be open-ended: "What sort of things happen that make it harder for you to be physically active?"

Second, due to the pilot, I saw that I could learn more about girls' intentions to be physically active, in relation to the first knowledge gap I had identified (See Chapter 1). To explore the girls' perceptions of themselves (and accordingly, gain insight into their related intentions), I added this question: "For what reasons do you think of yourself as physically active/not physically active?" Likewise, I saw that I could learn more about factors influencing the experience of being physically active (the second knowledge gap I had identified) by adding this question: "Is there anything else that gets in your way of being physically active?"

Third, while I was interviewing the first 2 girls (in part to pilot the interview guide), Dr. Porter and I began identifying two new gaps in the literature, reflecting on them as we discussed the interviews. We talked about the fact that one goal of promoting PA among youth is to promote life-long PA (Sallis & Patrick, 1994). Yet, we surmised that other scholars had not yet asked middle-school girls about their intentions to become active or to stay active as they

matured (see Chapter 1, p. 8, regarding knowledge gap #4). We also realized that I did not have questions about that issue in the Initial Interview Guide, and that I could contribute by reporting findings on that topic. So, I added these questions to the Revised Interview Guide:

1. Do you see yourself being physically active in high school?

2. Do you see yourself being physically active later, if you were a mom?

3. Do you see yourself being physically active later, if you were a grandma?

The Revised Interview Guide (see Appendix K), incorporating the changes and additions mentioned above, was approved by the IRB (#2011-0347 CP003). Thereafter, I began using it as a template for interviewing the other 8 participants.

Finally, Dr. Porter and I also talked about the extent to which scholars had viewed adults as *the* experts on girls' PA (see Chapter 1, pages 8-9, knowledge gap #5). We surmised that few other researchers had asked girls what advice they would give to other girls about being physically active. Dr. Porter, who does research with older women, had found it very helpful to ask participants what advice they would give their counterparts about dealing with certain health-related experiences. We realized that I did not have interview questions on that topic either, so I included a probe about that in the second interview of some girls. I personalized each of those questions. When a girl explained how she had dealt with a particular challenge to being active, I asked if there was anything else she would advise other girls to do in that situation. The following is an excerpt from Sara's second interview.

> [A lot of girls say that when they do physical activity they get self-conscious about other people looking at them.] Yeah. [You said that also, but yet you're still active sometimes. How do you think that you do that – that you are still active even though you are self-conscious about the way you look when you exercise?] Well, I am self-conscious about things, but I keep telling myself that it really doesn't matter how I look at the time because I am in the middle of doing something. I just keep telling myself that it is okay.

Who cares how I look right now? [Is there any advice you could give a girl who is not able to just say, 'Who cares?' how she looks when she is doing an activity?]

Data Collection

Interview Schedule for Each Participant. I planned a month-long period of data collection with each participant consisting of two interviews 1 to 4 weeks apart, with the timing of the second interview dependent on the participant's schedule. I established that plan for several reasons. First, as explained earlier, spending time with participants where they are living the experience is an important part of Porter's (1998) method (Activity 4). So, a one-time interview would not be consistent with the method. However, I had other reasons for planning two interviews. Because I have had a lot of experience interacting with middle-school girls, I know that as individuals they are often very different from each other. I thought it would probably take more time to establish rapport with some girls than with others. I wanted to get to know each girl at the first interview and establish a relationship with her. I planned to ask more general questions about the experience of being active at the first interview, saving the questions that might be harder to answer or somewhat more personal for the second interview. Also, having two interviews would give me the chance to explore additional topics that came up in the first interview as well as to reveal any changes in intentions or context from one interview to the next. Finally, the two-interview schedule made it possible for me to talk with each girl at the second interview about what I had learned from her during the first interview. That was one way that I carried out Activity 7 of the method, discussing emergent findings with participants.

The two-interview plan for each participant worked out well. I did interview each participant twice. Although I had planned to do both interviews for each participant 1 to 4 weeks apart, there was a lapse of 5 weeks in one case. (I had to re-schedule the second interview; I was hospitalized at the time.)

Dialogue with Adviser. Although I conducted all interviews, I met with Dr. Porter after the first interview with each girl, sharing my reflections on the data and the interview process. I

came to each meeting prepared to discuss any issues of concern with regard to the interview process or my interviewing style. I also came prepared to discuss my ideas for new probes and additional questions for the second interview, typically sending a draft list to Dr. Porter in advance. We worked together to craft probes to further explore topics the girls had mentioned and to create new questions as needed for the second interview, as explained below.

Timeline of Data Collection for the Sample. I completed interviews with the first 2 participants between November 2011 and January 2012. From February through March, as noted earlier, I prepared the Revised Interview Guide and awaited a response from the IRB. I interviewed the other 8 participants from April 2012 through June 2012.

On Dr. Porter's recommendation, I did both interviews with the first participant before starting interviews with the second participant. Focusing on just one participant increased my confidence as an interviewer and gave me practice differentiating data about the experience from data pertaining to the context of the experience (as explained later, in Data Analysis).

The Setting. The start time for each interview was pre-established by contact with the parent. In the informed consent and assent documents, I indicated that each interview would likely last no longer than 45 minutes. However, the length of interviews ranged from 10 to 60 minutes. In all instances, a participant's second interview was longer than the first interview.

All interviews were scheduled to occur in a private place that the parent and I had agreed on in advance, such as a private room at the girl's school, a private room at the public library, or in the parent's home. There were no disruptions of privacy during interviews conducted at the school or at the library. However, in one case during an in-home interview, a girl's parent entered the room, perhaps having forgotten about the interview. Melanie, who was speaking, interrupted herself to ask her mother to leave! (The mother did leave the room.)

Another in-home interview situation was more complex, with regard to privacy for the participant. Throughout the first interview, Melissa's dad sat on the couch next to her. He interjected several times to tell me that Melissa was more active than she was making herself

out to be. A few times he asked Melissa to think about activities he thought she had forgotten to mention. I spoke to Dr. Porter about the situation. We concluded that although it was not ideal for the dad to be present in the room or to interject, we could not dispute his right to do so. I was conducting the interview in his home, and I was interviewing his daughter. However, we needed to take steps to uphold Melissa's right to talk about her experience in her own way, without direct interference from anyone. Because I had been communicating with the dad by e-mail, we realized that I could craft a message prior to the next interview to explain that it was important for Melissa to have the chance to share her experience. This effort was successful. Although her dad sat on the couch during the second interview, he did not interject.

The Interview Process. I relied on the initial Interview Guide (which I piloted with the first 2 participants) and the Revised Interview Guide (which I used for all later interviews) as templates while conducting interviews. As noted earlier, there were specific questions for the first interview and specific questions for the second interview. I asked every girl all of the questions specified on the Interview Guide for that interview (first or second), although not necessarily in the same order. However, I asked additional questions beyond those specified for that interview, because each participant had a unique experience to offer.

The first interview with each participant. In addition to establishing rapport with the participant in the first interview, I wanted to inquire about physical activities as it pertained to them. During the first interview, I did not ask about things that got in the way of being active, but I did explore that topic if a girl brought it up. (See Appendix L for an example of the interview questions and probes for a first interview.)

The second interview with each participant. I began every second interview by bringing up additional questions to clarify my understanding of data from the participant's first interview. When I had intuited an intention from data in the first interview, I reminded the girl what she had said, and then I asked if I was on the right track, as far as they were concerned, by thinking of that as an intention, as something she was trying to do. I did that for two reasons.

First, I wanted to make sure that I understood the participant correctly. Second, phenomena fluctuate, because people create and re-create their realities (Reker & Wong, 1988). I might have thought that the girl was revealing an intention at the first interview, but by the second interview, things might have changed for her. For example, during the first interview, Amanda spoke about wanting to get 60 minutes of PA each day of the week. It was something that she was striving to do. To explore and validate that intention, I began the second interview this way.

> [There were a few things from last time that really jumped out at me, and I wanted to talk about those things first. The first thing that you said was that you strived for 60. So I was thinking that striving for 60 was something you were really trying to do. Can you tell me more about that?]

After starting the second interview by asking my follow-up questions, I continued by asking the pre-planned or scripted questions for that interview. Those questions were mainly focused on exploring the personal-social context of the experience of being physically active, including things about the girls' lives that influenced their activity. I tried to ask those questions in a way that would elicit spontaneous stories. For example, instead of asking girls about the most common barriers to PA that other girls mentioned on the APAPBarriers scale (Robbins et al., 2008), I asked them about the potential barriers that they had documented when they completed the APAPBarriers scale (Robbins et al., 2003). I wanted to explore their reasons for having documented a particular barrier without influencing or confusing them by talking about other girls' responses. (See Appendix M for an example of the interview questions and probes for a second interview.)

I expected that the second interview with each girl would be longer than the first, because I was going to ask specific questions and follow up on issues raised in the first interviews. This turned out to be the case. The average length of the transcript for the first interviews was 3.3 single-spaced pages (range 2 – 6 pages). On average, transcripts for the second interviews were 7.2 single-spaces pages in length (range 4 – 11 pages).

Interview style. To enable each girl to talk about her experiences, I often encouraged her to do just that. For instance, in one case, I said: "Not having enough time is a common thing that makes it harder for girls to get PA. You say that you do not have enough time, but yet you get enough PA. Tell me more about that." Although some of the interview questions were closed, rather than open-ended, I routinely gave the girls a chance to say more after they answered a "yes-no" question, and generally, they did so.

I created probes as needed to further explore the experience, either (a) spontaneously during the interview or (b) while reflecting on a girl's first interview and preparing for her second interview. It was necessary to create probes spontaneously to explore participants' responses to my first question in every first interview, which was, "What activities do you do?" They typically responded by relating a list of different things they did. I then created a probe to have them tell me more about a certain activity. For example, "You said that you horseback ride. Can you tell me more about that?" However, I also asked the girls follow-up questions to learn more about their experience of being physically active. For instance, Ellen said that if her middle-school had a soccer team she might join it. So, I built off that to ask about a possible intention of playing soccer in high school. "So, what if in high-school they have a soccer team. Would you be likely to join it, do you think?"

Interactions during interviews. During the interviews, the girls interacted with me differently. Some girls appeared to feel very comfortable. During most of Eleanor's first interview, she lay on the couch. At one point, she got up and demonstrated yoga positions. Other girls appeared to be more nervous and fidgety. Sara fidgeted and pulled on her clothes during the entire first interview but less so in the second interview. During the first interview Becki fidgeted and looked around the room when answering questions. During the second interview, she was more relaxed and gave more eye contact.

Ellen did exhibit a noteworthy non-verbal emotional response during the interviews. In the first interview, she mentioned on several different occasions that she wanted to lose weight.

She provided direct eye contact the entire time she spoke about wanting to lose weight. Her intention was to lose weight by being physically active. She continued to talk about "fitting in" because she would lose weight. She also talked about not wanting to make a fool out of herself because she was already "not very popular to begin with." When I initially met with Dr. Porter, I thought that I should not explore this intention at the second interview. I did not want to potentially cause Ellen any additional emotional distress. Dr. Porter reaffirmed to me that Ellen had probably revealed an intention that was important to her. We worked on developing additional questions for the second interview that helped establish rapport and a sense of comfort prior to asking her about her intention of wanting to lose weight. I did ask her if her intention of being physically active was to lose weight. She nodded. I then asked if there was anything else that she would like to tell me about this. She shook her head no. I did not plan to bring up the intention again during the interview unless she mentioned it first.

Toward the end of second interviews, I noticed that 3 girls were getting restless with the process. That is, through their non-verbal cues, I began to think that they wanted the interview to end. Well into the second interview with Eleanor, her dog whimpered; she went over and calmed him down for a few minutes. She returned to her seat but was fidgeting a lot. Her posture also had changed. Prior to caring for her dog, she sat very erect while snacking and sipping water. Afterwards, she sat hunched over the table, supporting her head with her hand. I interpreted those non-verbal cues to mean that she was no longer interested in the interview. Fortunately, I was almost finished; I had only one more scripted question to ask. In contrast, the other 7 girls maintained interest throughout the second interview. Melanie's second interview lasted approximately 63 minutes. She wanted to continue talking about interview topics, but her mom told me that they had to leave because of another obligation.

Data Management

All appropriate precautions were taken to safeguard the data and maintain confidentiality. Signed consent and assent forms were kept in a locked cabinet at the

University. All interviews were audio-taped using digital audio-recorders. No personal identifiers were used to label the recordings. Instead, a unique number was assigned to each participant. The list matching each girl's identifying information to that number was also stored in a locked cabinet, to which only I had access. The audio-recordings remain in the locked cabinet. They will be destroyed by university personnel after dissemination of the findings.

Within 3 days after each interview, I transcribed the audio-recording using Microsoft Word. While I transcribed, I inserted relevant observational data (such as girls' non-verbal behaviors) into the transcript at the appropriate location. I saved the transcripts to a personal computer and sent the files to Dr. Porter for storage in a folder on the school's computer. Transcripts were single-spaced, and the dataset of 20 interviews consisted of 105 pages.

My original plan was to manage the data using *NVIVO 10* (QSR International, 2012), a new version of a qualitative software management package; Dr. Porter had successfully used an earlier version, *QSR N6* (QSR International, 2002), for years. I prepared each transcript for uploading, deciding how to break up the transcript into short sections, called *text units*, that pertained to the same topic (such as an interview question and the response to it. I separated text units with hard returns and uploaded the transcripts to *NVIVO 10* (QSR International, 2012). Like *QSR N6* (QSR International, 2002) in the past, *NVIVO 10* (QSR International, 2012) was ostensibly designed to develop an "index tree" that is parallel in form to the three-leveled taxonomy – the taxonomy that is to be the product of analysis in Porter's (1998) method.

In both *QSR N6* (QSR International, 2002) and *NVIVO 10* (QSR International, 2012), each interview question can be designated as a *node*, so that all responses to that question can be coded at that node, enabling comparison of all responses to the same question. In the older version, *QSR N6* (QSR International, 2002), the researcher can also code each text unit for substantive purposes, either as an intention of the experience or as a facet of context. This enables the researcher to actually create the taxonomy within a project folder in *QSR N6* (QSR International, 2002), as mentioned above. The researcher can also code the same text unit at

multiple levels of the taxonomy (that is, as an exemplar of an intention, a component phenomenon, and a phenomenon). In Porter's (1998) method of descriptive phenomenology, the researcher has to be able to code data substantively (that is, to *produce a taxonomy*) as well to code data based on the interview question.

Unfortunately, the newer version of the software, *NVIVO 10* (QSR International, 2012), was not nearly as versatile as the older version, *QSR N6* (QSR International, 2002). It allowed coding of each text unit in only one way, according to the interview question. Although it was helpful to be able to pull up all of the responses to each question at once, I needed to be able to analyze the data based on content and to set up a leveled taxonomy while I was analyzing data. I worked with a consultant in-person and by telephone and used on-line tutorials, only to realize that it would be fruitless to continue the effort.

Despite that disappointment, Dr. Porter and I decided that my dataset was small enough that I could manage it using Word, if I proceeded carefully. I set up a sub-folder for each girl's interviews and used the "find" menu to check for key words or phrases in individual interviews, in each girl's set of interviews, and in the entire dataset. With this relatively small number of rather short interviews, I was able to manage data successfully using Word.

Data Analysis

As explained in Chapter 1, the analysis-related activities of Porter's (1998) method (Activities 5 – 7) involve describing, comparing, and inferring from the "stream of experience" (Husserl, 1913/1962, p. 105) to discern each participant's intentions. To summarize, intentions may be unique to each individual, although some intentions may be comparable for individuals who share similar experiences. Similar intentions are grouped into more general levels called component phenomena. Component phenomena represent a group of intentions that share similarities based on data. In turn, similar component phenomena are grouped into larger phenomena. These three levels (intention, component phenomenon, and phenomenon) comprise a taxonomy that represents the structure of the experience. A taxonomy is not

developed by a linear process. Rather, the researcher teeters back and forth between the levels of taxonomy to see and explain the experience across the levels. A similar process is used to explore and describe the personal-social context of the experience; the aim is to create a taxonomy of three levels. From specific to general, the context is described in terms of element, descriptor, and feature of life-world. As the analysis proceeded in the manner described above, new substantive nodes were added to the index tree. Each node represented some facet of the developing taxonomy of the experience or its personal-social context. The procedures to analyze data are based on Activities Five through Seven.

Activity 5: Intuit the Structures Through Descriptive Analysis. I began data analysis by focusing on identifying intentions from my first participant, Amanda. I was trying to understand what she was trying to do with her experience of being physically active. Using Husserl's (1913/1962) recommendations of "describing, comparing, distinguishing, and inferring" (p. 93), I analyzed data inductively and deductively to develop structures of the lived experience. As stated above, three categories of structures, ranging from specific to general were developed: (a) intention, (b) component phenomenon, and (c) phenomenon.

The following is an example of the way in which these related structures of the lived experience were developed from data: (a) *making up the activity I missed,* an intention; (b) *figuring out ways to be more active when things get in my way,* a component phenomenon; and (c) *making PA fit my life,* a phenomenon. Amanda provided several different examples of having things on certain days of the week that made it more difficult for her to be active. For example, her sister was busy with basketball, and in turn that affected her PA. In reviewing the transcript, I realized that she was structuring her experience of being active at times to make up the activity that she missed. After she told me certain circumstances that affected her PA, she told me that she would just make up for the activity she missed on a different day. Other data confirmed that I had ascertained that intention accurately. For example, the reason that she

had missed her PA was that her grandma had been in the hospital. She was going to be off school that upcoming Thursday, and she was planning to make up the PA she had missed.

When I had a basic understanding of Amanda's experience through dialogue with Dr. Porter, I began working with data shared with other participants to consider similarities and differences. For example, there were similarities or consistencies between Amanda's intention, *making up the activity I missed*, and that of the other participants. For example, Joy's PA after school was limited because she was too busy. When I questioned her, she said that she was "busy" and that she would make up the PA at a different time. As a result of these two conversations, I thought that the girls were *figuring out ways to be more active when things got in their way*, a component phenomenon. Both girls spoke about things in their lives that made it more difficult for them to be physically active; however their intention was still to be active. They were going to figure out a way to make up the PA. That is, they were making PA fit my life (a broader phenomenon), despite things in their lives that made it more difficult for them to do so.

As I continued to analyze data, I was able to consider differences between data focused on the context of the experience and data relevant to the experience (Porter, 1995; 1998). However, often data about context and the experience were intermingled. According to Porter (1994, 1995, 1998), that is to be expected because experience is nested in context. That is, people do not distinctly talk about the experience and then talk about the context. There were many cases when it was hard to distinguish between context and the experience. For example, one of Samantha's intentions of being physically active was *getting to the point where I can compete better.* To do so, she would run long distances almost every day of the week. While she was taking about her intention, she also was *explaining what it is like for me while I am being active.* That is, she was talking about the personal-social context of her experience. Samantha was *recognizing a certain feeling associated with being active.* That feeling was a "runner's high."

Activity 6: Engage in Intersubjective Dialogue about the Phenomena and Contextual Features and Activity 7: Attempt to Fill Out the Phenomena and Features.

Activity 6 was used as a strategy to achieve Activity 7 during data analysis. I sought to fill out the phenomena by engaging in intersubjective dialogue. The goal of engaging in intersubjective dialogue is to share ideas about emerging phenomena with each participant, with other participants, and with other interested persons (Porter, 1998). These activities were related to efforts to ensure the validity of data analysis (Porter, 1994). Throughout the entire process of interviewing and data analysis, I meet with my advisor frequently. I did this so I would have access to multiple interpretations of the data and additional insights. For instance, my initial instinct was to organize data by the activities the girls were doing. I grouped data according to the type of activity it was – unorganized, leisure PA, or organized (sports team) PA. The intersubjective dialogue with my adviser was very helpful at that point. As a result I realized that I needed to focus on intentions, what the girls were trying to do with and in relation to the activities, rather than focusing my analysis on the activities themselves.

Because I interviewed each girl two times, I could talk with each girl at the second interview about what I had learned from her during the first interview. This is an important component in Activity 6 to ensure that I did understand her experience correctly. There is one particular response during my second interview with Jenny that demonstrates the importance of intersubjective dialogue. During our first interview, Jenny spoke about ice skating. She currently was not ice skating but was thinking about joining in the future. I asked her what about ice skating was it that she liked. "It is just fun to skate around." During the second interview, my first question to her was about ice skating and having fun.

> [We talked about ice skating last time, and you said it is fun to skate around. Is 'having fun' something that you are trying to do?] I think having fun is sort of what I am trying to do. When you are having fun when you exercise, it just makes it more fun. You can have fun while you exercise. You don't have to always just sit there and do push-ups.

This excerpt shows the importance of intersubjective dialogue with participants; I was able to affirm that “having fun” was an intention, something that Jenny was trying to do.

Activity 8: Determine Uses for the Findings. As mentioned previously in Chapter 1, Husserl (1913/1962) highlighted the need to reconnect phenomenological studies to other realms of science. Accordingly, in Activity 8 (Porter, 1998), the researcher proposes particular uses for the findings of the study in the discussion, pointing out how the findings address the knowledge gaps previously identified.

After completing data analysis, I returned to the literature to compare and contrast my findings with those of other researchers. In Chapter 5, I compare and contrast my work with prior research that is relevant to PA in middle-school girls. I draw conclusions about ways in which my findings are unique and suggest how the findings could be useful to suggest interventions and ideas for other studies.

To conclude, I used Porter’s (1998) descriptive phenomenological method to explore and understand the experience of being physically active for middle-school girls who had previously reported both high levels of PA and high barriers to PA on standardized measures of those variables. Ten participants took part in two in-depth interviews no more than 4 weeks apart. Data collection continued for 8 months. During this process, I sought to understand what the girls were trying to do with their experience. I also sought to understand the personal-social context of their experience. The findings of this work are presented in Chapter Four.

Chapter 4

Findings

The purpose of this chapter is to present findings of a descriptive phenomenological analysis of this dissertation research. The purpose of this dissertation research was to explore and understand the experience of being physically active for middle-school girls who met recommended levels of PA despite reporting barriers. The phenomena that structured the girls' experience and the life-world features that were basic to the experience are detailed. Prior to reporting findings pertaining to the experience and its context, an overview of the life-situations of each participant is presented. In this section and throughout the findings, participants (and persons they mentioned) are referred to using names that are not their own. Participants' remarks are in quotation marks; the interviewer's remarks are in brackets; and any explanatory information is in parentheses.

A Description of the Sample and an Overview of the Participants

A description of the sample. The sample was comprised of 10 middle-school Caucasian girls, 8 from the rural school and 2 from the urban school. Participant's ages ranged from 11-13 with a mean age of 12. The range of the scores on the PAQ-C (Kowalski et al., 2004) was 3.14 – 4.06, with a mean of 3.453 (SD= 0.32). The range of the scores on each item of the APAPBarriers Scale (Robbins et al., 2008) was 2.33-3.22, with a mean of 2.588 (SD= 0.32). See Table 2 for the range and mean scores of the sample on the APAPBarriers Scale (Robbins et al., 2008).

Table 2

Range and Mean Scores of the Sample (N=10) on Items of the APAP Barriers Scale

APAPBarriers Scale (Robbins et al., 2008) Item	Range of Scores for Each Item	Sample mean (SD)
"I am afraid to fail"	3 – 4	3.4 (0.52)
"I feel self-conscious or concerned about my looks when I exercise"	2 – 4	3.0 (0.67)
"I have minor aches and pains from activity"	2 – 4	3.0 (0.94)
"I am too busy to exercise"	1 – 4	2.5 (1.07)
"I have to exercise alone"	1 – 3	2.4 (0.84)
"I had a bad day at school"	1 – 4	2.4 (1.17)
"It is very hard work to exercise"	1 – 4	2.4 (1.07)
"I am too tired to exercise"	2 – 3	2.2 (0.42)
"I am not motivated or I am feeling too lazy to exercise"	1 – 3	2.1 (0.88)

Scale range is 1-4 (1=not at all true; 2=not very true; 3=sort of true; 4=very true). Higher mean scores denote more agreement with the statement (Robbins et al., 2008).

Overview of each participant's situation. I present a snapshot of key information about each of the 10 participants, beginning with each girl's age, grade in school, and her family situation. I follow by reviewing each girl's key comments about her degree of involvement in PA. These key facets about each girl's life are a backdrop to the personal-social context of her experience of PA. Although I observed likely indicators of family socio-economic circumstances in their homes, such details are not presented here to better ensure that anonymity is maintained. I begin by presenting data about the 2 girls who met the original inclusion criteria for high PA levels and high barriers to PA, followed by data about the other 8 girls who met the modified inclusion criteria of at least average levels of PA and above-average barriers to PA.

Girls who met the original inclusion criteria. Amanda, age 12, a 7th grader, lived with her mother, her stepdad, and her younger sister. She "did walking," rode a stationary bike, and played on the school's volleyball team. She said that her family was active; she thought she was active, too. She strived for 60 minutes of PA every day. "Sometimes I meet that goal. Sometimes I fall a little bit behind."

Becki, age 11, a 6th grader, lived with her parents and younger brothers in "the county" on a "busy road." She participated in a volleyball league sponsored by a local bar, and she had recently started taking tap dance. She did not feel pressure to be active, but she felt that she would be active even if she was not playing volleyball or taking dance. She said she got 30-60 minutes of PA each day, and she thought of herself as active.

Girls who met the modified inclusion criteria. Eleanor, age 11, a 6th grader, lived in the country with her parents and two younger brothers. Her grandparents also lived nearby. Her dad worked mainly from his home office; her mom worked long hours in another town, with a long commute. Eleanor played basketball with her dad and brothers and took part in school plays. She thought of herself as active and said she got about 45 minutes of PA a day.

Melanie, age 13, a 7th grader, lived on a farm with her parents and younger sister. She was required to do daily farm chores, such as feeding the steers. She was on the school

volleyball team, rode a bike, and took walks. She said that she got about 15 minutes of PA a day and thought she should get about 30 minutes. She described her level of PA in a colorful way. "(I am) . . . not un-physically active. I am right in the middle."

Melissa, age 12, a 7th grader, spent equal time in the homes of her divorced parents. She had a younger brother. She did PA with her dad and brother, but not with her mom. She rode her bike, walked, swam, ran, and played on the school's volleyball and basketball teams. She said she was "not very" active. "I don't get an hour (of PA a day), but I think you should."

Sara, age 11, a 7th grader, lived with her parents and older sister. She was on the school's volleyball team. On occasion, she went running, rode her bike, and walked her neighbor's dog. She used the treadmill in the basement more often than the other family members did, but she was not sure if she was physically active. Most times, she was just "lying around. . . . I normally watch TV a lot, and I am on my iPod a lot." When asked if she got enough PA every day, she laughed and said, "No." Her estimate was 20-30 minutes a day.

Jenny, age 12, a 7th grader, spent time at the homes of both parents, who were divorced. Her sister was in college. Jenny described herself as "somewhat" active but also as an "over-achiever" in all her activities including PA. She ran track at school, danced at home, and rode her bike. She thought that she should get 60 minutes of PA daily and that she did get that much activity due to running track.

Joy, age 12, a 7th grader, lived with her dad and two brothers. Her mother's home was within walking distance. She played games like dodge-ball, and she rode her bike. She said she was active anytime she got the chance, and she thought of herself as active. She said that she "usually got more" than the hour of PA that she thought she should get.

Ellen, age 12, a 7th grader, lived with her parents and older brother. Ellen had recently become her mom's "workout buddy." They walked together. Some days she was more active than others. She thought that she should get between 30-60 minutes of PA a day. When I

asked if she thought of herself as active, she replied, “I try, but I don't succeed very much. Not really. I am high-low. I am there (uses hand gesture to show a middle level).”

Samantha, age 13, an 8th grader, lived with her parents, two older sisters, and an uncle. Her mom worked in a nearby town and often stayed at her apartment there during the week. Samantha ran long distances by herself and was on the cross-country and track teams at school. She typically ran 15 to 45 minutes a day, 5 days a week. She thought of herself as active. “I work hard at what I do. I work hard at exercising and keeping in shape and toned.”

As is evident, the participants’ lives were similar in some ways and different in others. These factors, and others, were influences on their experiences of PA as middle-school girls. Those similarities and differences are explained in detail below.

Overview of the Findings

I discerned six *features* of the personal-social context of middle-school girls’ experience of being physically active despite reporting barriers to activity and four *phenomena* that structured the experience. I present overviews of the features and the phenomena below.

The Context of the Experience. There were six features of the context of middle-school girls’ experience of being physically active despite reporting barriers. The contextual features were: (a) *realizing the extent to which certain things in my life influence me to be more physically active,* (b) *having my own reasons for being active,* (c) *explaining what it is like for me while I am being active,* (d) *realizing how things change for me when I have been physically active,* (e) *realizing that things get in my way of being physically active,* and (f) *realizing that things get in the way of being active for girls my age.* Each of these personal-social facets of life-world was an influence on the girls’ experience of being physically active in interesting ways.

Each girl acknowledged that she was influenced to be more physically active by the examples of certain other people, by the opportunity to engage in activity with those people, and in some cases, because they felt pressured to be active. Girls were also influenced to be more active because they had proximity to certain places where they could do particular activities.

Despite those influences, the girls also related their own reasons for being active – important reasons that varied for each girl. Some girls were active for their own personal gain, such as looking healthy or having fun. Other girls were active because they viewed it as a requirement. A few were active to encourage other people to be more active.

Each girl talked about what it was like for her while she was being physically active, referring to signs like sweating or being tired. They realized that there were certain requirements associated with being physically active, like engaging in activity for a certain period of time. Furthermore, the girls were aware that some things changed for them when they had been active, like losing weight or feeling better about oneself. However, each girl explained that certain things had gotten in her way of being physically active, including her own schedule and preferences for activities as well as actions and remarks of some family member and friends. They also acknowledged that they were up against certain issues when it came to being more active – things in their lives that would need to change if they were to become more active. Likewise, the girls were realizing that they were not the only ones dealing with issues that could make it harder to be active. They knew that things could get in the way of being active for other girls their age, like spending too much time on a cell phone. Nonetheless, the girls expressed the belief that other girls could be active, even if certain things got in their way.

The Phenomena of the Girl's Experience. There were four phenomena of middle-school girls' experience of being physically active despite reporting barriers to being physically active: (a) *getting up and doing something to keep my body moving,* (b) *striving to meet my own goals in physical activity,* (c) *making physical activity fit my life,* and (d) *suggesting ways that girls my age could be active when things get in their way.* Each phenomenon was especially influenced by one or more of the life-world features that I summarized above.

First, in part because they had chances to be active with other people and in particular places and because they had their own reasons for being physically active, the girls had the intention to engage in PA. That is, they were *getting up and doing something to keep my body*

moving, either alone or with others and in particular locations (at school, indoors and outdoors at home, and outdoors elsewhere). Second, although they did not necessarily like all of the accompaniments of PA (like sweating and dealing with hairstyle problems), they were trying, for instance, to increase the distance they could run or to get to a higher level in a certain sport. They were *striving to meet my own goals in physical activity.*

Furthermore, although the girls knew that certain things were getting in their way of being active, they were trying to address those issues to the extent that they could by *making physical activity fit my life*. They were trying to figure out ways to be more active when things got in their way, as well as envisioning a future for themselves in which PA was a part. Finally, because they had been active despite the fact that things that had gotten in their way and because they recognized that other girls faced such issues, too, they were in a position to provide advice for other girls their age on how to be active. Thus, the middle-school girls' experience of being physically active despite facing challenges was structured in part by *suggested(ing) ways that girls my age could be active when things get in their way.*

Organizing Principles Used in Presenting the Findings

With regard to middle-school girls, the experience of interest was that of being physically active despite having reported barriers to PA. The main findings pertaining to both the experience and its personal-social context are presented in a taxonomy, shown in Appendix O (p. 240) and described below. As explained earlier and as shown on the taxonomy, I discerned six features of the context of the experience and four phenomena that structured the experience. There was evidence of the most general levels of the taxonomy (life-world feature and phenomenon) in data from all participants. Instances of the intermediate levels (life-world descriptor and component phenomenon) were evident in data from most girls. Instances of the most specific level of the taxonomy (life-world element or intention) were unique to each girl.

Contextual features and phenomena are presented in four sets to illustrate their relationships. Each set is comprised of one or two contextual features and one related

phenomenon. For each set, the feature is discussed first, because life-world is understood as the personal-social context of the phenomena that structure the experience (Porter, 1995). Within each section of the findings, categories with the most data examples typically are presented first, followed by categories that were less prevalent in the dataset. At two appropriate places within the findings, I have included a table citing all responses of participants to two key interview questions, setting the stage for reporting findings pertinent to those data.

Set One: Context and Experience

The first set consists of two contextual features and one phenomenon. An integral relationship was perceived between these features, *Realizing the Extent to Which Certain Things in My Life Influence Me to Be More Physically Active* and *Having My Own Reasons for Being Active*, and this phenomenon, *Getting Up and Doing Something to Keep My Body Moving.* Experience was nested in context as evidenced by the following example. Amanda had recently started to exercise. "I noticed that I was going up a pants-size, and I didn't like that very much." She wanted to lose or stay the same pant-size "without being over-obsessed about it." She had particular reasons for being active, and she got up and got her body moving. "I do walking. After school I'll go and walk the block by our house." She also rode a stationary bike in the basement several times a week. Amanda was also realizing something important about herself – the extent to which her friends influenced her PA. She concluded that she did not need to be active with her friends to be active herself. "The majority of my friends are not interested in sports anymore. The only time they are being active is gym." Amanda got into volleyball for her own reasons, even if her friends were not as active as they had been.

Realizing the extent to which certain things in my life influence me to be more physically active. The girls spoke of many things about their lives that they considered influences on their PA. Some of these influences were more negative than positive, and those are considered in Set Three. In this set, I focus on the degree to which certain facets of the girls' lives fostered (or did not interfere with) their opportunities to be physically active. There

were five descriptors of this life-world feature: (a) *being influenced by my family to be more physically active*, (b) *recognizing the extent to which my friends influence my physical activity,* (c) *being able to be active in a certain way in a certain place*, (d) *finding that I really like to do a certain kind of physical activity*, and (e) *feeling pressure to be active*. For example, Melanie pointed out several related things about her life that influenced her opportunities to be active. She could be active in a certain way in a certain place. "Sometimes I will climb trees, but there are not a lot of trees in my house to climb. So that is when I rely on my grandma." She and a cousin would ride bikes to their grandmother's house to climb trees, but they had not done that as often lately. With that change in her life situation, Melanie felt that her PA had decreased.

Being influenced by my family to be more physically active. All 10 girls mentioned family (parents, grandparents, aunts, cousins, and siblings) as influences in helping them to be more physically active. (All the siblings, other than Samantha's sisters, were younger than the participants.) However, those people functioned in different roles, according to the girls. Whereas some family members were co-participants in PA, others influenced the girls' activity in other ways, such as encouraging them to be more active. (Here, I report influences that did not extend to "feeling pressure" to do PA. Those data are reported later in this section.)

Of the 10 girls, 7 girls realized that being active with family members helped them to be active. Three girls indicated that just being part of their particular families helped to make them more active. First, Samantha was physically active with her family, "because family, they are together. We all stick together." Samantha's dad had always played soccer, so the family played soccer together. They also went to the track and ran together. Eleanor said that her family helped her to be active, because "they are active." She played basketball with her dad and brothers. "We all play sports pretty much, being in my family." Finally, Melanie spoke about a different way in which her family influenced her to do more PA. Her dad routinely asked her to do specific tasks to help him take care of the livestock on the farm. "My dad will be like,

'Melanie, open up the gates' (to let the cattle in or out of a pen). I will have to go there. And he is like, 'No. No! The other gates.' Then I will have to run inside the barn."

Although Eleanor did not do much PA with her mother as with her dad and brothers, she felt influenced by her mom with regard to PA. Her mom wanted her to be on sport teams. "She wants me to be physically active, and she wants me to be fit. She likes knowing that I got exercise in the day."

A few girls were emphasizing that their siblings helped them to be active. Joy said this about her brother. "He motivates me. . . . I want to be active like him. I want to play games, and I want to beat him at it. . . . He is really good at everything." Samantha said that her two older sisters were long-distance runners. "They (her sisters) signed up, so then I did not want to be alone. So I signed up with them, and it just kind of clicked."

Compared to the girls who related that being in an active family helped them to be active, Melanie had a different situation. Although her "whole family was active," she said:

> I don't like to do a whole lot of sports. But all my other cousins do football, volleyball, baseball, and all that other type of stuff. I am not really into all that good stuff. But it is weird. I don't really like baseball at all, but everyone else in my family just enjoys it.

Melanie realized that although her family's example could have influenced her to do more sports, the extent to which she was actually influenced was minimal.

Recognizing the extent to which my friends influence my physical activity. All 10 girls spoke of particular ways in which they realized that their friends were influences on their degree of PA. Some girls saw differences between themselves and certain friends when it came to the importance of being engaged in PA. Some girls, in a sense, were doing it alone; that is, they realized that they could be different from their friends and engage in more PA than the friends did. Others talked about what it was like to do PA with friends, realizing that having friends around increased their own confidence with PA. Finally, although some girls preferred to do PA with a friend, they realized that they could do it on their own. There were five descriptors

of this life-world feature: (a) *knowing that my friends help me to be active*, (b) *knowing that having friends around helps me feel more confident with physical activity,* (c) *knowing that it is nice but not necessary to do physical activity with a friend,* (d) *knowing that I do not need my friends to help me be active*, and (e) *knowing that I am different from my friends when it comes to physical activity.*

Knowing that my friends help me to be active. Of the 10 girls, 8 were realizing that their friends could help them be active. Several girls liked to be active with friends. Sara described herself as active "sometimes." "Most of the time I am just lying around. Sometimes I feel like I need to do something, so I get up and run, go for a walk, or ride my bike." However, she preferred to do those activities with a friend. Melissa explained that the extent to which she engaged in PA could depend on which friend was over at her house. "My friend Nancy, we always sit around. But other friends, we actually go outside and do sports and stuff."

Joy and Melanie invited friends to be active with them; those invitations were reciprocated. That is, friends came over and asked them to do something active, an arrangement that Joy characterized as "like, equal." Melanie said this about her cousin. "Yeah, she will ask me sometimes if we can go for a walk. I'll be like, 'No, I can't because I am at a wedding dance.' She will be like, 'Okay.' I don't know what she does then."

Knowing that having friends around helps me feel more confident with physical activity. Of the 10 girls, 4 talked about their perception that they were more confident with doing PA when friends were present. Melanie said that classmates in gym had encouraged her.

> They will be cheering me on. They will be like, 'You can do it Melanie.' I will be cheering them on and saying, 'You can do it.' But if they are not there, I have no support to cheer me on. I just feel all lonely. Then I will have to go to my imaginary friend, and that is a dorky stage. Then I will be like, 'I am such a dork.' Then my self-confidence gets low.

Some girls wanted to be active with friends to deter attention from passers-by. Melanie said:

> I don’t like to be the odd-ball. If I am jogging down the street, I really want someone there with me so that everyone is not staring at me like, ‘What is she doing?’ So that way, my friends can be there to help me to get a little more confident.

Sara preferred to run on the treadmill in the basement, because “it’s more private.” However, when she ran outside, she wanted to do so with a friend because she felt “more open.”

Knowing that it is nice but not necessary to do physical activity with a friend. A few girls realized that although they preferred to do PA with a friend, they could be active without a friend. Melanie said, “I like to have a friend, companion, with me. It is comfortable. But I could go out of that zone and get out there.” Some girls liked an activity so much that it did not matter if a friend was there. Jenny said, “Dancing is something that I am passionate about, and I don't need someone else there to be with me. You always make new friends with whatever you do.” However, she doubted that she would enjoy volleyball without a friend.

> Volleyball is fun, but I just don't think it would be as much fun without your friends there. It is one of those sports you have to focus, but. . . . you have the time in between turns where you can talk to your friends. Your friends are there cheering you on.

Likewise, Melissa remarked, “I don't think I would do basketball if my friends weren't involved or volleyball. . . . It makes it more fun.” When it came to having friends with her during PA, Ellen contrasted “competitive sports” and “exercise.” “If it is not a competitive sport, but it is exercise, I like to have friends or people doing it with me. That way I don't get bored.”

Knowing that I do not need my friends to help me be active. Samantha ran cross-country, but she said that most of her friends played volleyball. “They don't really like running.” That did not deter Samantha from doing her own PA, but she found an ancillary benefit in having a different activity than her friends. “It is something to talk about. Like, 'Oh my gosh, I had this amazing run,' and they are always curious about running. They are like, 'That sounds kind of fun, but I don't want to do it.'”

Jenny, Sara, and Eleanor shared one reason why they did not need to do an activity with a friend. They all made new friends when they started new activities. Sara's friends did not go out for volleyball, but she "met new friends on the team." Eleanor took part in school plays.

> Even though I was not in a cast with all my really close friends, I was in a cast with a couple boys from my school, two girls that I knew well, and a bunch of 7th graders. And I was able to bond with the girls that I was with. We learned dances and we sang.

Knowing that I am different from my friends when it comes to physical activity. Two girls talked about changes they had seen over time in peers' interest or involvement in PA. They realized that they were different from those friends with regard to PA. Melissa said this about her friends. "They like to goof around. My friends don't really exercise as much. . . . Most of them like their computer. That is their favorite thing." As noted earlier (p. 87), Amanda had noticed that most of her friends were active only in gym. However, she also saw differences between the situations of other, more active friends, and her own situation. "I have a few hand(s)ful of friends that are being active. They have similar, but yet different goals from me. We both try out for sports."

In both of those examples, the girls saw themselves as more active than peers. Conversely, Melissa also saw herself as less active than other peers and one peer in particular. "I don't do exercise every day, so I think that I am less physically active than other people. Claire, on my bus, is on at least two basketball teams normally, so she's exercising all the time."

Being able to be active in a certain way in a certain place. For a few girls, the place where they were active was important, because they could only do that activity in that place. At her dad's home, Melissa had more opportunities to be active than at her mom's house. "We have the trail in our backyard. But my mom doesn't have a trail, so I don't walk at her house." Melanie could be active in a unique way, but only at a place that was very special to her.

> My grandma, at the pond, has this hill. It is like a straight incline, but slightly slanted. What we do is we take our bikes all the way up to the top. We have these competitions

> where you run and hop on your bike. And you just go down as fast as you can and you just fly off this hill. And then this one time, I almost ran into the river. It was awesome. The river goes right past their house. If you are lucky, you will get to go into the pond; you will just fling off your bike and land in there. Then the pain comes and you have to bring your bike and swim over there. It is just a pain, but it is super fun.

Finding that I really like to do a certain kind of physical activity. Several girls explained that because they liked a particular activity, they were more prone to engage in PA. Becki talked about the importance of liking the activity.

> If you don't enjoy it (the activity) you basically won't do it more. . . . Say you are doing a sport, and you aren't enjoying it, you won't work as hard at it. So that could relate to not doing it much. . . . If I really didn't enjoy it, I really wouldn't go do it.

Becki liked several things about tap dance. "I just like the sound of the shoe and how I can actually do it." Jenny liked a lot of particular things about going out for track. "I enjoyed it the whole season that it lasted." She talked about the importance of liking a type of PA as basic to the intention to do that PA.

> When you are doing something that you don't like, you usually don't want to continue with it. That is how I am. If you don't really enjoy it, then you are not going to want to learn more. You are going to want to try something else or try some other things.

In contrast, Joy did not speak about preferring one PA over another. She said, "I have always been really energetic. Since I was a little kid, I like to do different things (referring to physical activities). I like to try out new things, because I am all about new things."

Feeling pressure to be active. Of the 10 girls, 6 related feeling some type of pressure to be active, especially from parents. Amanda shared the only noteworthy example of sibling influence, an indirect pressure due to her younger sister's extensive involvement in sports.

> I kind of do look up to my sister (who was 2 years younger), because she is always so physically active, and she's always happy. So I think that if I started exercising, I'd feel better about myself. Then I will be happy, and I will be able to get along with her better.

Although a few girls imposed pressure on themselves, none felt direct pressure from their friends to be active. However, Sara implied a perceiving indirect pressure to engage in PA from particular peers, the "better people," on her team.

> [Do you know why you like being part of a team?] You have the better people to help motivate you. It makes you feel like, 'I have to do this for the team. I can't like just let the team down.' If you are by yourself, I feel more like, it's just myself.

Sara felt pressure to be active, generally, from "people." "Sometimes I feel people are going to think that I am a lazy person if I don't really do things." She was active, in part, to counteract that possibility. However, when asked if they felt pressure to be active, several girls related that they were unsure, and Becki denied it, saying, "I just enjoy it."

Feeling pressure from my parents to be active. As noted earlier, Melanie did not like walking with her mom, because her mother expected her to walk 3 miles in 30 minutes just as she was doing. Melanie said, "My mom has kept on telling me that I am kind of overweight." Her mother had encouraged her to be active to help with her weight. Melanie indicated that she felt some pressure to increase her PA for that reason. She also felt pressure from her mom to engage in activity more often. "Whenever I do try to be physically active, (her mom) says (something) that sounds like to me that I am not being physically active enough. I know that she means well, but sometimes I want her to shut up, because she will keep pushing me."

Eleanor felt pressure from her parents to be active at times. "He (dad) is like, 'Eleanor, go outside. Go outside and play basketball with your brother.' And I am like, 'Fine.'" Eleanor was "tolerable" to the idea of being active when her parents told her to do so. "Sometimes I am happy, but other times I am not." Eleanor thought that she would be active despite her parents' pressure, but perhaps not as active.

Similarly, Melissa felt a great deal of pressure from her dad to be active. "My dad likes to exercise, so I feel that I should exercise when I am with him." She said that when they were biking, sometimes up to 7 miles at a time, "My dad will not let me stop until we are done." Samantha felt pressure to be active, because her parents expected it of all their children.

> My parents are always on my sister's case, because all she really does is go on her phone and text people all the time. . . . We will be at home, because they (parents) are always out, and they will call and say, 'You guys should go for a run. It is really nice out.' Or, 'You guys should be in this sport, because you get a lot of exercise.'

Realizing that I put pressure on myself to be active. However, Samantha did not need her parents to tell her to be active. "I guess I don't need to listen to them, because I am already motivating myself. It doesn't matter what they say or not." Indeed, of the 10 girls, 3 mentioned that they felt pressure from themselves to be active, including Melissa, who was not as enthused about running as her dad. "I kind of feel like I have to (be active) otherwise I am going to basically do nothing my whole life and sit around and eat. I have to work out because it seems important." Ellen was not quite sure if she felt pressure to be active.

> Maybe, not really, though. I think I maybe being pressured without knowing that I am being pressured, most likely by me. But I don't get pressured. People don't say, 'Oh you should go workout.' But I just feel pressure by myself. . . . Because I want to lose weight, and you lose weight by working out.

Having my own reasons for being active. As implied in Ellen's remarks above, particular things about each girl's life, including perceived pressure from parents or from themselves, were coupled with their own reasons for being active. Most of the girls spoke of more than one important personal reason for being active, as illustrated in the example at the end of this section. Accordingly, *Having My Own Reasons for Being Active* was a key contextual feature of the experience of PA for middle-school girls, related especially to the phenomenon of *Getting Up and Doing Something to Keep My Body Moving*. These eight

reasons are viewed as descriptors of that life-world feature: (a) *being healthy, staying healthy, or both,* (b) *looking healthy,* (c*) losing or maintaining weight*; (d) *feeling better or feeling better about myself,* (e) *having fun,* (f) *doing something with my time,* (g) *realizing that I have to be active in that situation,* and (h) *hoping to help my parent(s) become physically active*. With each descriptor, examples of life-world elements are given for specific girls.

Being healthy, staying healthy, or both. Five girls said they were being physically active to be healthy. Joy said, "I go for it (being active), because I think it is good for your health. . . . If you are lying down, and you're not doing anything, that is not really good for your health." Amanda was more focused on engaging in PA now to stay healthy in the future. "I'm trying to increase my chances for less cancer, possibly for less heart attack, and trying to maintain the healthiest life I can possibly for my age range now." Samantha was concerned about her present and future health. "I get the comfort of knowing that I am healthy, and that I am going to stay healthy and pretty throughout my whole life if I can keep it up."

Looking healthy. Samantha also talked about wanting to look healthy as a reason for engaging in PA. "I think health comes before skinny, though, because that is really what I am aiming for. The skinny thing isn't as important to me as being toned and . . . muscular." Joy placed less value on wanting to look healthy as a reason for PA.

> Some people can be super-duper skinny and be healthy or unhealthy. Or you can be a little overweight and that is still healthy, because if you are still getting exercise, that is healthy. So it (being unhealthy) is not really a look. It is all based on if you are exercising and eating healthy and stuff like that.

Losing or maintaining weight. In addition to Ellen, three girls said that losing weight was one reason they were engaging in PA. Melanie was trying to lose weight, also.

> I am trying to lose these pounds to get the perfect swimsuit body for Mt. Olympus. It is coming up June 5th, so I am kind of slacking at that. But I have a theory. When we got my swimsuit, I was really chunky. I am like, 'Oh my God, I look terrible in this.' My mom

> is like, 'You look so pretty.' So I am like, 'Fine, get it.' And then the top was starting to feel loose and so were the shorts. And I am like, 'Yes.' So I am thinking that if I keep on this path, slowly losing the excess body fat, I will become great (she poses with her head to the side and her biceps flexed).

Amanda had increased her PA so that she could lose one pants-size.

> Right now my doctor would say that I am overweight by a couple pounds. So I am trying to become the average for the state, because my parents kind of feel like I should be there right now, so I feel like I should be there. So now I am trying to work to meet their expectations and my own.

Whereas the other girls spoke of losing weight as a reason for PA, Eleanor talked about maintaining her weight. “If you get enough (PA), you don’t get fat.”

> When you are fat, you look kind of ugly. No offense to fat people, but I just don’t really want to get fat. I wouldn’t be fun. I feel like it would be awkward if I got really fat, and I wouldn’t fit into most of my clothes anymore.

Feeling better or feeling better about myself. Of the 10 girls, 4 mentioned that feeling better, especially in an emotional sense, was a reason for being active. Amanda realized that being active was a way to get rid of bad moods:

> Usually I only go on the (stationary) bike when I am in a bad mood. This is something I just noticed recently. I feel like it gets away my bad moods and helps me become more better [sic] with my anger management, because I have these really bad mood swings. (Before she rides the bike), I guess that I am usually mad, and I have a problem. But at the end, I feel . . . more calm, and I am more ready to be open and go about fixing it.

Samantha also had “anger issues,” and she had started running as a way to control her anger.

> Before I really started running, I had really bad anger issues. I would faint because I would get so angry. My parents got me into running cross-country. Well, no, I just

wanted to be in cross-country, so my parents began motivating me even more to start running. So that really took away most of the fainting.

In talking about her reasons for engaging in PA, Sara elaborated on her definition of a "lazy person." "It's someone who doesn't do much. They just sit around most of the time and sleep a lot more than normal. . . . You are not going to get exercise." When I asked for an example of a lazy person, she chuckled and replied, "Me." Sara had reasons for wanting to get up and keep moving. She was being active, in part, to deal with the feeling that she was a "lazy" person. Finally, Melissa noted that being active was a way to feel better. "You feel better about yourself, because you are more fit and active and healthy."

Having fun. Although all girls talked about having fun while engaging in some form of PA, only two girls directly said that having fun was a reason for being active. Samantha said, "Whenever I have time, I put on my shoes and go for a run, because it is fun. I find joy in it." She danced at home because "it's fun and it's an expression. . . . It is the only reason I do it (to have fun)." When I asked Jenny about her reasons for ice-skating, she replied, "I think having fun is sort of what I am trying to do. When you are having fun when you exercise, it just makes it more fun. You don't have to always sit there and do push-ups." Beyond having fun while doing the PA, Jenny talked about an added benefit of being involved in an extracurricular sport. She had the chance to travel with the school track team. "I think it is fun to travel to (a town) and see what you can do."

Doing something with my time. As noted earlier in this section, Amanda was doing PA to have fun and to occupy her time. Samantha was the only other girl who expressly said that PA was "something to do." She said, "In the summer I am usually always bored, and I don't do anything, so I train. I do hill workouts and speed workouts. It is something to do." Melissa talked about playing volleyball on the school team. "I find it fun. It gives me something to do besides sitting home watching TV. . . . PA makes it so that you can do more. Sitting around is just boring. You actually have fun doing other stuff."

Realizing that I have to be active in that situation. Ellen was the only girl who spoke about being required to be active in a certain situation, which for her, was gym class. "I don't like working out in front of people, unless it is gym class. I still don't like it, but I have to do it."

Hoping to help my parent(s) become physically active. In contrast to the other seven reasons for engaging in PA, which pertained to the girls themselves, two girls also talked about engaging in PA to help a parent or parents. Amanda shared this reflection:

> My legal dad, he adopted me a couple years ago, he and his family have short lifespans. I'm hoping that by being physically active, I inspire him to become physically active so he might have a chance for a lot longer lifespan.

Amanda was pleased that she had been successful. "They (her parents) go for their walks every night. My dad has to stay healthy with the new semi-(driver) laws. I would say they are getting better about being active. . . . They have even come with me on walks."

An exemplar of multiple reasons for being active. Like Amanda, Ellen was hoping to help a parent achieve a goal. "She (her mom) has this 5K run that she is going to do. But it is a mud run, so she has to get in shape. I said I would be her 'workout buddy'." However, with regard to her reasons for engaging in PA, there was more to the story. As a 7th grader, Ellen she wanted to lose weight before she went to high school. "I really want to lose weight, and you do that by PA or not eating as much. So it (walking with her mom) is a good way to lose weight, and I want to lose weight." When I asked why it was important for her to lose weight, she replied, "I don't like my weight." She brought up the topic of weight at both interviews; she was the only girl who became emotional when talking about it. At the second interview, she said that she and her mom were not walking as much as they had been. When I asked what would change for her if she got enough PA, she replied:

> I would lose weight, and I would feel better about myself because I was losing weight. And that would make me feel good about myself. I think I would be a happier person and perky more often than I am.

Ellen had a variety of related reasons for an intention – to get up and get her body moving.

Getting up and doing something to keep my body moving. This was viewed as the companion phenomenon of the two life-world features previously discussed (*Realizing That Certain Things in My Life Influence How Physically Active I* Am and *Having My Own Reasons for Being Active*). The girls were trying to get up and do something to keep their bodies moving. To do so, they engaged in a great variety of physical activities. Data about their intentions with regard to these activities are organized in a two-level framework: first, where the activity took place and second, with whom it occurred. Accordingly, there were three components of this phenomenon: (a) *doing something active at school;* (b) *doing something active outside;* and (c) *doing something active inside*. As each component is described, examples of pertinent intentions are presented. Those unique intentions are detailed in terms of with whom the girls engaged in the activities, whether alone or with another person or persons.

Doing something active at school. The school setting offered opportunities for the girls to get up and get their bodies moving. They could complete a required activity, select an option in the context of a required activity, or take part in a purely optional activity.

Doing something active at school that is required. The girls were required to take gym class. Joy said, “I have gym every other day. Like day 1, day 2, I have it on day 2.” She was one of the girls who considered her gym activity to be part of her PA. “We have 45 minutes in gym . . . every other day. So I know that I am getting my exercise for that day.” Gym included structured activities like dodge-ball and running, as well as skateboard and volleyball “units.” Although most data about required school activities pertained to gym class, Eleanor and Jenny spoke about getting up and keeping their bodies moving just to get to class. Eleanor said, “Technically, I am physically active, because I have to walk to my classes everywhere. Some of them are upstairs, and some are downstairs with the smart kids.”

Choosing a built-in option for a required activity at school. Some required school activities had built-in options. On occasion in gym, students could choose from several types of

PA. Jenny noted, “During gym when we have nothing to do, me and my friends will do some back-bends, flip-overs, cartwheels, and hand-stands.” Joy shared similar data. “Some days we will have gym, and you will either be able to play a game or go to the fitness room. And then I will choose the fitness room.” At one school, daily noon recess was required, with options for activities. Ellen talked one such activity that was “not really like physical activity.”

> We like to run around during recess and go up to random people and say random things, which is very odd, but. And we like to just run around and be crazy, running around circles around each other and screaming at each other. But that is not really like physical activity. We will be jumping up and down and moving around and stuff. Often it involves one of us chasing a different one.

Doing something active at school that is optional. Of the 10 girls, 5 said they were part of an organized sports team like volleyball, offered as an option through school. Samantha said, “I am on the 4x100 team for track. That is the fastest people on the team. I am also the starter, so that means that I am (the) second-(fastest runner). That is pretty awesome.” Taking part in such sports was an option, but for Jenny, being in track also had built-in options:

> I really like the events that they have. It is not like a regular basketball team or soccer team where you are sticking with that. With track, you can kind of change it up. You can do the mile at one meet, and at the next meet you can do hurdles.

Although most data pertained to optional sports activities, Eleanor engaged in PA by taking part in school plays. “Oh, I love to act. Does acting count (as PA)? Because I do (school) plays, and there is a lot of dancing involved. And so, I love to do that.”

Doing something active outside. The girls emphasized that they were getting up and doing something outside to keep their bodies moving. Amanda noted, “I always thought it was kind of fun to go around and play outside. I feel comfortable outside, like a lot (except in) . . . winter, because it’s always so cold.” Melissa had similar thoughts. “I think it's more fun to exercise outside, because indoors doesn't offer you as much space to do as much.”

The girls mentioned a variety of activities including swimming, riding scooters, playing tetherball, raking leaves, making snowmen, making snow forts, walking, playing basketball, and riding bikes. The girls were active outdoors by themselves, with a friend or friends, with a family member, or with both friends and family. Because there were more data about doing something active outside than any other component phenomenon, I present an introductory exemplar about the most common activity, bike-riding.

Exemplar: Bike-riding. Of the 10 girls, 8 mentioned they rode a bike outdoors. There were data about riding a bike alone, riding with friends, and ridings with family. The girls rode bikes for different reasons. Sara said, “Sometimes I just ride for fun, but not too often.” Typically, she rode it to fulfill an obligation. “After school I walk my neighbor's dog, and I always ride my bike to her house because she lives toward the end of the road.” Melissa thought of biking as a good option for keeping her body moving. “I don't like running, so I don't have to run that way. I can kind of run around the block, or I can bike. So it is kind of an option.” Joy offered a different reason for biking. “Sometimes my friends and I like to go places that are too far to walk. We like to ride bikes so we can get there faster.”

Whereas a few girls rode their bikes alone, most rode with other people. Joy said, “I barely ever ride my bike alone.” She chose to ride with others, “because I get kind of bored and I don' think it is as much fun. It is always fun to have someone to talk to. I don't like being alone.” Although Melanie said that her mom had been riding a bike lately, they seldom rode together. Instead, Melanie most often rode with her cousin. Becki and Melissa also rode bikes with family but emphasized safety concerns. Becki lived in the country on a “busy” road without sidewalks. She rode bikes with her brothers. “I can’t go by myself yet because my mom said that there are cars.” Melissa rode bikes on busy roads with her dad and her brother. She enjoyed riding with them, knowing that she would “get bored being out there by myself.” However, riding with her family also helped Melissa to deal with the cars. “I don't like when they (cars) come anywhere near me. I feel like they notice us more because there are more people.”

Doing something active outside by myself. Some girls kept their bodies moving by doing something active outside on their own, including biking, walking, horseback riding, and running. Melanie had to walk her steers and feed them. She described what it was like to feed them.

> I have to fill up these two 5-gallon buckets, because that is all we have. Then I have to carry them to the back manger, and then I dump both of them in there, take them back, re-fill them up and give them to my front three ones (steers). Then I will turn off the water, depending on how high it is between there. But it is really weird because this one time, I came home, and the water was bone-dry. I had to wait down there for like an hour for it to fill up, because it is like a 180-gallon tank.

Melanie cared for her steers as part of her daily routine at home. In contrast, Ellen went to summer camp and did a unique activity. "I horseback ride for a week; it is 2 hours every day."

A few girls chose to run by themselves outside. Samantha kept her body moving through her long-distance running which she preferred to do alone instead of with friends.

> I am afraid that they are just not going to finish, and then I am going to have to walk with them back to their house. That will take time out of my run. Then I will have to go all over again. It is just time-consuming.

Doing something active outside with a friend. Samantha did mention an occasion when she ran with a friend. "She died half-way. Yeah. And then she jumped into a pool somewhere." Other girls related more successful episodes of outdoor PA with friends. Eleanor talked about a neighborhood friend who went to a different school:

> I love to be outside, and that (being with her friend) makes me want to be outside more. I don't really get to see her as often now during the school year, because she has school and she has dance. If I am going to see her, we ride our bikes when we can. It is just really fun to be around my friends and run around and get fit.

By practicing volleyball with friends, Becki was getting up and doing something to keep her body moving. "We go to this (bar), because my mom used to play volleyball (there). It is kind of at this bar, but they have this volleyball thing. So we usually, I practice there."

Doing something active outside with a family member. Girls were active outside with family member(s) in different ways, including walking, playing basketball, riding bikes, loading the wood-burner, and doing yard work. Joy kept her body moving by doing yard work with her parents. "We usually pick up sticks so my dad can mow the lawn. We try to rearrange the garden, or we pick weeds. We pick up apples (windfalls from their tree)." Eleanor often played basketball with her dad and younger brothers. "My brother Mitch, I always guard him, because I am not that good, and he is not that good. But I am better than him significantly."

Both Ellen and Melanie walked with their mothers, but they viewed the experience differently. Ellen and her mom had walked together daily for the past few weeks. Referring to herself as her mom's "workout buddy," she said:

> I like talking with Mom, which you can talk while you are walking, unlike when you are doing a really hard work-out, because then you are breathing heavily, and you can't talk. . . . I like spending time with her, because she is my mom, and she is awesome. I like walking with her, because then we have some time to just talk about whatever we want.

In contrast, Melanie viewed walking with her mom as "terrible." "She will walk 3 miles in 30 minutes, and we have to go back and forth in 15 minutes, which is terrible."

> She will be like, 'Come on Melanie. We can do it.' And I am like, 'Mom, I am in flip-flops. I can't walk as fast as you.' And she is like, 'Oh, you are just being a lazy bum.' And I am like, 'I am not being a lazy bum. I just don't want to apply myself to walk that fast.' She is like, 'Lazy.' I am like, 'I am not.'

However, although Melanie did not enjoy that sort of walk with her mom, she said this to say about an outdoor activity she did enjoy with her mom. "I do a little hiking over the summer, if my mom's boss is not being a big jerk and gives her the day off."

Doing something active outside with a family member and friend. Joy was the only girl who talked about being active outside with family and friends, making snowmen, shoveling, making forts, and riding bikes. "I like to ride around town with my brothers. Me and my friends like to ride around in a circle, while my (younger) brother throws balls at us. It is just fun." She also described a game that she enjoyed playing outdoors with her brother, cousins, and friends.

> Me and my brother and some friends, we have this game kind of like dodge-ball. People go up against the garage. One person has the ball. You have to try to hit them and move out of the way so you don't get hit. If you get hit, you have to go, and you are it.

Joy emphasized that running was basic to the games she played with family and friends.

> Like tetherball, you have to run in certain places to get the ball. And in the dodge-ball game, you have to run so that you don't get hit by the ball and so that you can hit somebody. We play tag and hide-and-go-seek a lot, and that takes a lot of running.

Doing something outside either alone or with a family member. Several girls talked about activities that they did alone sometimes and on occasion with someone else, especially a sibling. Amanda talked about walking the block in her subdivision; these data reveal several different intentions for walking, intentions that varied when she was alone or with her sister.

> Sometimes I am sightseeing for different seasons, because they bring different views. Other times I go, and my sister and I pick up trash. It is kind of seasonal; like in spring and summer, I take out my camera with me, and I take pictures as I walk.

Melanie liked to hike. "I like to see nature and the outdoors. I get to see the little bunnies." But there were problems with hiking, when she was alone and when she was with her little sister.

> I hate when I am wearing iPods and hiking because first of all, I don't hear the cars coming because there is no sidewalk where I live. It is just a road, and that is it. And then second of all, it is because I like to hear the nature. And third of all, if my sister falls off the bike and cries, I will have to tend to her, which really sucks.

Doing something active inside. Although most data pertained to outdoor activities, some girls were physically active inside their homes, dancing, riding a work-out bike, lifting weights, or playing pool. They were active by themselves or with a friend or family member.

Doing something active inside by myself. Eleanor, Sara, and Amanda ran on treadmills in their basements. Becki practiced tap dance. "I turn on a song in my room and just do it with my bare feet and practice." Jenny said, "I dance basically just at home, really. And at all the dances, I always dance. And all the shows I watch are about dance. My life really isn't consumed with dance as much as it sounds."

Doing something active inside with someone else. Of the 5 girls who talked about engaging in PA inside, only 2 talked about doing so with a friend or acquaintance. Jenny said, ""Me and my best friend would put on music on YouTube and would dance in front of the mirror and the giant window." Becki liked her tap-dance class, as well as her solitary practices, even if the other people were not her friends. "Sometimes I like being by myself because I have my space. But I kind of like doing it with other people, so not really by myself."

Four girls talked about being physically active with a sibling or siblings in the basement. Samantha and her older sister did "cardio and . . . boxing kind of stuff." Amanda explained:

> We have a bike, one of those ones that stays in place downstairs. Sometimes my (younger) sister will be walking, and I'll be on the bike. We will time ourselves to see how long we can stay at the same pace. We kind of incorporate it into a game.

When I asked Eleanor what else she did downstairs besides running on the treadmill, she said: "I play ping-pong and pool. Our TV is downstairs. And sometimes my brothers wrestle down there and push me down. Sometimes my brothers hurt me down there, but I tattle on them."

Set Two: Context and Experience

The second set has one contextual feature and one phenomenon. An integral relationship was perceived between this feature, *Explaining What It Is Like for Me While I Am Being Active,* and this phenomenon, *Striving to Meet my Own Goals in Physical Activity*. For

instance, Melanie explained what it was like to be physically active and how those perceptions influenced one of her goals pertaining to PA. When she was in grade school, "I would literally have to stop and walk for a little bit" instead of running the required three laps. With her gym teacher's support, she got to the point where she could run the three laps.

> I would start out running and have a brisk jog. I could beat the fastest runner for 3 seconds before she was past me. That would feel great, like, 'I am at the top of the world.' I felt really happy that I was able to do that. It made me feel like I was special.

Explaining what it is like for me while I am being active. I asked each girl what the words "physical activity" meant to her. Their direct responses to that question are cited in Table 3 (see p. 108), incorporated as appropriate in reporting these findings, and considered in the Discussion.

Table 3

What the Words "Physical Activity" Meant to Each Participant

Participant	Interview Question and Response
Amanda	[Tell me what the words 'physical activity' mean to you.] Physical activity to me would mean like working. And like kind of being like in motion where it's hard. Like where you eventually work up a sweat and like you're getting a good workout, you know. Like you're tried. But then you feel really good about yourself because you accomplished something.
Becki	[Tell me what the words 'physical activity' mean to you.] (She hesitates.) It's something that makes you tired when you do it, and it is like, physical. [Are you able to think of a different word other than physical to tell me what the words 'physical activity' mean to you?] Ah. (Sighs. long pause).
Eleanor	[Tell me what the words 'physical activity' mean to you.] Exercising and being fit. [So being fit, tell me more about that.] Well, being fit is when you get enough exercise, and you eat right amounts of food.
Melanie	[Tell me what the words 'physical activity' mean to you.] Physical activity means to me gym. (She is very firm in her statement.) That is, you have to have to get up and do all this running and jogging and all that stuff. It's like those commercials that say, 'Get up and play an hour a day,' or whatever. That is what physical activity kind of means to me. It's like getting up and doing something out of your home, and stop being a lazy bum.
Melissa	[Tell me what the words 'physical activity' mean to you.] The first thing that comes to mind is sports. I would say sports.
Sara	[What do the words 'physical activity' mean to you?] Anything that makes you, anything that is active that you're doing, that gets your blood pressure up or

	something like that.
Jenny	Tell me what the words 'physical activity' mean to you.] I guess just getting up and doing anything that, you know, just move around. Like walking or jogging, riding a bike or something like that. Just anything that involves getting up and you know, just moving around.
Joy	[Tell me what the words 'physical activity' mean to you.] Physical activity to me means that you are breathing really heavy, and you are, I guess improving how strong and how toned you get. Physical activity, to me, you also have to be having fun. I don't get how you can be physically active without fun. I don't know how that would work.
Ellen	[Tell me what the words 'physical activity' mean to you.] Doing something where you are moving around and like, getting your heart rate accelerated. Like running or lifting weights or walking a lot or, stuff like that. [So, moving around. What does that mean to you?] You really can't just be like sitting there. You have to be moving around and not just a little, like rocking back and forth. You have to be like really moving.
Samantha	[Tell me what the words 'physical activity' mean to you.] Getting up, getting active. Starting to work a sweat and work hard (pause). Not just like walking, well, I guess walking (long pause). Not for me. [So walking is not work for you?] Yes. [Explain that more to me.] Walking is like just casual, and it is just, you do it anyways. It is just human nature. But running and jumping and sprinting and swimming, that just doesn't come as easily. So you got to work to do it.

In addition to talking about what the words “physical activity” meant to them, some girls reflected on what it was like for them while they were engaged in PA. This life-world feature had two parts or descriptors: (a) *understanding what has to happen for an activity to really be physical activity* and (b) *recognizing a certain feeling associated with being active*. Sara shared data that illustrates each descriptor in turn. First, she realized that while being active, she would have to get sweaty and deal with ponytail problems; these were predictable accompaniments of engaging in PA.

> I don’t like to look all sweaty. But I can’t really help that. My hair . . . always falls out of my ponytail. I keep having to re-do it, because it keeps falling down.

When I asked how it made her feel when she was playing volleyball, she replied: “It makes me feel better about myself, because I know that I am not very active very often. So when I am actually doing something, it feels like I'm good. [You’re good?] Like, I feel good about myself.”

Understanding what has to happen for an activity to really be physical activity. All 10 girls realized that PA had certain characteristics compared to activity in general. However, their ideas about the characteristics of PA varied.

Realizing that working hard is part of being active. Like Sara, who realized that she would have to sweat to be really active (as detailed above, in the introduction for this feature), Becki said: “Me and my brother, the harder we work, we sweat more. But if you don't work that hard, nothing really happens.” Samantha also realized that she had to work at being active. “You can’t be physically active by just sitting down or doing nothing. You have to work up a sweat and just work harder and harder and harder and harder each time.” Similarly, Melissa said, “I know that going up hills makes heavy breathing when I am bike-riding.” Likewise, Becki said, “I think it makes me feel good when I am out of breath because I know that I worked hard.”

In contrast, Amanda explained what it was like when she found that she could not work as hard as she had in the past during a particular type of PA. For some time, she had been taking part in her younger sister’s basketball practices to help out. However, she said:

> I tried last week, and my body couldn't handle it, and I was really sick afterward. So I decided right now to stay out of her activities until I know I can handle it. [What do you mean that your body was really sick after it?] I was almost to the stage where I was throwing up. I was having a fever, and my body just did not like it at all. [Why do you think that was?] I think that with her, since they were 5th graders, I might have pushed my limit a little bit too much, because they do a lot running with basketball. It's kind of a physical sport, and I don't think I was quite ready for it as much as I thought I was.

Amanda and Sara spoke of bodily signs of working hard, but Eleanor was monitoring the degree of her activity in a different way. I asked what changes she noticed when she was active.

> You burn calories. I know that, because when I go on the treadmill, I turn it because it has different types of screens. . . . So I go to the one that has everything, so I can see how many calories that I burn and everything.

Sara, Amanda, and Eleanor referred to working hard physically as a part of PA, but Becki referred to the mental work associated with learning the moves in tap dance.

> When I went the first couple weeks, I didn't really like it. But now I really like it. [Why didn't you like it at first?] I just thought it would be too hard. But then after doing it more, it got easier and easier. [What was too hard initially about it?] I don't know. Like the moves and stuff. [So, you didn't know how to do the moves, so it was challenging?] Yeah. [Was it challenging for you because it was hard physically for you, or that you didn't know how to do the moves?] More mentally.

Becki thought that the mental part of tap was "too hard" compared to the physical part.

Thinking that only certain types of activity count as "physical" activity. Of the 10 girls, 3 felt that a person had to engage in a certain type of PA to have it be considered PA. Only certain activities met their definitions of PA. Becki said, "Like right away when I hear 'PA,' I think of football because that is physical, like hands-on, kind of, soccer and almost every sport." "Drawing" was not a PA to her. To Samantha walking was not PA.

> Walking comes easy. I have done it since I was a kid, so everybody can. But I've learned that walking is just minor, and there are other things that you can do instead of walking that are even more active and can be even more fun.

Similarly, Melissa said: "I don't think of walking as that big of an exercise, because it is easy. . . . I don't feel like I have to do it. It feels like fun." But for Amanda, walking was PA.

> I think that it does (count as PA), because most of the time I am walking for a while where I actually start sweating. And I walk sometimes where I feel my muscles burning. So then yeah, I feel like I'm getting the exercise that I need.

Walking had certain characteristics, such as sweating, that Amanda linked with PA.

In comparison to walking, Melissa said, "I think more challenging stuff feels like exercise." She gave the example of bike-riding, explaining the challenges involved.

> I feel like I have to go fast enough, because I want to be ahead of everybody else. I feel like I have to be fast, and I have to make sure I get up the hills faster than everybody else and make sure that I am always in front.

For Melissa, an activity had to incorporate physical challenges to count as PA.

Realizing that physical activity involves meeting a time requirement. I asked each girl how much PA she thought she should get in a day. (I presented those data earlier, in the Overview of Participants.) In summary, most girls said 60 minutes; a few said 30 minutes. Ellen initially said 30 to 60 minutes, then 60 minutes. So I asked her to explain.

> In studies, they come up with that you should have an hour of PA every day. But 30 minutes, you could probably get away with. But like an hour and a half, it's a longer workout. It's probably better for you. You would have more time that you would be active and moving around, and that's better in most cases.

As Ellen talked, she raised her bar to 90 minutes, while viewing it as excessive in some cases.

> Like if someone had an eating disorder, and they never ate, and they also worked out for like a hour and a half every day. They would lose way too much weight, even if they were at a good weight. And so that would be bad because they could die then.

Several girls explained the sources of their information about how much time was enough time to do PA. When Amanda mentioned that "everyone tells you to do 60," I asked, "Who is everyone?" She replied, "It's on the TV a lot. It is parents and family and friends who are saying, 'Oh we should go be active this many minutes each day, healthy and active.'" In Eleanor's first interview, she said she had seen a TV commercial emphasizing the importance of doing 60 minutes of PA a day. At the second interview, I asked her if that commercial "had made a difference" in her PA.

> No, my gym teacher just told us, 'Do you know what to do for the commercials?' She was like, 'You are supposed to get 60 minutes of activity each day,' So then, she made us do all this stuff, and all this stuff that we didn't get done, she would want us to do at home. But she just reminded us every time we saw her, at gym, that we should be getting 60 minutes of PA a day. It doesn't really impact me. I try to get in as much as I can, really, or as much as I will tolerate.

As noted earlier, Eleanor said she was "active," with about 45 minutes of PA daily.

Recognizing a certain feeling associated with being active. Of the 10 girls, 3 talked about some physical and emotional feelings they had while being active. When Jenny was running track, she had "these really weird pains in my side, like air bubbles or whatever. That's what my sister used to call them." Samantha also talked about discomfort in her side but went on to talk about another phase, experiencing a "runner's high." "It is like when you run so much, and you stop feeling the pain of getting stitches in your sides, and then you just coast." To coast, for Samantha, was to no longer feel pain. "Then your mind just nonchalantly tells your body to just move, right-left-right-left-right-left." She also spoke about the physical effect of not being able to stop running. "You just keep on running and just can't stop. . . . Your mind does

not think about running, and your body does not think about running. It just thinks about – It doesn't think, I guess. It just does."

Conversely, Ellen explained how she knew she would feel if she actually had engaged in PA. She acknowledged that she did not get enough PA each day. She said she would know if she was getting enough PA every day if she was, "really, really, really tired."

> Let's say I was running for a long time, I wouldn't get a runner's high. But I would be really, really, really tired. I would probably go do something else, like ride a bike. And I would feel really, really, really tired. And I think the more tired you are and then the longer you do it, then the more likely it is to be good for you.

Striving to meet my own goals in physical activity. This phenomenon was related to the contextual feature I just described (*Explaining What It Is Like for Me While I Am Being* Active). While recognizing what it was like to *really* be physically active, several girls were striving to meet their own goals in PA, which I have captured in these four component phenomena: (a) *pushing myself to increase my time or distance*, (b) *building up my stamina or strength,* (c) *getting to the point where I can compete better*, and (d) *getting to the next level in that activity*. Most data excerpts pertaining to this phenomenon illustrated more than one component phenomenon; they were quite inter-related, as illustrated in this exemplar.

Samantha talked about running in track meets. "In track, you have to run really fast to even place, and that's really what you aim for at a meet. And so, you have to run like a bullet, and that's moving." She wanted to win races, so she set specific goals for conditioning. When she lost a race by 3 seconds, she worked harder so that she would not lose again. "I train harder and longer. I put more pick-ups in my runs. So instead of three 30-second pick-ups, I put five 20-second pick-ups." She was also influenced by news about a friend.

> Just today I heard that one of my friends was running 13 miles now. Now I am super jealous, and I am going to try to run 15 (miles). She is getting more than me, meaning that she might get a better place than me on the team. I got to do better.

Losing a race to a peer and finding out that a peer was out-doing her were two circumstances that increased Samantha's self-imposed pressure to improve. She was trying to push herself to increase her distance, in part to get to the point of being a better competitor with her peers.

Pushing myself to increase my time or distance. A few girls were striving to meet distinct goal related to their PA and pertaining to "time" (an amount of minutes in daily PA) or "distance" (in miles or to a specific location). Ellen explained that when walking, she often was trying to reach a certain destination, to get "to a point."

> When we were walking, it was like 3 miles to one of our walking spots that I wanted to walk to. . . . Usually I have a good reason, like a point that I need to get to. I will try to get there, because I kind of have to, and then I can just keep pushing myself, because I am like, 'I got to get home,' or 'I got to finish this lap.

In that story, Ellen was rather vague about the distance she walked; however, she later referred again to walking "about 3 to 5 miles," so I asked her how she knew it was that far.

> We wear a pedometer, or one of us (does), because we walk about the same number of steps. It would be the same number of miles. It is like 2000 steps a mile, we found out online. So, we translate that. We're like a little above or a little below and just say, 'We walked 3 miles.'

At the first interview, Amanda said she was "striving for 60." "You should be active for 60 minutes a day or an hour." At the second interview, I asked how that was going. She said, "Well, I'm still working. So far I have gotten to 55 minutes. Sometime in the next couple of weeks, I should be able to hit my 60."

Building up my stamina or strength. When she was talking about "striving for 60," Amanda said, "I am trying to build up my stamina, so I can do the 60 minutes at once. It's kind of a personal goal. I want to get better and better and better."

Joy was trying to build up her arm strength to do flips in the pool like her friends did.

> I want a lot of arm strength, because in the summer we try to do front flips and back flips into the pool at my aunt's. . . . I will try, and everyone else can do it except for me. I will try, and then I will fall. It is very painful (She giggled a lot). I can't do any of the flips, because I don't have enough arm strength. So that is what I am really trying.

This interview took place in the spring, but Joy was already preparing ahead for summer. She was trying to gain more arm strength by lifting weights in the school's fitness room. As was mentioned in Set One, Joy elected to go to the fitness room for an optional activity in gym class. She did so, because she was striving to meet her own goal in PA.

As a farm girl, it was really important to Melanie to become stronger. She appraised her current strength using a very specific indicator, her ability to do a certain chore with her dad.

> I live on a farm, and it is kind of pathetic when you can't lift up these logs. Sometimes in the winter, I will load the wood-burner with my dad. I will try to lift up logs with him so we can get done faster, 'cause it is really cold when you are just doing nothing out there. So I will do that, because almost all the girls at my school have legs like that thin. I am like, 'I could snap you like a twig.' [Is it important for you to have more strength than some of the other girls?] Yeah. It is very important to me, because if I don't have strength, I will be a weakling, (and) I will get picked on by my cousins, more and more, and then my self-confidence drops. I don't like my self-confidence to be down here (puts her hand near her stomach). I like it to be way up there (puts her hand above her head).

Getting to the point where I can compete better. Four girls, including Amanda, were striving to reach the point of being able to compete with others in a certain PA.

> (I want to) be able to get more endurance and stamina to be able to compete with my sister, because right now she can out-do me in everything. . . . My mom wants us to go out and run around the block. But since she (the sister) is younger (in 5th grade) and more fit than I am, she can go farther than I can. I want to catch up to her, so that I am not holding her back when we are running. It's kind of like a game we play together.

When asked if it was important for her to be able to compete with her sister, she replied:

> Yes, because she gets a lot of attention, and I'm looking up to her. I feel kind of like I'm on the sidelines with my family, because everybody goes and asks her how she's doing. I'm kind of like second best. I know that I'm the oldest too, and that is normal. But I feel that is happening more usually than not.

Melissa had several PA goals in relation to basketball. She said, “I practice basketball at open gym. In gym class, I try to work my hardest and make sure I win.”

Getting to the next level in that activity. Some girls offered general data pertaining to this component phenomenon, such as trying to ride their bikes faster. Melissa talked about wanting to get to the next level, and she did so in relation to two activities. First, in addition to wanting to win during gym class, as noted above, she wanted to improve her basketball skills to achieve a longer-term goal in relation to playing for a school team. “I want to be one of the better 'B' team basketball players next year or a low 'A' team player.” Melissa also she was “trying to be able to run the 5K at Summerfest (with her dad). I want to actually make sure that I run that.” That is, she wanted to train to the point of being able to run the whole race.

Melissa’s data about getting to the next level with her running were similar to the example Becki gave as she explained what it was like to working hard at her tap dancing. When I asked what working hard meant to her she said, “So basically, I did my best. Just like (pause), I went out of my box more. Say you are running and you just walk because you don't want to run. But you should because you are just trying.” Later she affirmed that to step out of her box meant that she was going to work harder to get to the next level in her tap dancing.

Set Three: Context and Experience

The third set consists of two contextual features and one phenomenon. An integral relationship was perceived between the features, *Realizing How Things Change for Me When I Have Been Active* and *Realizing That Things Get in My Way of Being Physically Active,* and this phenomenon, *Making Physical Activity Fit My Life.* As with the other sets, experience was

nested in context. For example, Melanie spoke about coming a long way in regards to her PA. When she was younger, she was not able to complete the running requirements in PE class without walking. Having to stop running and walk make Melanie feel ashamed because, "I was the only one that had to stop and walk for a few minutes besides a few of my friends. I felt awkward." Melanie pushed herself to her limits in 5th and 6th grade so she would not feel left out. However,

> I realized that whenever I do (push myself to the limits), I become sweaty. Because we do not change clothes, my clothes would be all sweaty, and I would smell. I am like, 'Melanie, you idiot. Why would you do that so you can smell horrible for the rest of the day?' So my aunt bought me this thing of perfume. So when I was there (in gym class), I would put it on my hands. I was this little lotion perfume stuff, so I would smell good.

The contextual facets of this situation pertain to Melanie's realization that being sweaty after gym was getting in the way of taking part in gym class. She was able to make PA fit her life, to be more active in gym, by applying lotion after gym to avoid "smell[ing] horrible."

Realizing how things change for me when I have been active. Of the 10 girls, 9 realized that things changed for them when they had been engaging in PA. A few girls shared realizations about just one change, while others reported multiple changes, both objective and subjective. I view those changes as contextual facets of the experience of PA, as these descriptors of life-world: (a) *realizing how my weight is affected because I have been active*, (b) *having more energy and endurance because I have been active*, (c) *having had a painful injury because I was active*, and (d) *feeling better about myself because I have been active*. As well as experiencing a change herself, Amanda was the only girl who said that others had told her that she seemed different due to being more active.

> My cousins have noticed that I'm physically and emotionally healthier, and that I'm not as tired, and I am happy all the time. They commented on that, and it made me feel

> even better that they have been noticing. . . . It made me feel proud of myself, too, that I have made it to where it is noticeable now without coming out and saying it directly.

Realizing how my weight is affected because I have been active. Of the 10 girls, 7 recognized that their weight was affected, either decreased or maintained, due to being active. With regard to weight loss due to more PA, Melissa was the most vocal participant.

> Whenever I put on my pants, I always take my thumb and do this (inserts thumb into her front pocket and moves it back and forth). At the beginning of the year when I got these (jeans), I was like this big (shows example with her hands by her hips), and now they are loose on me. So I am so happy! . . . I don't pay attention to scales, because it is just a number. You can go on one scale, and you can be 175, and you can go on another and be 165. It just depends. What really matters is these jean sizes because right now, I am rockin' them. I can totally pull off these pair of pants. . . . Then I saw that my leather boots, that I could finally fit my pinkie in there. I was really happy. I'm like, 'Yes.'

Samantha realized that she had maintained a healthy weight due to engaging in PA. "I am not gaining that much weight, and I am keeping it under control. I am not going to be morbidly obese when I grow up." She wanted to avoid that. "I am stuck in a wheelchair (if I were morbidly obese), and people have to wheel me around, and people will stare at me. Then I will just be huge."

Having more energy, endurance, and strength because I have been active. Several girls, including Amanda, spoke about being less tired during the day due to their PA.

> I notice that in the mornings, I'm tending to be not as tired. I wake up, and I'm ready for the day. Then I notice that through getting enough exercise, I've started to eat breakfast again. I stopped a couple years ago; I just didn't have enough time. So I've actually started eating breakfast again, and I feel like I have a better mood throughout the day.

After doing PA, Sara said she was more awake, felt stronger, and was able to "finish the day."

> I am able to finish the day without being so tired and pass out at the bed at the end of the day. I feel stronger almost. I feel more active and more awake when I am at school. Like when you walk up and down the stairs all day, you don't get as tired as easily.

Jenny felt that she was able to sleep better after she had been active during the day.

> It helps me sleep. I try to go to bed around 9. But a lot of times if you are not physically active usually a lot during the day, at least 60 minutes a day, it makes it harder to fall asleep. Which that does apply to me; I usually can't fall asleep. But after track, I just come home, I'll do whatever, shower. Then I will be ready to go to bed, and I can be more ready for the next day. I am not as tired and dreary, and I can get up and shower in the morning, do everything that I want to do, and I'll have all my stuff. I'll remember to eat breakfast and just be ready to go.

A few girls, including Amana, noticed increased endurance when they had been active.

> I know that I'm getting enough activity when I notice that I can go a longer time. When I started on the treadmill, I noticed that I had to stop every 5 minutes to catch my breath again. Now I notice I can go for 15 to almost 20 minutes without really bending over and breathing hard. So when I can see the improvement throughout the week or throughout a couple weeks, then I know I'm getting enough.

As noted earlier, Melissa had increased her PA and was "losing pant sizes." She explained the connection she saw between losing weight and being better able to engage in PA. "I started to realize that I weigh less, and that I can run a little bit longer without collapsing. But I don't collapse, I just get really short of breath."

Having had a painful injury because I was active. Samantha had recently pulled a tendon in her leg and could not run in two track races. "It (pulled leg tendon) kind of got in the way (of being active)." Joy had a recent injury from swimming.

> I am not that graceful, and I have a tendency to run into things. We were swimming in the lake, and I hit my toe on a rock, and it really hurt. I haven't been able to run around as much because my toe hurts, and I think I actually broke it. Oh, my gosh, it still hurts.

Feeling better about myself because I have been active. A few girls spoke about feeling better as a sign they experienced because they were physically active. Some remarks about "feeling better" were very vague. For example, Samantha said, "I feel better . . . happier," when she was active. Of the girls, Amanda spoke most about feeling better as a sign of being active. Amanda had residual pain from an appendectomy at age 5. Each time that she engaged in PA, she had pain due to "stretching" of the scar tissue. "It hurts a lot. In the end, I feel better about myself because I know that next time I will be able to go longer and then longer and longer." The more active she was the less pain that she experienced. She also spoke about feeling better due to exercising with her sister and enjoying each other more.

> I've been doing the same exercise, and my sister sometimes joins in with me. We have a better understanding of each other, so we started getting along a little bit more. It makes my parents happy because we are not fighting as much. It's kind of a chain-reaction of happiness.

Realizing that things get in my way of being physically active. All 10 girls spoke of their realization that certain facets of their lives got in their way of being active. There were three major descriptors of this life-world feature: (a) *realizing that things about me can get in my way of being active*, (b) *realizing that things going on around me can make it harder for me to be active*, and (c) *knowing what I am up against when it comes to being more active.*

Because scholars have used the word "barrier" (Pender et al., 2012; Robbins, 2003) to characterize factors that can adversely affect PA, I asked each girl to tell me what the word "barrier" meant to her, after I had already asked her to explain what things got in her way of being active. Each girl's response to that question is cited in Table 4 (see p. 123). Although some girls began to use the word "barrier" after I introduced it to them, none of the girls

spontaneously used the word before I mentioned it. That is, they all used words other than "barrier" when they initially talked about the things that got in their way with regard to PA. I will explore the implications of that circumstance (as well as the implications of the girls' definitions of the term "barrier") in the Discussion, along with the findings presented below.

To introduce the feature, realizing that things get in my way of being active, I provide a case-study of Melissa, a 7th grader, who talked about her prior involvement in track. Several things about her had gotten in the way of continuing it; she simply did not like it, and she had felt afraid to fail. Things going on around her were problems, too – things that she could not control.

> In 5th grade track, I lost my breath, so I did not like doing that. I felt like I had to be in front of other people, and I had to win. And if I didn't, I felt like I wasn't supposed to do that stuff. I had 3rd place in the mile, and that was the last place you could get. I felt like I shouldn't have ran that, but I had to. I felt like I should have done something easier, but I didn't have a choice. . . . I didn't do track in 6th grade, because I did not like that. In 7th grade, I just didn't think of it.

In view of that personal history, Melissa said, "I don't like running at all. I don't think that I could actually ever like it." Nonetheless, as noted earlier, she was planning to participate in a 5K event with her dad and brother. When I asked about her reason for doing that, she said, "My dad is making me." When I asked if she would still compete in the 5k if her dad had not made her do it, she replied, "I probably would, but I probably would not run it. I would probably walk." In part, the context of Melissa's experience of PA could be characterized as knowing what I am up against when it comes to being more active. At her dad's behest, she had to train in a sport that she did not really enjoy. She was striving to meet a goal in PA that was not fully her own.

Table 4

What the Word "Barrier" Meant to Each Participant

Participant	Interview Question and Response
Amanda	[Tell me what the word "barrier" means to you.] A barrier - I automatically think of as a wall like something that stops you; that prevents you from going on. So it's like my sister's basketball. It is sometimes… it is a barrier to my exercise because I can't always go outside. If it is winter, I'm most likely not going to go outside and walk around as much as I want to or something like that.
Becki	[Tell me what the word "barrier" means to you.] Barrier? I have no clue. [Have you ever heard the word used before?] I think so. [Does something come to your mind?] Oh yeah, something in your way of doing something.
Eleanor	[Tell me what the word "barrier" means to you?] Something that stops you; like prevents.
Melanie	[Tell me what the word "barrier" means to you?] It sounds like to me something that I have to push down in order to succeed. So the next barrier, I will have to push that down. It is like an obstacle that you have to jump over. [Do you think you are able to jump over the obstacle?] Sometimes yes and sometimes it will take me awhile to jump over the obstacle, but I will pass it.
Melissa	[Tell me what the word "barrier" means to you.] Something that gets in the way. [Can you tell me more?] Like a block. Something that like prevents you from doing something.
Sara	[Tell me what the word "barrier" means to you?] Something that holds you back from achieving your goal. [How does it hold you back?] It is something that's (pause) like, something that is too hard for you. Like if you set your goal to high,

	well then it would be a barrier because you can't achieve that. Or if it is something like you are going to a party and there is going to be lots of food and lots of junk food like chips and cake and stuff. And you just eat a whole lot of that. Then that's going to be a barrier because the next day you're probably gonna feel sick from eating so much and not going to be able to do that.
Jenny	Tell me what the word "barrier" means to you.] It means something that is in your way. Something that is blocking your or just stopping you from doing something.
Joy	[Tell me what the word "barrier" means to you?] Something that sets you back from doing something you want to do. [Is it just for PA?] Not always. I guess it could be with anything.
Ellen	[Tell me what the word "barrier" means to you.] It is something that keeps you from letting you do something or like getting somewhere. It could be physical or mental. If somebody had a disability, they would have barriers. Like if they lost a leg, they would not be able to exercise as well - even if they did get a prosthetic leg because it would not work as well. But it could also be something mental. Like, I don't' know. I can't think of one. But it is something that keeps you from doing something.
Samantha	[Tell me what the word "barrier" means to you?] Something that holds you back. [Can you give me an example of a barrier?] Like with PA? [Sure.] Well, injuries, family, academics, your own mind set. [Your own mind set; can you explain that more to me?] Well, if you don't want to come out of your comfort zone, then you're stuck in your own barriers. I don't know how to explain it now. You have to set in your mind to run further, to jump, or to fly, like in pole vaulting. If you are not comfortable with that, you are stuck in your barriers.

Realizing that things about me can get in my way of being active. All 10 girls mentioned at least one thing about themselves that they viewed as getting in their way of being active. There were seven elements of this life-world descriptor: (a) *having to do things that get in my way of being active*, (b) *having things I would like to do instead of being active*, (c) *having habits that get in my way of being active*, (d) *realizing that I do not like certain ways of being active*, (e) *having health issues that influence how active I can be*, (f) *realizing that the day's events and my mood can influence how active I want to be*, and (g) *being afraid to fail at doing a physical activity*.

Having to do things that get in my way of being active. Of the 10 girls, 6 mentioned they were required to do things that got in their way of being active. School work was the most common required activity mentioned by 5 of the 6 girls. Sara said, "I take pride in my school work and that always does come first." She made sure her homework was done before she did PA. Ellen also prioritized homework as more important than being active. "You need to get good grades to be able to do everything else. Otherwise you won't be able to do anything. You need to get all your homework caught up." As noted earlier, Amanda had a "workout bike" downstairs. "I'll go on that maybe twice a week for 10 to 15 minutes sometimes. It kind of depends on how much homework I get."

Eleanor explained that her opportunities to do PA varied with the day of the week, based on school-related scholastic activities. "I have forensics after school on Tuesdays. So after that, I am only able to play (do PA) for a little bit. Then I have to do my homework, I have to eat dinner and get ready for bed." Joy was one of the girls who said they were too "busy" to do much PA after school. "I have to come home and do my chores. We have plans a lot, so I am really busy." The girls had to fulfill these sorts of requirements, so they sometimes had to put off the PA. In contrast, there were other things that some girls would just rather do than PA.

Having things I would like to do instead of being active. Three girls felt they had something better to do with their time than to be active. Reading was Ellen's favorite thing to do, but at times when she was reading, she felt she should get up and do something physically active.

> I would be like, 'Let me finish this chapter.' But then I would get into the book so much that I don't see where it says the next chapter. So then I will be in the next chapter. I will be like, 'Isn't this chapter over already?' So then I will need to finish that chapter, and it just kind of goes on. Then I would be like, 'I don't want to do anything' (any PA). I just had to go learn all day and write things and be all concentrated. Now I just want to have some fun and do nothing, because I have been working all day.'

Melissa explained that although she wanted to get to a higher level in basketball (as previously explained), she did not want to "make enough time . . . to play basketball all the time."

> I am pretty sure that I cannot get to the best 'A' teams. . . . I guess I could if I tried, but I don't think I would make enough time to do all that. . . . I think I have time; I don't think I would make the time. I get distracted and don't want to play basketball all the time.

Finally, Joy explained that she had the option to do more PA at school after school, but that was not her preference. "After school I don't really go (to the fitness room), because I like to hang out with friends and walk around town."

Having habits that get in my way of being active. Of the 10 girls, 4 mentioned a certain lifestyle pattern or a habit that got in the way of being active. Jenny and Sara said that they often came home from school and watched TV for the rest of the evening. Melissa said, "I don't do a whole lot of stuff outside of school. I mainly sit at home when I am outside of school."

Whereas those data pertained to the school year, Eleanor talked about a summertime habit that she felt adversely affected her interest in PA.

> I might have woken up early, so I will go downstairs, and I will be able to watch TV for hours. Then my parents will say, 'It's time to go outside.' I'll be like (moans), because I have been watching TV all day. I am not really completely awake. . . . My brain is awake. . . . I can process what is happening on TV. But I don't want to go outside because the rest of me isn't really awake. So I don't want to play basketball. I will be wanting to sit. . . . I go outside, and then I will want to come in after 5 minutes. Or if it is really, really hot out, I won't want to be outside.

Realizing that I do not like certain ways of being active. A few girls simply did not like something about a particular PA. Ellen simply did not like PA, other than horseback riding. (Her opportunities to do that were limited, as explained later). Referring to other physical activities as a group, she said, "It is not very fun, and I like to do things that are fun, because everybody likes doing things that are fun. I don't have much ways to make it fun."

Sara and Melissa did not like a certain way of being active because they had difficulty breathing. Sara did not like to swim because she could not breathe. "I can't hold my breath very long, which swimming would help with that. I start to get short of breath real quickly, and then it slows me down because I can't breathe." As noted earlier, Melissa could not get enough breath when she was running; that was one reason she did not like running as an activity.

Having health issues that influence how active I can be. Five girls thought that a current or past health issue got in their way of being active. Amanda said, "Recently I have had a little bit of a cold, so I'm not able to go as far and as long because of my health." Amanda was the only girl who referred to a condition that she thought would be a "lifelong barrier." She had had an appendectomy at age 5. "During that time period, my scar tissue was forming. My doctor's always told me not to do anything, so I kind of stayed in that one position." She listened to that advice; she was inactive for some time. With regard to the physician's advice, she said:

> It was hard for me to accept, because I was always active. It was very hard for me. So then after I got used to it (being inactive), I got lazier and lazier and lazier. I noticed that my sister had so much energy, and I would always be tired. My mom would say it was because I was not being very active. So I tried becoming active again.

Nonetheless, becoming active again was no easy task for Amanda, as explained later in the findings about the phenomenon *making physical activity fit my life*.

Melanie said that being "heavier" made it harder for her to keep up with her cousins in PA. This issue, which she also characterized as one of "metabolism," was something she had in common with one cousin, as she shared in this compelling story.

> I am trying to not be a lazy bum. I want to actually keep up with my cousins. (They, she names four people) is active. Me and my cousin John are the two odd-balls, because we are heavier than them, not a whole lot. It hurts us, because it makes us feel bad inside, because we can't keep up with them. This one time, Johnny is like, 'How come we are bigger than the other people?' So I told him it is because of our metabolism, and it is not, like, not a very good metabolism. And he is like, 'Are we going to die because of that'? And I am like, 'Of course not, Sweetie.' And he is like, 'Okay.'

Realizing that the day's events and my mood can influence how active I want to be. Several girls talked about the extent to which the day's events, particularly at school, could influence their intentions to engage in PA later that day. Melanie realized that when she had a bad day at school, she would be more likely to do PA if she had planned to do so in advance.

> If I was going to track, I would probably be more likely to be physically active.
> And we usually do something that I am good at or trying to be better at, so it kind of takes my mind off some of the things.

Similarly, Jenny said that if things had not gone well at school, she was likely to come home and watch TV, if she had not already planned to do a PA like track after school. Perhaps, then, she

might do some dancing in the evening. Ellen said that her mood influenced her interest in doing PA.

> I think at times I'm more active than others because some days I am really blah and tired. But other days, I am bouncy and hyper, and I really want to do stuff, like where I am moving around. It just depends on what mood I am in.

When she was feeling "blah and tired," she was "more likely to sit around and play Solitaire" on her computer. On days that she had lots of energy, she was more likely to be physically active.

Although Jenny and Ellen talked about how a particular day's events could influence their activity later that day, Sara revealed that a key event on one day could affect engaging in PA for an extended period of time.

> Well, for a while a couple of weeks ago, I was running every day after school. I felt really good about myself. But then I just kind of stopped. One day I think I had something to do after school, and so then I didn't do it (run). Then I kind of broke the routine.

When Sara had a break in her routine with running, she found it hard to return to running.

Being afraid to fail at doing a physical activity. Of the 10 girls, 4 were afraid to fail when they were trying to do a PA. Becki said, "I don't want to fail at it (the PA). I want to try hard. But if I don't do it, I feel like I failed, like I didn't do it." Joy thought that failing at an activity would affect her future activities. "If I fail, then I will get frustrated with myself. I won't be motivated to try new things and get out there and do more." When I asked what failing meant, Joy said, "to not be able to do something even after you try your hardest."

Realizing that things going on around me can make it harder for me to be active. Eight girls spoke of things going on around them that could limit their PA. The three elements of this descriptor were: (a) *realizing that family members or peers say or do things that limit my physical activity*, (b) *feeling self-conscious when being active around people*, and (c) *being unable to control something that gets in my way of being physically active*.

Realizing that family members or peers say or do things that limit my physical activity. Of the 10 girls, 5 explained that words and actions of family members had been negative influences on their PA directly or on their opportunities to be physically active.

Four girls realized that their siblings' situations got in their way of being active. These influences ranged from temporary to more long-standing. For instance, Eleanor's brother had been "really sick (and) in the hospital." When he came home, she had to "stay inside with him when he had to be inside" while her parents were gone. However, he regained his health, and they resumed playing basketball on the driveway. Ellen had a more chronic concern with her brother. She liked to use the WiFit in the basement, but because her brother "is always there," she did not want to use it. Amanda's situation with regard to her sister was also longstanding.

> I tend not to (be involved on a sport teams), because my sister does basketball. That's almost as soon as school starts to as soon as school ends. She really likes it, so I try not to conflict with her schedule.

Later, when I asked Amanda what the word 'barrier' meant to her, she said, "I automatically think of as a wall, like something that stops you, that prevents you from going on. So it's like my sister's basketball." When I asked why her sister's basketball was a barrier, she replied, "I don't do as much activity, because I like to watch her play, and I like to watch her win." Finally, Joy gave the starkest example of ongoing, adverse sibling influence on PA.

> My older brother gets into a lot of trouble, and that sets me back from doing a lot of things. This one day when he was going crazy . . . , I had to stay inside, because my mom didn't want me to go anywhere, just in case he did something. Usually I can't really do anything, because we try to keep things closed, so it acts like we are not here.

Several girls said that a parent or parent's situation had adversely influenced their PA. Samantha had a prior experience with one activity (and her father's reaction to that activity) that

influenced her. She had tried basketball, but she had concluded that it was "good to watch and fun to fool around with, but it was not my forte. My dad always said that I wasn't that good at it, so I just kind of stuck to not being good at it." She decided to focus on running instead.

Several girls explained why they had chances to be more active with one parent than with another. Eleanor was active with her dad and brothers at home, but not with her mom.

> My dad is mainly home, and my mom works until 4:30 and normally gets home at 5:30 or 5:45. So I don't get as much PA with my mom. She likes to run, and I am not the fastest runner. I get side-aches, so I don't really like to run.

Melissa was not the only girl whose parents were divorced, but she was the only one to talk about differences in opportunities for PA at their homes. At her dad's home, she engaged in PA with her dad and brother. "We did a long bike ride here a while ago." She and her brother did less PA at their mom's house. "My mom does not really give us a lot of space to do stuff. She likes to be with us all the time in the house."

Finally, several girls talked about how a peer or peers had ridiculed them for engaging in PA or for their abilities in PA. When Amanda and her sister walked in the neighborhood, "(My friend's) older sister kept putting us down, because she was, 'Oh my goodness. You guys are so crazy to go out in that weather today and go walk around the block.' Eleanor explained what happened when she was playing basketball at school.

> We were playing four people on a team versus four people, me and Mary -- who is one of my friends -- Allan and David. I didn't really get passed to that much, so Mary told Allan to pass it to me. He did, and somebody intercepted it before I did. He said to Mary, 'See, that's what happens.' . . . It made me feel bad. . . . Because then I knew that I am not very good, and then it made me feel like I should not play on a team.

As explained later, Eleanor's intentions for *making physical activity fit my life* were greatly influenced by the fact that this situation occurred with a peer and that it occurred at school.

Feeling self-conscious when being active around people. Four girls talked about feeling "self-conscious" around "people" other than family and peers when being active. When Amanda said she was "self-conscious" while walking in certain places, I asked her to explain.

> I feel that some people are staring at me, and I am very self-conscious about how people view me. If they view me very good, than I feel very happy. But sometimes if they view me as a horrible person, than I feel kind of down.

That feeling limited or changed the girls' activity, as it did for Amanda, who wanted to "walk the block" in her neighborhood or while she was visiting Oshkosh for her sister's basketball games.

> One thing that I don't like as much is that when I ("walk the block"), I feel like I am getting looked at by a lot of people. Sometimes I wish they were not looking. I feel like they are staring at me. . . . Sometimes I am walking, and I notice that it is the same place where I feel uncomfortable. Then I may not walk there that day or walk at that place. I may go (walking) at home, or I may just walk on the treadmill. In Oshkosh a lot of people just turn their heads, and it feels uncomfortable. In Oshkosh I will walk around the school outside, because it is really nice up there. But I have kind of stopped, because a lot of people look at us and think that we are doing something wrong.

Although Amanda felt self-conscious while walking or running in her own neighborhood, Joy said she did "running around home" without that concern. However, Joy said, "I guess it is who I hang out with, because if I am being physically active, exercising around town, running (by herself), I feel like everyone is watching me. I don't like that feeling. I just feel weird about it."

Being unable to control something that gets in my way of being physically active. Of the 10 girls, 7 mentioned one or more factors they could not control that got in their way of being active. They referred to the season, the weather, the cost of an activity, the varying skill-levels of peers in a team sport, and menstruation.

For 5 girls, the winter season was problematic with regard to being active. Joy felt that being active outside in the cold could pose challenges, because one needs to be "in layers." Eleanor, Jenny, and Amanda said that winter was their most inactive season. Jenny's comment was typical. "Winter, I'm not at all physically active. I don't really do any sports, and I really don't do anything outside."

Several girls contrasted their chances to be active in winter with their opportunities to be active in other seasons. Melanie explained that this was the case for her on the farm.

> There is a huge difference, because in wintertime there is nothing that I get to do here (at home) besides housework. I am just smiling with enthusiasm, because that is all we do in winter. But in the summertime, there is more stuff. My dad is going to take me on a tractor-safety course, so I will be able to do more outside work, which will make him happy, because he won't have to pay so many people to do it.

Jenny had a similar view, but from the perspective of playing sports. "That (seasons other than winter) is when most sports are going on. It is warmer out, so it is not as cold, and you can run and ride your bike. You can do a lot more." Becki simply said, "In the winter, you cannot ride your bike." Conversely, Joy said that she rode her bike in the only summer:

> My parents think it is too dangerous, and so do I (riding in fall, winter, and spring). I am really clumsy. . . . Spring – there is a lot of muddles (she giggles) – puddles. In fall, we are usually raking or it's kind of cold, so we come in and eat or drink hot chocolate."

Amanda said that the day's weather affected the duration of her runs with her sister. "Our runs usually last 10 to 15 minutes. Sometimes we go farther on some days. Like last week, we went farther because it was nicer out. But this week we haven't been going as far."

For financial reasons two girls had to curtail participation in an activity they enjoyed. This was Ellen's reply to my first question in the first interview, "What activities do you do?"

> When it is possible, I like to horseback ride. . . . [Can you tell me more about horseback riding?] Well, I used to take riding lessons . . ., but we did not have enough money. . . . [How did you get started with that?] Mom got a garden plot at a farm, like outside of town, and they were friends with the owners of the horse farm. And I was one of those people that always liked horses. So they gave us a brochure for a horseback riding place. And so I rode, and I took riding lessons for a year or so . . . every week Wednesday. . . when I was 7 or 8, like a really long time ago. . . . Now it is just every summer for 2 weeks, summer camp.

Jenny explained why she had stopped ice-skating.

> I really ended up liking that (ice-skating), and I had stopped awhile back. I never went back because you have to work, your parents or guardian has to work 40 hours every couple weeks. And it costs to have your skates sharpened.

Jenny also shared some frustration associated with her observation that her peers had different levels of skills in volleyball; this was something she could not control.

> Where we are at now, the ball hardly volleys. It goes back and forth. One person serves, and the person misses. And then the next team serves and misses. It kind of gets boring sitting there. It is bad. It is not fun, I guess. It is not that challenging either. All you have to do is really just sit there.

With regard to being physically active, Jenny knew what she was up against in that situation.

Finally, Amanda was the only girl who said that her PA was affected "when the menstruation cycle comes around." "I find it harder to exercise because you are in more pain. So I may usually try not to count that towards my goals, since I can't always control it."

Knowing what I am up against when it comes to being more active. Several girls realized that they were up against something that made it more challenging for them to be active. There were two elements of this descriptor. The first was *realizing the downsides of*

being active. This descriptor emerged as I explored remarks that 4 girls made, asking them about any downsides of being active. They each related an issue of concern. Amanda said:

> Sometimes you can't do what you want to. Once in a while I might want to play on the computer a little bit longer, and I have to remind myself that I have to go walk to maintain my schedule. It seems like sometimes the days get shorter. You spend so much time doing that (being active) that you lose track of time.

Samantha had similar thoughts. "I don't get to spend as much time just hanging out or shopping. I love shopping. I never hang out with my friends. If I wasn't in track or cross-country, I would be able to do that more."

Melissa was the only girl whose data illustrated the second descriptor: *having to work at a goal for physical activity that is not really my goal*. With regard to achieving a goal in running, an activity she did not like, Melissa knew what she was up against. Those data were given in the introduction for this life-world feature (see page 41). However, despite that issue, Melissa, like the other girls, had found various ways to make PA fit her life.

Making physical activity fit my life. This phenomenon was viewed as the companion of the two life-world features discussed above, *Realizing How Things Change for Me When I Have Been Active* and *Realizing That Things Get in My Way of Being Physically Active.* There were two component phenomena: (a) *figuring out ways to be more active when things get in my way* and (b) *envisioning physical activity as part of my life in the future*. As each component phenomenon is described, examples of girls' unique intentions are presented.

Figuring out ways to be more active when things get in my way. Of the 10 girls, 9 related intentions to be active despite the fact that things in their lives made it more difficult for them to do so. There were eight intentions: (a) *creating a flexible schedule that includes physical activity*, (b) *making up the activity I missed*, (c) *deciding that I am okay with looking like the active girl that I am*, (d) *finding ways to make physical activity more fun*, (e) *working past the*

pain, (f) *choosing the best place to be active*, (g) sticking with *an activity instead of quitting or quitting too soon*, and (h) *going ahead with my physical activity even if peers think it is weird*.

Creating a flexible schedule that includes physical activity. Of the 10 girls, 5 explained that they were trying to create flexibility in their schedules to engage in PA despite having things they had to do, especially homework. Amanda said that she would start homework, do a PA, and finish homework. Samantha said, "I always get my work done first. If I don't get it all the way done, I'll just go for a run, real quick, and then I will come back home and finish up my work." Melissa was required to help with household chores. Although some chores involved PA, they got in her way of being active in other ways. She explained how she could create flexibility to allow time for "exercise."

> Normally I will try to get some of my chores done the day before. I know what I have to do the day before, so I try to get stuff done the day before so I can do more exercise the next day. Mondays I do most of my chores; then Tuesdays I'll do my exercise.

Making up the activity I missed. The girls also were trying to make PA fit their lives in relation to other things they had to do, like visiting a sick family member or adjusting to the schedule and activities of another family member. Amanda gave several examples that were similar and indicative of the intention, making up the activity I missed.

> My sister has a lot of activities going on right now. My grandma is in the hospital, so we go up and see her. That means that I don't have quite as much time to exercise as I normally do. So now that I have school off on Thursday, I will probably do more activities on those days (to) kind of make up for what I missed.

As noted earlier, Joy's PA after school was limited by her very busy schedule. When her extra obligations took up the rest of her day, she would come home and sleep. The next day, she did more PA to make up what she had missed.

Deciding that I am okay with looking like the active girl that I am. Of the 10 girls, 3 mentioned that sooner or later, they chose not to worry about what others thought of their appearance while they were exercising or later. They explained that even when they felt self-conscious about how they looked, they were trying not to let that bother them. Sara said this:

> I am self-conscious about things. But I keep telling myself that is really doesn't matter how I look at the time (while being active,) because I'm in the middle of doing something. So I just keep telling myself that is it okay. Who cares how I look right now?

Finding ways to make physical activity more fun. Four girls talked at length about overcoming their challenges to engaging in PA by purposefully making PA more fun. These were creative ways to combine PA with an activity that was fun to do. For example, Joy realized that even if her friends were not in the fitness room, she would enjoy lifting weights more if she listened to music. Joy emphasized that even if she did not totally like a particular PA, like a required activity at school, she would do it anyway. She would try to make that PA more fun, like push-ups in gym class.

> I think it is more fun to make things harder, because then it is just funnier and more fun. It was this push-up thing with a ball. If you put it (the ball) lower on the wall, then you do push-ups. Then you have to squat down, and then go back up, and keep repeating that. It is really hard and sometimes the ball will drop or fly away. You'll start hurting, and then you will drop it and the ball will hit you. It is just funny.

As noted earlier, Eleanor did not like to be active outdoors in the winter. She said she was more likely to use the treadmill in the winter, especially if she had a good book to read.

> It has a book holder, and it has something where you can plug in your iPod or MP3 player so you can listen to music, too. . . . It is motivation for me. I really want to read my book, but I also want to get exercise. So I'll go on the treadmill, and I will be able to read and walk or run. I usually run and go to 'incline 12,' which is like walking up a hill.

> It is on 1, and then it's on 12. It is like I am walking up a hill the whole time. Normally it doesn't take me that long to read most books, like 2 hours for a 200-page book. So I get a lot of exercise done on the treadmill.

Working past the pain. Of the 10 girls, 5 related an intention to work past the pain associated with an injury – an injury that in turn had affected their PA. As noted earlier, both Samantha and Joy had sustained injuries due to PA. Samantha explained how she was dealing with pain from the tendon she had pulled in her leg. "I probably shouldn't do this, but I kind of push it out of the way and just keep in mind that I am going to get better even if it does hurt a lot." I asked how she responded the next time she went out running after the injury. "I kind of regret it, but kind of not because I'm getting my run in. But it hurt, so I just kind of shut it up with ice." Likewise, Joy, who had injured her toe while swimming, said that it hurt to run, but she was taking her mom's advice "not to baby things." "I guess I just tried not to baby it so then I don't get in the routine." She still was able to be active in the fitness center at school. Jenny said she would continue running track despite having "air bubbles" in her side.

> I'll still keep going, if I have to at track. Like if we are running two laps around the track, I will be on a lap and a half, and I will get a side ache, so I will just keep going. Once I get around, I'll be like, 'Okay, I made it.' Then I can kind of relax a little.

While Becki acknowledged that she had minor aches from being active, her way of dealing with them was to continue being active. "Basically like my dad says, you just man-up. [What does that mean?] You just get over it. That was what I heard when I was little."

In the pertinent data above, girls spoke of their intentions to deal with short-term or situational things that got in their way of being active. In contrast, Amanda talked about her strategy of dealing with a situation that she thought she would face throughout her life. "My appendicitis is definitely a barrier for me. I'm always constantly trying to find a way to move around it." She did that by stretching out her abdomen near the surgical scar and pushing her

body to its limits. In these words, Amanda revealed an intention to engage in PA to the extent possible. "I try to just keep going as much as I can. If I can't do it, then I don't really worry about it, because I can just catch up." Amanda was trying to adjust her PA to fit her life. She was figuring out how to be more active despite her health problems.

Choosing the best place to be active. Two girls had realized that in a particular place, certain things were getting in their way of being as active as they wanted to be, so their intention was to be active in a different environment, where they were more likely to succeed. Eleanor realized that where she played basketball made a difference in her opportunities to take part. She played at home on the driveway instead of at school and had no plans to do otherwise.

> I don't really want to be on a team for my school or for other places. I would rather do it at home, because I can practice as much as I want. I play basketball games with my brothers, and I have fun, because it is not competitive. If I lose, I don't feel as bad as if I was playing on a team.

Her concern about losing as part of a team was due in part to the troubling experience she had when playing basketball at school with peers (previously described on p. XX). While playing ball with her family, Eleanor did not have that worry; she could have fun. She was figuring out a way to be active at home, getting around some things that had gotten in her way elsewhere.

Sticking with an activity instead of quitting or quitting too soon. Eleanor and Jenny required themselves to spend time or energy in a certain activity before deciding not to do it again. Eleanor said she would quit an activity only if she were "really, really horrible at it."

> Like only if I was failing at it, and I tried a bunch of times to try to get better and I still didn't get better. . . . I think 2 years seems like a good time to know that you practiced enough. Like if you practice for 2 years, and you still suck. [Is there anything about 2 years . . .?] No, it is just a lot of days.

Jenny said that she did not have an easy time of it when she went out for track at school.

> It wasn't actually that bad (but), like at the time it seemed pretty bad, when you are running 2 miles a day or a little more. But after that, you learn a lot of new things. So, it just kind of makes me proud that I stuck with it and didn't turn away when maybe I was not having a good day. Like, I've done some pretty bad runs with hurdles, but I still stuck with hurdles the whole time and tried to do my best.

Jenny was considering going out for cross-country despite thinking that it might not be much fun. She wanted to do it because she felt that it would be good exercise.

> I like to continue with things, and I don't like to stop right in the middle of something and then start something else. . . . If it was cross-country, and I just joined, if I didn't really give the sport the chance, then I would continue with it, even if I didn't enjoy it at first.

Going ahead with my physical activity even if peers think it is weird. As noted earlier, Amanda and her sister often took walks together in their neighborhood. When a friend's older sister derided them for walking, Amanda explained how she handled the problem.

> So like we would always say, 'Well, okay. If you think it is so weird, then you don't have to do it.' We kind of made it a presentation of why it is good for us and why it is bad for us if we don't do it. So we convinced her sister to come along with us for a while. [And how did that make you feel?] It made me feel really good that I was able to convince her (the friend's older) sister, and she is like a sophomore. So, I felt really good about myself.

Envisioning physical activity as part of my life in the future. I asked 8 girls whether they could see themselves as being active in the near future, in high school, at the age of a mom, and at the age of a grandma. (Amanda and Becki, who were interviewed before those questions were added to the revised interview guide, did not provide any relevant data spontaneously.) The 8 girls who responded shared a variety of interesting thoughts, as noted below. Of those girls, Melanie was the only one who spontaneously reported an intention to

reach a particular goal in PA by a certain age. Before asking about her future plans, I probed to learn more about her reasons for wanting to have more stamina.

> I could do a lot more stuff and take less breaks. [What kind of 'more stuff' would you be able to do if you had more stamina?]. I could ride my bike farther. I could um, like, run longer. [Do you see yourself trying to get more stamina?] I do. But I will do it in gradual steps. Like, by the time I am 20, I will be able to run like a mile and take only two breaks. So, that is kind of a goal I am shooting for.

Planning ahead for activities that I might do in the near future. Of the 10 girls, 5 spoke about the intention to be more active or active in a different way in the near future. Jenny was planning to join a dance team. Amanda intended to join the school basketball team. Becki was attending tap class once a week; she was excited because her mom had said that perhaps next year she could take it twice a week. Also, although Becki had enjoyed volleyball as a 5th grader through a league "at a bar," she did not go out for the school team in the 6th grade. "I wanted to take it, but my mom wanted me to get familiar with the school before me getting into volleyball. So, I am going to be taking it this year, and I can't wait!"

Although Ellen and Jenny wanted to resume horseback-riding lessons and ice-skating, respectively, they could not plan on it for financial reasons. When I asked Ellen if anything was getting in the way of resuming skating, she replied:

> Probably just the cost, because . . . I have so much stuff I need for school that costs money. . . . Constantly asking for money – that probably would be an issue.

As noted earlier, 5 girls emphasized that the winter season, something they could not control, got in their way of being active. However, Samantha's data are a counter-case. It was her specific intention to do a particular type of PA in the winter to prepare for fall and spring sports. "I am going to be in either track or soccer . . . . definitely and cross-country, too. I will be training in the winter, so that I have it (PA) all year."

Planning ahead for activities I might do in high school. Melissa saw herself as being active in high school, because, as she said, "I think that there are more sports." Sara said she would "probably" try out for the high school volleyball team. Samantha already had plans to take part in certain sports when she entered high school in the fall. "I already have some sports lined up, track, if I feel like pole-vaulting. That's a big thing. Otherwise it's going to be soccer. And then there is also cross-country and possibly basketball." As noted earlier, Ellen did not think of herself as physically active. When I asked if she thought she could be physically active, she replied. "I think if I put my mind to it, I could (be active)." She saw herself as being more active in high school than she had been in middle school. "I will probably walk home every day, unless it's really, really bad weather, like a tornado warning."

Seeing myself as being active at the age of a mom. Of the 8 girls, 6 saw themselves as being active when they were the age of a mom. Jenny, Joy, and Sara envisioned themselves in that situation because they would have kids. Joy saw being active as a mom as a way to encourage children to be active. "I will motivate my children to be healthy and to exercise a lot. If I am not doing it, they won't get motivated to do it. I will probably do a lot of stuff with them, too." Jenny had similar thoughts:

> I would probably encourage my kids to be active. I would be out there doing stuff with them, 'til they reach about this age (pointing to herself) or a little bit later – when they really think it is uncool to do stuff with their parents (she giggled).

Eleanor, Ellen, and Melissa spoke about roles they would have at the age of a mom as something that would factor into their ability to engage in PA. Eleanor and Ellen spoke about work. Eleanor thought that she might not have as much time to be active at that age, because her own mom worked a lot. Nonetheless, she saw her mom as being active. "She (Eleanor's mom) gets up really early and exercises, but then she normally gets to bed really late." She went on to say, "But once I get older, I will stay up later. So I will eventually adapt." Eleanor

thought she could “adapt” like her mom had done, when she got to that age. Ellen thought that her occupation would influence her need for additional PA. “Right now, I’m worrying about friends and homework, whereas in the future, I will be worrying about what job I get.” As “one of those people who always liked horses,” she hoped to work with animals on movie sets or to be an exotic animal trainer. She thought that if she worked with animals, she would get a lot more activity than if she worked at a desk job.

Melissa was the only girl who said she did not see herself as active at the age of a mom. Her vision of her potential future activity was consistent with her view of her current activity.

> Right now I don't do enough. I don't feel like I am going to do more. I mean I probably will, but right now I don't think that I am going to do more. . . . I will feel like there are other things to do, like work, and then being a mom.

Seeing myself as being active at the age of a grandma. Of the 8 girls, 4 said that they saw themselves as being active at the age of a grandma. This was Samantha’s response:

> Well, my dad's talked to me about this, actually. He said that he wants to see me in marathons when I am a grandma. I don't think that is going to happen. I think I'll just take up jogging still. . . . I might take up walking, but only when I am a grandma. . . . Maybe I won't be able to jog as much, ‘cause of frail bones and all that.

Joy was unsure if she would be active at the age of a grandma, because of her aging body. “I will be old. . . . Their joints hurt a lot. That is what I have heard.” Eleanor did not foresee herself as active at the age of a grandma, compared to her activity level earlier in her adult life.

> I would probably not be very active. I might take walks and stuff, but I would not be able to work with animals and much as I did, maybe like dogs and cats, but that is about it. I would not be as strong as I was, because I don't lift weights, so I would not be very strong once I got older. And I would not be able to exercise a lot. I would try, but probably would not succeed very well.

Melissa had different two responses to this question. At the first interview she replied, “I think that I would want to be, but I don't think that I would.” At the second interview, she said, “Maybe, because there is less stuff to focus on. You don't have a kid to watch over anymore.” Eleanor did not reply to this question, stating that she did not want to “think that far ahead.”

Set Four: Context and Experience

Nine girls were asked during the interviews if girls their age had any things that made it harder for them to be active (compared to boys), and eight girls were asked to provide advice to other girls their age with regard to being physically active. Those data, which are focused on “other girls” rather than the participants themselves, are both similar to and different from data reported in Set Three – data that pertained to the lives of the 10 girls in this study. Accordingly, Set Four was comprised of the life-world feature, *Realizing That Things Can Get in the Way of Being Active for Girls My age*, and the phenomenon, *Suggesting Ways That Girls My Age Could Be Active When Things Get in Their Way*.

Realizing that things can get in the way of being active for girls my age. Melanie explained that a friend was faced with a challenge that made it more difficult for her to be active.

> Her brother is in high school, and he will smoke. He had got this girl pregnant, and the baby died within a few weeks. It was really sad, and he broke up with her. She (Melanie’s friend) just feels really bad, because her dad and mom will try to keep that son in line, and they won’t give her attention. She just doesn’t know what to do, and then she will feel really sad and just doesn’t want to exercise.

Like Melanie, the other girls felt that girls their age could face a variety of things that would make it harder for them to be active. While Joy personally did not mention any things that made it more challenging for her, she said, “Every girl has a different life, so there are various barriers in everybody’s lives that keep them from doing physical activity things.” Amanda also talked about the potentially problematic influences of peers on activity for other girls.

> I think a lot of things make it harder for us (for girls to be active, compared to boys). Like friends and like the drama. Some kids get caught up in the drama, and they forget about looking after their own selves – aside from cleaning and cleansing, like being healthy and activeness. [What do you mean by 'the drama?'] Like (a 'friend'), she has changed a lot ever since she got a phone. She is always texting and is like, 'Oh, my goodness' a lot. So I think they really get caught up on all the other news about everybody else that they forget to be active themselves. . . . Sometimes people won't do it (be active) because they are like, 'Oh, no! That's weird. Nobody else is doing it. Why should I?' "
>
> Ellen explained that some girls were not active due to concerns about their appearance. They are like, 'I don't want to mess up my hair. So they won't exercise as much as they would because they are like, 'Oh man, I don't want to ruin my hair.' . . . They would probably want to go hang out with their friends instead of walking somewhere. They (the friends) might be like, 'I am going to take a walk.' And they would be like, 'Oh, no-no-no. You should stay for a while.' And they probably would.

Becki compared her own views on that issue to those of "a lot of girls" she knew.

> In our gym class a lot of girls don't want to do the stuff, because they are going to get all sweaty, and their hair is going to get all messed up. I don't really care about that kind of stuff, because my friends don't care what I look like.

Samantha had a specific example about a girl facing a barrier to being active:

> She really doesn't like her body. . . . She thinks she is too big. That she is too heavy and that she is overweight. . . . She keeps on complaining about it over and over. But she doesn't really want to do anything, because she thinks people are going to make fun of her and how she runs, or how she exercises, or what she looks like when she is exercising. And she doesn't like sweating. . . .

Ellen and Melanie thought that boys could adversely influence girls their age with regard to being active. Ellen said, "They (other girls) might spend time with their boyfriend and not have time to do other things." Melanie said, "Guys going 'Whoot, Whoot.' And saying, 'You look good. Shake what your mama gave you.' . . . They (the girls) would be like, 'Gosh, I am being ridiculed, because I am a girl.'

Samantha and Melanie thought that family members could get in the way of PA for girls their age. Samantha thought that inactive parents specifically were a barrier to girls being active, because the girl learns from her parents to be inactive. Melanie said that the parents of a friend were divorcing; she thought that was preventing her friend from being active.

A few girls said that for girls their age, some communication devices could get in the way of being physically active. Like Amanda, Ellen said that phones could be adverse influences.

> I think phones are a barrier because cell phones, they spend way too much time talking and texting. I went camping this weekend for Memorial Day and my friend was on the phone for an hour with her boyfriend. She is just sitting around for the whole hour just talking to him. I am like, 'Wow, this is a little bit too much time on the phone.'

Jenny said that laziness is probably the biggest challenge that most girls face.

> It is mostly just being lazy and not wanting to get up. 'Oh, my favorite show just come on TV,' or Facebook or Twitter. I think that is one of the major reasons why a lot of girls are not physically active. [Why would girls rather do those things than be active?] I think because it is just the getting up and moving is not a lot of people's thing. Why not just sit down, munch on your Doritos, and watch your favorite show?

Although most of the girls said that homework or school got in their way of being active in their own lives, Melissa was the only girl to mention that it could be problematic for other girls her age. Likewise, although most girls said that the winter season was a problem for them,

Amanda was the only girl who mentioned "the weather" it as a potential problem for other girls. "I know a lot of people who make up excuses like, 'It's too hot,' or, 'It's too cold.'

Thus, the participants mentioned quite a few problems that could adversely influence PA for girls their age – problems that could actually prevent a peer from engaging in PA. In contrast, Melanie talked about a situation that could arise for girls who were "super good . . . at sports."

> When you are physically active, like you are super good at being active, like at sports, there are these people who want you to join our team. 'No, join our team.' You will have to decide: 'Which team do I want to do? Do I want to join this team? Or do I want to join this team? I have heard bad things about this team, but I this team sounds really good. But that team has really cool uniforms.' You will be so confused.

Suggesting ways that other girls could be active when things get in their way. As noted earlier, I asked 8 girls what advice they could give for other girls who were facing problems like lack of time to be active or feeling self-conscious when being active.

Suggesting that girls focus on bettering themselves. Samantha was active despite being a bit self-conscious about her looks while she was active. This was her advice for other girls:

> You are exercising. You are burning off all that fat. Sweating is like fat crying – throwing that all away. So I guess in short, I should say that, 'Really you are just bettering yourself in both looks and in power.'

Suggesting that girls make time for physical activity. Of the 8 girls, 2 recommended that other girls should make time for PA. In fact, Melissa said that girls should make PA a priority.

> You have to make time for it, like you know that you have to do your homework. I guess PA is one of those things that you should feel like you have to do because it is important. Like being healthy and exercising is important, and it should be important in everyone's life.

Ellen suggested that girls make a schedule to help manage their time. For example, if they really want to play soccer but they still have to do their homework, a schedule would help them to do so. Ellen also suggested to plan ahead. "It would probably be a good idea to find out things that you are doing. Maybe if a friend wants to come over, have them ask you beforehand, so you have time to plan and get ready for that."

Suggesting that girls find ways to have fun with physical activity. Three girls advised that girls their age take part in an activity they enjoy. Melissa said, "If you are not interested in it, you will really not want to do it." Jenny had similar thoughts. "Just do something that you enjoy. If you are not enjoying it, then you are not going to have any fun." Jenny offered these suggestions about how to have fun with PA.

> Even if just exercising the littlest bit isn't your thing – walk! Just walk somewhere with your friends. Walk down to the park with a bunch of people. Do something that you think is fun. Or . . . activities that aren't so active, make them more active. Like if you are doing your homework, you could do it physically. You could use props and stuff. If you get really sick of your homework, you could just do some of it. Then after a while, just do whatever you enjoy for a little bit, and then do some more of it.

As noted earlier, Ellen really did not enjoy PA. While she did not think that other girls could do a lot to make being active more fun, she said that listening to music would help.

Suggesting that girls think about the benefits of being active. Samantha and Sara emphasized that other girls would find it beneficial to be active. When I asked Samantha what she would say to encourage other girls to run, she said, "It would be the runner's high again. It is just so awesome and amazing." She thought that everyone should experience it. She also said that girls need to realize that they would lose weight as a result of being active. "If she has troubles running because of body image – if she finds herself bigger or heavier, then it would just be better to motivate her with the fact of losing weight." Likewise, Sara also thought that

girls should think about the physical effects of being active, explaining how they could actually use those to their advantage in starting to exercise even if they felt "too tired" to do it.

> If you exercise, normally since it gets your heart racing, it wakes you a lot more. So if you are too tired to exercise, just slowly start. Maybe start walking and slowly start running. That will wake you up, so then you won't be tired and so you can exercise.

Suggesting that other girls continue trying to be active. Three girls emphasized that to be physically active, other girls their age should start doing some kind of PA and keep trying to do the activity that they start. I asked Sara what could be done to encourage a girl to be active if she really is not that motivated. She replied: "When I set up goals, it usually motivated me to go get the goal. You could set them up a goal and achieve it and reward them when they are done." I also asked Sara what advice she would give a girl who was afraid to fail at doing an activity. "If you fail, it doesn't really matter as long as you keep trying to achieve the goal that you are trying to do. Even if you fail the first time, you should keep trying to achieve the goal." I continued, asking Sara what she would say to a girl her age who felt she had failed.

> Maybe then you should set a little bit of a smaller goal and keep working toward that. Once you finally achieve that, you can keep working toward the bigger goal. It might take a while, but as long as you keep trying for it, I think you are good.

Joy was in a routine of being active, and she offered that same advice to other girls her age.

> If you keep on staying like this (being active) -- If you start at a young age, then you will continue to be healthier as you grow older. So if you start right now, it will be easier as you get older. Then you won't have to pay for doctor bills.

Summary of Findings

In this chapter, I described the experience of being physically active for 10 middle-school girls, who, when completing standardized measures of PA and barriers to PA, had described themselves as active and as having barriers to PA. The girls' main intentions, illuminated in four

phenomena, were to get up and do something to keep their bodies moving, to strive to meet their own goals in physical activity, to make physical activity fit their lives, and to suggest how other girls could be active when things got in their way.

Certain personal-social factors basic to those key intentions were elaborated in the form of six features of life-world. Although the girls were realizing that a whole variety of things apart from themselves were influences on their PA, they also related perceptions about their own reasons for being active. They were also realizing what it was like to be active and explaining those feelings and physical changes. However, the girls were well aware that various things were impediments or at the least challenges to their opportunities to be physically active. Finally, they knew that other girls faced challenges to engaging in PA, challenges which in some cases, were quite complex. The phenomena and the contextual features were presented in sets to illustrate their relationships.

In the ensuing Discussion, findings are compared to the literature that was bracketed in Chapter Two. It is argued that findings present an alternative to the standard approach of focusing on barriers in efforts to increase PA among middle-school girls.

Chapter 5

Discussion

I conducted a phenomenological study designed to describe the experience of being physically active for middle-school girls who had previously reported at least an average level of physical activity (PA) and above-average barriers to PA on standardized measures of those variables. In earlier chapters, I presented the framework, method, and findings of that study. The main purpose of this chapter is to discuss the findings and compare them to the prior literature pertaining to PA in youth, specifically middle-school girls.

This study was designed to yield both the phenomena of the experience of being physically active for a particular group of middle-school girls and a description of the personal-social context of that experience. First, the synopsis of the study is reviewed. Then, the contextual features and the phenomena of the experience are compared to relevant literature. The implications of each major finding for practice, research, and policy are presented along with the discussion of that finding. In presenting implications of findings, I show that I have carried out the last step of Porter's (1998) descriptive phenomenological method: to determine uses for the findings. Next, I highlight the two main contributions of the study: (a) enhancing descriptive knowledge of the experience of interest and (b) enabling constructive critique of the construct of barriers to physical activity for middle-school girls. After discussing the limitations of the study, I draw conclusions about this dissertation research.

A Synopsis of the Study

I identified the need for a descriptive phenomenological research study to inform the science pertaining to middle-school girls' experience of being physically active. While the previous relevant research was focused on barriers to PA in middle-school girls, there were limitations with that research. Researchers had focused on developing their own constructs (such as levels of PA and barriers to PA), measured those constructs, and proposed or tested

interventions to enhance PA on those findings. Scholars have often tested the construct of perceived barriers to PA, whether or not they referred to the HPM (Pender, 1982, 1996), to another theory, or to no theory at all. Researchers have studied the barriers using quantitative as well as qualitative methodologies. Although the empirical validity of constructs is a critical parameter of sound research (Shadish et al., 2002), scholars have measured the construct of "barriers" without attending to construct validity.

One of the main reasons that I used a descriptive phenomenological method in this study was that, in its philosophical basis and methodological foci, it allows for consideration of two critical elements that quantitative methods cannot measure. First, it allows for a preliminary critical analysis of constructs used in previous research, such as barriers. Second, it allows for refinements of those constructs based on the findings and new ideas for empirical facets of experience that warrant further study (Porter, 1998). Although some prior qualitative studies were relevant to the experience of being physically active for middle-school girls, none of the methods used were purely descriptive. That is, none of the studies were focused on trying to capture what the experience was really like for the girls who were living it. In contrast, descriptive phenomenology aims at exploring the experience in everyday life (Porter, 1998). In the literature relevant to the girl's experience of being physically active there has not been another study using this method. For a variety of reasons, Porter's (1998) method was the approach of choice in this study.

I did a preliminary study to identify eligible volunteers for a descriptive phenomenological study of the experience of being physically active for middle-school girls. I wanted to recruit girls who reported both high levels of PA and high barriers to PA. I used the PAQ-C (Kowalski et al., 2004) and APAPBarriers scale (Robbins et al., 2008) to screen girls. Of the 302 girls screened, 277 were willing to participate in the interviews if they were eligible. However, only 7 girls met the original inclusion criteria, so those criteria were modified concurrently with

changing the description of the sample in the study purpose to this, middle-school girls who had reported at least an average level of PA and above-average barriers to PA on standardized measures of those variables. With the change in inclusion criteria, a total of 28 girls were eligible. The parents of 10 girls consented to participation, and each of those girls assented. I engaged in two in-depth interviews with each girl. Throughout the process, I engaged in each of the activities of Porter's (1998) descriptive phenomenological method. Using Porter's method enabled me to capture rich data and to elicit participants' insights about the experience.

I fulfilled the three aims of the study. I discerned each participant's intentions regarding the experience of being physically active (Aim 1) and explored personal-social factors that influenced her experience of being physically active (Aim 2). For each girl, I identified unique intentions and very particular facets of life-world that affected her experience. However, I compared and contrasted those individual data to discern the phenomena of the sample's experience of being physically active and the features that characterized the context of their experience as a whole (Aim 3). Six features of context and four phenomena that structured the experience were intuited, and I have summarized them in the ensuing paragraphs.

The Contextual Phenomena. The six contextual features represent the life-world circumstances in which the middle-school girls found themselves. The context of the experience was featured, in part, by *realizing the extent to which certain things in my life influence me to be more physically active*. Girls realized that a variety of things apart from themselves were influences on their PA. Although they acknowledged this, they also related perceptions about *having my own reasons for being active*. They were also realizing what it was like to be active and were explaining those feelings and physical changes. That is, the girls were *explaining what it is like for me while I am being active* and *realizing how things change for me when I have been active*. Yet, the girls recognized that they faced some challenges with being active; they were *realizing that things get in my way of being physically active*. Finally, the

girls acknowledged that they were not alone in facing issues that could influence being active. They were *realizing that things can get in the way of being active for girls my age.* These six features represent the personal-social context of the experience of being active for middle-school girls who had previously reported at least average levels of PA and above-average levels of barriers to PA on standardized measures of those variables.

The Phenomena of the Experience. The four phenomena are what the middle-school girls were trying to do with regard to their experience of being physically active. First, the girls were *getting up and doing something to keep my body moving.* They were trying to engage in different types of PA in different places with different people. Second, the girls were *striving to meet my own goals in physical activity*. Some intentions pertained to competing with other people; other intentions were focused on a personal goal – *pushing myself to increase my time or distance.* Despite reporting things that got in their way of being active, girls were *making physical activity fit my life.* That is, they were figuring out ways to be more active when things got in their way. The girls were trying to make PA a part of their life and adjusting things in their life or their perspective with regard to being physically active. Finally, the girls were *suggesting ways that girls my age could be active when things get in their way*. The girls were trying to provide recommendations that would help other girls their age be active.

Relationship between Findings and the Literature

In this section I compare the features of context and the phenomena of the experience of being physically active for middle-school girls who had previously reported both high levels of PA and high barriers to PA on standardized measures of those variables to the bracketed literature (Chapter 2) and to additional literature on PA in youth. I found similarities and differences between my findings and relevant literature. As presented in Chapter Four, I organized the findings as a series of four sets of contextual features and phenomena that were

fundamentally related to each other. I will follow that same pattern in this discussion, beginning each section with an overview of key findings for that set.

Findings of Set One Compared to the Literature

The first set was composed of two contextual features and one phenomenon. The two contextual features were *Realizing the Extent to Which Certain Things in My Life Influence Me to Be More Physically Active* and *Having My Own Reasons for Being Active.* Being in that situation, the girls' key intention (the phenomenon for the sample) was *Getting Up and Doing Something to Keep My Body Moving*.

Realizing the extent to which certain things in my life influence me to be more physically active. The girls spoke about many aspects of their lives that they considered as positive influences on their PA, especially other people. All 10 girls spoke of particular ways in which their friends were influences on their degree of PA, and 7 girls spoke about their families in this light. Other researchers have reported that other people influence youth PA. The role of friends was included in the qualitative work of Thompson et al. (2005). Friends were identified as "the things that help me to be physically active" (p. 427). The researchers described "friends" as the "second most dominant theme that influenced the leisure pursuit of the participants" (p. 431). According to Thompson et al. (2005), girls participated in PA with other peers their age, whereas their parents served in a support role relative to their PA. The girls who took part in that study said that parents "help me to be physically active" (p. 431), providing transportation or enrolling girls in particular activities.

Perhaps because I engaged in several interviews with each participant, my findings about the involvement of other people are richer and more complex than the peer-parent dichotomy in other studies. I discuss my findings pertaining to peers first.

All 10 girls talked about spoke of particular ways in which their friends were generally positive or negligible influences on their degree of PA (as well as more negative influences, to

be discussed later). The first of my five life-world descriptors, *knowing that my friends help me to be active*, is definitely akin to the finding of Thompson et al. (2005) pertaining to friends as "the things that help me to be physically active" (p. 427). However, the other four life-world descriptors show a considerable range of influences far beyond that basic notion.

First, for some girls, having friends around increased their confidence in doing a particular activity. The notion of a friend as a confidence-booster in a certain activity evokes a more specific, situation-focused sense of "help" from friends than is evident in other studies. In contrast, the other three descriptors revealed that the girls thought that they themselves were more important than friends as influences on their own PA. That is, life-world was characterized by *knowing that it is nice but not necessary to do PA with a friend, knowing that I do not need my friends to help me be active*, and *knowing that I am different from my friends when it comes to PA.* These findings are important, showing that researchers should explore girls' varied perceptions about the influence of friends on their PA, rather than simply assuming that "friends help" girls to be active.

As noted above, other scholars have focused on the influential role of parents with regard to girls' PA. However, I found a much broader influence that extended beyond parents to the family as a whole. Girls were *being influenced by my family to be more physically active*. All 10 girls mentioned various family members, not only parents, but also grandparents, aunts, cousins, and siblings as influences in their experience of being physically active. My findings reveal that researchers need to broaden the current emphasis on the role of parents in PA of middle-school girls and explore ways in which other family members are engaged.

That said, data from 7 girls in my study indicated that a parent was involved in their experience of PA. However, in contrast to Thompson et al. (2005), who simply asked participants if each parent "helps you to be physically active" (p. 427) and then characterized parental influence as "positive or negative" (p. 428), I gained a lot of very specific data about

how parents were involved. When it comes to planning family-focused interventions to improve activity among children, it is insufficient to think of parents in a general way as "role models" (Thompson et al., 2005, p. 423). It is essential to explore more deeply like I did, to find out, for instance, that several girls were directly engaging in PA with at least one parent. Researchers should further explore the nature and prevalence of parent-youth PA and its influence on the continuation of PA by girls after middle-school. However, in planning interventions, it is critical to assess changes in the nature and the degree of parental influence as girls get older. As Robbins et al. (2008) found, girls at ages 13 and 14 were less likely than 11 and 12-year-old girls to mention parents as supports in PA.

For some girls, the line between family influence and friend influence was somewhat blurred; they engaged in PA concurrently with siblings, for instance, and friends. Although one item on the APAPBenefits Scale (Robbins et al., 2008) is "spend time with family, friends, or team members" (p. 105), a response to such an item is only cursory and not illuminating with regard to the distinct or co-mingled roles of any of those groups, let alone individuals within each group. Furthermore, for some girls, the identity of the family as *an active family* was very important, such that being part of that family meant that the girl should be active, too. These findings are unique to the literature and really quite fascinating. In longitudinal studies, scholars should explore how the identity of a middle-school girl as part of an active family influences her experience of being physically active over time. I really enjoyed hearing the girls' stories about the different forms of PA they did with their siblings; in longitudinal studies, it would be interesting to explore how sets of siblings maintain or change their forms of PA over time.

The importance of a mutual relationship with someone else around PA was evident in my data. There were different types of mutual relationships. First, some girls were inviting friends to be active with them; their friends reciprocated the invitation. Second, some girls took part in certain organized physical activities with friends. Certain activities were not as much fun

without a friend there. Jenny would not have joined the volleyball team if her friends had not participated also. Finally, some girls had set up a special plan to do an activity with another person. The idea was to recognize each person's goal to be more active and to help each other achieve the goal. Ellen volunteered to be her mom's work-out buddy; she wanted to lose weight while helping her mom prepare for her 5K mud run. To my knowledge, other researchers have not identified these three different patterns of mutual relationships around PA.

Six girls in my study said that they felt pressure to be active from different sources, especially from parents and from themselves. However, no one indicated that they felt direct pressure from their friends to be active. This finding was somewhat unexpected, because at middle-school age, girls are immersed in a transitional time. They are experiencing the social and biological changes associated with puberty (http://www.aap.org=puberty) and often times have made a transition into a middle-school. As Robbins et al. (2008) learned, there is a shift in the perceived importance of parents versus peers as supports for PA during this time. Grieser et al. (2006) reported these data from a middle-school girl:

> [Without PA] I might get into bad stuff. . . . I wouldn't have anything to do, and I then would wanna go do something and my friends who, like peer pressure.
>
> When I'm doing sports, I have something to do besides smoke and drink (p. 5).

In contrast, the girls in my study did not talk about PA as a means to stay away from negative influences, like alcohol and drugs.

However, several girls explained that they felt pressure from other people (especially parents) to be active. Others talked about putting pressure on themselves to be more active, in one way or the other. These findings have a different character than the types of pressure that have surfaced in other studies. In their qualitative study Thompson et al. (2005) talked about societal pressures of "thinness" (p. 433) and body image as it related to participants' reasons for engaging in physical activity. Finally, in their qualitative study, Clark et al. (2011) referred to the

pressure that some girls felt during gym class. "Girls felt pressure to participate in appropriate feminine physical activities in physical education contexts" (p. 195). In contrast, girls in my study did not share such concerns. It is likely that girls in different settings perceive different sorts of pressures about being physically active. The individual variations in these pressures are an important consideration when planning interventions for any group of girls. The variation within my small sample on this issue is important, showing that researchers should explore girls' perceptions of pressure and how, if it does, relate to PA. The distinction I found between pressure from others and pressure from oneself is also a potential issue to explore in other studies. It would be interesting to explore whether girls who feel troubled about the extent of parental pressure are more likely than other girls to limit their involvement in PA later. Likewise, it would be interesting to explore whether middle-school girls who are already putting pressure on themselves to engage in PA continue that pattern as they grow older.

Having my own reasons for being active. Kientzler (1999 directly explored the question of "girls' knowledge about the benefits of physical activity" (p. 396) by asking girls to agree or disagree with 12 statements about PA, although the word "benefit" was not incorporated in those statements. Kientzler (1999) also gave girls a written survey, beginning with this "open-ended" (p. 396) question: "Why do you participate in physical activity?" (p. 396). In contrast to Kientzler (1999), I did not assume that the girls would associate physical activity with specific benefits. I asked this question: "What do you get out of being physically active?" As I engaged in dialogue with the girls about their activities, I realized that they were spontaneously reporting a variety of personal reasons for being active in general and for engaging in particular activities.

My method and my findings are also quite different from the approach and results of scholars who have used quantitative methods to study PA in youth. Quantitative researchers have purportedly measured the construct of *benefits of being active* (Grieser et al., 2006;

Robbins et al., 2008), although they did not ask specifically about benefits. For instance, Robbins et al. (2008) scale used the phrase, “A major reason for being physically active or exercising for me is to . . . “ (p. 103). Grieser et al. (2006) conducted semi-structured interviews with the question, “What good things would happen to you if you got more physical activity” (p. 43). Yet, they reported findings in terms of “benefits” of physical activity, raising questions about the empirical validity of their work.

In contrast to the findings of Robbins et al. (2009) (ranges and means of specific benefits reported by a sample) and those of Kientzler (1999) (percentages of girls who wrote certain reasons on their surveys), my findings reveal the individuality of each girl and her unique life situation. This finding has clear implications; prior to encouraging a particular girl to be more active, practitioners should explore her reasons for being active at present and use those reasons as springboards for further interventions. I categorized the girls’ reasons for being active as eight different life-world descriptors, and I discuss them next.

In my study, a focus on health was foremost among the girls’ reasons for being active. They wanted to be healthy, to stay healthy, or to look healthy. Other researchers have referred to the importance of being “healthy” (Kientzler, 1999, p. 399) or “healthier (Robbins et al., 2008, p. 169). When Robbins et al. (2009) measured the benefits of being active, among other things, using the APAPBarriers Scale (Robbins et al., 2008), the top benefit of being active for girls was to “take care of myself, stay in shape, and be healthier” (p. 169). Grieser et al. (2006) found that the most important perceived benefit of being active for girls was to “stay in shape” (p. 44). However, my work extends and enhances previous findings; the girls referred not only to current health but somewhat surprisingly, to their future health. It is interesting that despite the lack of evidence that PA in youth is a significant predictor of health during adulthood (Gordon-Larsen, Nelson, & Popkin, 2004), those girls did see a connection between engaging in PA now and being healthier later. Perhaps they are onto something! If other middle-school girls have similar

views, they might be especially amenable to interventions to enhance their PA levels. School health educators should find creative ways to teach youngsters about the connections between (a) PA in youth and PA in adulthood and (b) PA in adulthood and better health in adulthood.

The girls in my study also focused on losing or maintaining weight as a reason for being active. That general finding is not new to the literature. While Robbins et al. (2008) did not include weight control as a specific benefit of PA in the Adolescent PA Perceived Benefits Scale, respondents could write in a benefit. When Robbins et al. (2009) used the scale, the most common write-in benefit of PA was "weight control" (p. 169), reported only by the girls.

However, my findings pertaining to weight as a reason for PA revealed nuances other scholars have not mentioned. In their interpretive descriptive study with sixth-grade girls, Clark et al. (2011) said that girls had "definite ideas about the link between physical activity and body size" (p. 203). Yet they reported only one relevant data excerpt; one participant said that "you don't gain much weight with it [physical activity]" (p. 203). Clark et al. used those data in presenting the second of their two themes, "taking care of myself, inside and out" (p. 203). Although the girls in my study referred to losing or maintaining weight as a reason for PA, data revealed a multifaceted relationship among engaging in PA, losing or maintaining weight, and fitting into a piece of clothing like a swimsuit (Melanie) or a pair of pants (Amanda).

Furthermore, although researchers commonly refer to "body image" when characterizing "facilitators or motivators of physical activity" (Taylor et al. 1999, p. 76), it is not a term that middle-school girls are likely to use. Instead, in this study, Melanie used the term, "the perfect swimsuit body," while explaining that losing weight was a reason to engage in PA. With regard to the experience of PA for middle-school girls, this connection among PA, weight control, and wearing a particular item or items of clothing is unique to this study. In intervention studies, this finding suggests the need to focus on reasons for engaging in PA that are associated not just

with weight but with how girls view the link between their weight and being able to wear the clothes they have and the clothes they would like to have.

Furthermore, in addition to the distinctions between my findings and those of other scholars pertaining to "weight," I handled data collection on this topic in a different way. In contrast to Taylor et al. (1999), who directly asked, "Do you do any special activities to lose weight or stay in shape?" (p. 72), I did not directly ask the girls about weight as a reason for engaging in PA. If a girl mentioned the word "weight," then I explored it more. Approaching the issue as Taylor et al. (1999) did is potentially problematic from the standpoint of validity, because participants in that study might not have mentioned the issue without the interviewer's prompt. There are also potential ethical issues associated with raising the issue of weight, as a girl could wonder whether the interviewer views her as someone who has a weight problem.

Feeling better or feeling better about oneself was another reason that the girls in this study gave for being active. When Thompson et al. (2005) asked the girls, "Why do you do the physical activities you do?" (p. 433), one participant concluded by responding, "It just makes you feel good about yourself" (p. 433). Those data were viewed as evidence of the link between PA and health. In this study, there were more data about the emotional sense in which girls talked about feeling better as a reason for being active – viewing PA as a way to get rid of bad moods (Amanda), to deal with anger issues (Samantha), or to overcome a bad feeling about oneself (Sara). Although I found these variations in my work, further studies should be done to explore the nuances of girls' statements that feeling better about oneself is a reason to engage in PA. However, these data suggest that engaging in PA could be an important way for middle-school girls to develop a pattern of dealing with everyday stressors as they grow older.

Another reason that the girls in this study gave for being active was having fun. Although other researchers commonly mention the word "fun" in their papers, my work is one of the few studies to include supporting data. The APAPBenefits Scale (Robbins et al., 2008)

includes the item “have fun or be part of a fun group or activity” (p. 105), although respondents do not have the chance to share comments. In the discussion Grieser et al. (2006) stated that “having fun with friends” (p. 8) was a perceived benefit of being active, but they did not present data to support that conclusion. In contrast, most of the girls in my study mentioned “fun” in data that I coded as primary examples of other facets of life-world. For instance, I coded Melissa’s amazing story about the “competitions” with siblings and friends, while flying down the hill on their bikes, as a superb example of *being able to be active in a certain way in a certain place*, a life-world descriptor in Set One. Yet, she also described it as both “awesome” and “fun.” Having fun is not only an important reason to do PA; it seems to be an important part of doing PA for girls. In that way my findings were most closely aligned with the work of Clark et al. (2011), who shared data about fun in free play and concluded that “free play is an important forum for girls’ physical activity engagement” (Clark et al., 2011, p. 203). I fully agree with their conclusion, and Melissa’s story is the best evidence I can give for my rationale: “If you are lucky, you will get to go into the pond; you will just fling off your bike and land in there. Then the pain comes and you have to bring your bike and swim over there. It is just a pain, but it is super fun.”

Of particular interest, in the focus groups done for the TAAG project, participants were given this information in the scripted introduction: “We want to . . . figure out ways to help them [girls] all get more active and have fun doing it” (Staten et al., 2006, p. 4). Their goal was to develop a program that was “interesting and fun for everyone” (Staten et al., p. 4). In fact, the promotional material for the project was “TAAG. Real Girls. Real Activities. Real Fun” (Staten et al., p. 11). Nonetheless, Staten et al. (2006) focused on ascertaining girls’ descriptions of “segments” (p. 11) or types of girls who would be especially interested in different physical activities. Their synopsis of the “athletic” type, which emerged from focus group data, included the only mention of “fun,” and then, interestingly, it was associated with the type of “fun” that athletic girls could have *after* they played basketball. “It’s like when we go on the court, we are

all about the balls. When we off the court, oh my god, we wanna see boys. It's like we just want, we just wanna . . . do everything . . . have fun" (p. 6). It is certainly possible that focus group participants offered more data about having fun as a reason for taking part in PA, but if so, those data were not reported by Staten et al. (2006).

In contrast, I learned that girls expressly engaged in PA to have fun, or to "find joy in it," as Samantha said. Because the girls in this study associated many, diverse activities with "fun," it is likely that middle-school girls have different types of fun doing different activities. In other words, the concept of "fun" might be too broad in this context. Researchers should explore girls' unique perceptions of having fun as a reason for doing *certain kinds* of PA. These findings and that implication for research move the field beyond where it seems to be at present, in which researchers have assumed that "having fun," in general, was a reason for girls to be active.

Three girls in my study said that doing something with their time was a reason for being active. This was particularly interesting to me, and I think it has implications for future study, because it suggests real differences in perspective compared to current research. As mentioned previously, an item included in the APAPBenefits Scale (Robbins et al., 2008), "spending time with family, friends, or team members" (p. 105), is described as a benefit of being active. That is, researchers have typically focused on the idea of social involvement with PA; it is assumed that spending time with family or friends is important to middle-school girls. Yet, for some girls, part of life-world is being alone at times with time on one's hands. It is really fascinating that these girls recognized PA as an option for filling their time. Researchers should explore how some girls come to view PA (and certain types of PA) as ways to use their time.

One reason that Ellen was active was because she realized that she had to be active in a certain situation. This idea was not mentioned in any other article included in the review of literature, probably because my work is unique in that it encompasses *the situation*, that is, the personal-social context. Although some researchers have focused on the physical education

class as the classic setting for middle-school PA, (Clark et al., 2011; Taylor et al., 1999; Thompson et al., 2005), those scholars did not mention situational aspects of being active. To inform group-based PA interventions for girls, further research is needed about what it is like for girls to have to be active in a group in situations when they have no other option.

Finally, several girls in my study explained that they were being active for a unique reason: to help their parents become more active. To my knowledge, this important finding is new to the literature. One implication I can think of is that researchers should not assume that middle-school girls engage in PA solely for their own personal reasons. Furthermore, girls who recognize that their parents could be healthier if they "would only exercise" might have unique motivations for engaging in PA themselves, compared to girls whose parents are active. Researchers who study both short- and long-term effects of engaging in PA in childhood should explore the extent to which middle-school girls intend to foster PA in their families.

Finally, in the context of this study, which was designed to explore the experience of being physically active, I have understood issues such as losing or maintaining weight and helping parents become more active as reasons for engaging in PA. Although I understand them as contextual to the experience of being physically active for the purposes of this study, I recognize that for some if not all girls, these issues were also foci of intentions for them. That is, some girls were trying to lose weight, in part, through physical activity. In a sense, for some girls, these background reasons for engaging in PA were also parallel intentions. In some cases, the background or parallel intentions (like losing weight) might have been more important to a girl than any intentions associated with engaging in PA. Detailing the complexity of this potential overlap of intentions (or phenomena) is beyond the scope of this study, but it remains of critical importance to researchers and practitioners in this field. It is important not only to recognize and explore the *reason(s)* for a girl's interest in PA, but also to realize that those

reasons could be more important to her than engaging in PA. Interventions to enhance PA, whether individualized or group-based, should be planned with this issue in mind.

To summarize the personal-social context for Set One, many aspects of the two life-world features (*Realizing the Extent to Which Certain Things in My Life Influence Me to Be More Physically Active* and *Having My Own Reasons for Being Active*) are new to the literature. As is evident in the next section, the phenomenon to which those two life-world facets were related, *Getting Up and Doing Something to Keep My Body Moving*, was also a useful contribution.

Getting up and doing something to keep my body moving. The girls were trying to get up and do something to keep moving. Although this phenomenon was common to the sample, it has not previously been reported in the literature in this manner. Before I compare findings for each of the three component phenomenon to the literature and discuss implications, I want to note that for some girls, there was a discrepancy between their scores on the PA measure (in the preliminary study), their self-reports of the time they spent in PA, and their views of themselves as active (or less than active). Although all 10 girls scored above the median of 3.14 on the PAQ-C (Kowalski et al., 2004) for the preliminary study sample, they reported a great variety of daily minutes of PA once I interviewed them. The range was from "about 15 minutes" (Melanie) to "usually more than an hour a day" (Joy). Some girls also reported a variable personal range, including Samantha (15-45 minutes 5 days a week) and Becki (30-60 minutes a day). Ellen reported the amount of PA she tried to get per day (30-60 minutes) more specifically than the amount she actually got (usually less than that). Obviously, only a few of the 10 girls (Amanda, Jenny, and Joy) reported spending the 60+ minutes per day that is specified in national guidelines (USDHHS, 2008). Furthermore, there was a great deal of variation in this small sample of 10 girls, all of whom had been above the median PA level in a much larger group of girls. This raises questions about the ability of the PAQ-C to capture accurate PA levels by self-report for middle-school girls. That said, as the interviewer, I did not

find it easy to seek clarification from girls as to self-reports of PA time. Further work is needed (a) to specify valid and reliable procedures for self-report of PA level in middle-school girls and (b) to develop interview techniques to explore self-reports of PA levels.

One way that the 10 girls were getting up and doing something to keep their bodies moving was captured broadly in the first component phenomenon, *doing something active at school*. My study is the first in which these school-based activities are categorized as "required" activities, as options within a required activity, and totally optional activities. Those categories emerged from data; I asked girls about their activities, not specifically about their school-based activities, and I did not incorporate my own categories in those open questions.

In contrast, other researchers have focused on gym classes at school, incorporating their own categorical perspectives into questions. For example, Thompson et al. (2005) asked, "Do you have physical education / gym? *How often* [emphasis added]*?*" (p. 424). Taylor et al. (1999) asked, "What do you *like* or *dislike* [emphasis added] about Physical Education classes at your school?" (p. 72). As would be expected, Thompson et al. (2005) found out how often girls had gym class, and Taylor et al. (1999) found how out how many girls liked gym and how many did not. My findings are much richer in nature. For instance, because I did not assume that gym was the only "required" activity the girls would have at school, I realized that Eleanor and Jenny viewed walking to class as "required" like gym. Other researchers have not reported girls' views on this, but then few others have talked to girls directly about their activities as I did.

I am really interested in my findings about this intention, *choosing a built-in option for a required activity at school*, based on girls' remarks about making different choices during gym class. To my knowledge, no other researcher has mentioned this with regard to youth PA. Ellen talked about "running around" during recess with friends, going up "to random people and saying random things." Her description reminds me of the typical characterization of youth's PA patterns as highly variable, unstructured, and consisting of short frequent bursts (Bailey et al.,

1995; Nilsson et al., 2002). Yet, when researchers ask girls about their activities, the focus tends to be on organized activities, or at least, on activities that adults can recognize and label. The phrase “running around” is a vague statement that could mean different things. I explored what she meant by that to get a better understanding of it. To better describe the experience of PA in youth, researchers should listen carefully to the phrases youth use to describe their PA and fully explore what that phrase meant in context.

Participating in an organized sports team was another way that girls spoke about *getting up and doing something to keep my body moving*. I discerned this intention to capture those findings: *doing something active at school that is optional*. Half of the girls said that they were part of an organized sports team like volleyball, offered as an option through school. Other researchers (L. Robbins, personal communication, October 1, 2010; Robbins et al., 2003) have focused on organized sports as a means of engaging in PA. Girls who were on teams have had more activity than their counterparts who were not on organized teams (Harrison & Narayan, 2003). Yet some girls in my study were not pleased about what they viewed as a limited availability of organized sports in their middle-schools. Because interest in PA declines among girls at middle-school age (Troiano et al., 2008), it would be especially important for middle-schools to consider expanding opportunities for girls to take part in organized sports.

Melissa’s data are an interesting example of how one middle-school girl perceived the role of sports teams in her life. Melissa did not think she was as active as other girls at her school, because she was not part of as many organized sport activities as other girls. Yet she was on two school teams (volleyball and basketball), as well as taking 7-mile bike rides with her dad and brother. As noted earlier, I asked each girl to define “physical activity,” and Melissa was the only girl who included the word “sport” in her definition. It seemed that Melissa defined her level of PA based on her involvement in sports.

Several girls in my study were not on organized sports teams; yet they met the modified inclusion criterion of having at least an average PA level (based on self-report). I discussed the topic of sports team participation in a telephone conversation with Dr. Robbins (L. Robbins, personal communication, October 1, 2010). She said that a researcher who knew that a girl was on a team could assume that the girl was meeting PA recommendations. However, based on my findings, I cannot completely agree with her perspective. Researchers need to keep in mind that most organized sports do not continue year-round (Grieser et al., 2006); there is no cause-effect link between being on a given sports team and getting adequate PA.

Furthermore, researchers who focus on sports team participation might tend to discount other forms of physical activity. In my study, despite some similarities across different sub-sets of the sample, each girl had her own unique intentions with regard to getting up and doing something to keep my body moving. Those intentions were associated with particular activities in which the girl engaged with various other people or by herself, in various settings. Each girl was engaged in some type of physical activity that has not appeared on any list I have seen in other literature, ranging from feeding steers to building snow-forts. Although I cannot generalize my findings to other middle-school girls, I feel comfortable stating that every middle-school girl will have unique intentions around engaging in physical activity. Before proposing that girls change what they are doing, practitioners need to assess what they are already trying to do.

To conclude this discussion of the phenomenon of *getting up and doing something to keep my body moving*, I return to Ellen, the girl who was "running around" with friends during recess. It is really fascinating that she did not think of the "jumping," "chasing," and "running around" that they did as PA. "But that is not really like physical activity," she said. That comment suggests important implications. Researchers need to consider that the phrase "physical activity" does not necessarily capture what middle-school girls like Ellen are trying to do. Instead, the phenomenon I identified in this study, "getting up and doing something to keep

my body moving," might be a phrase to which middle-school girls can relate. Accordingly, researchers and practitioners could consider talking to girls about how they might do more of that (getting up and keeping my body moving) in their daily lives.

Findings of Set Two Compared to the Literature

The second set of findings was composed of one contextual feature and one phenomenon. The contextual feature was *Explaining what it is like for me while I am being active*, and the related phenomenon was *Striving to meet my own goals in physical activity.*

Explaining what it is like for me while I am being active. As noted in Chapter 4, I felt that responses to my question, "Tell me what the words 'physical activity' mean to you," were basic to my understanding of this major intention. Of the 10 girls, 9 offered rather expansive responses. In the study by Clark et al. (2011), participants were told that the investigator was interested "in what physical activity means to girls" (p. 199). However, there was no report that the investigator actually asked girls to talk about that. To their credit, Clark et al. (2011) did not provide a definition of PA to the girls. "Instead, they were invited to consider their own interpretations of this term" (p. 199). Asking girls what the words "physical activity" mean to them is different than telling them that you as a researcher are interested in what PA means to them. However, I believe that my approach was more open-ended than that of Clark et al., and accordingly, more useful, because I was able to report girls' exact remarks about PA.

To my knowledge, I am the first researcher who actually has asked girls what the words physical activity meant to them. I hope that other researchers who work with middle-school girls will recognize the potential value of this approach and reconsider their own data collection strategies. For instance, Vu et al. (2006) reported that they asked participants this question: "What do you think of girls who are really in shape and active?" (p. 5). Then they stated:

> If it appeared that girls had a different definition of physical activity, the moderator would explain that for the purpose of these interviews, physical activity was any activity where a person moves around and breathes hard and sweats (p. 5).

This is an explicit example of an interview strategy in which the researcher did not allow the girls to speak. Rather than learning about the girls' perceptions of their own experiences, the researchers worked from their own assumptions about and definitions of PA. If the girls' views did not align with their views, they sought to re-align the girls' thinking. Such an approach will yield findings that can in some way be viewed as standardized, but it does not necessarily contribute to a deeper, richer understanding of the experience of PA.

I would like to expand on the life-world descriptor, *understanding what has to happen for an activity to really be physical activity.* The variety across the sample in perceptions about PA was fascinating. Predictably, some girls were *realizing that working hard is part of being active*; they talked about sweating or being out of breath. However, a surprising finding was that some girls thought that only certain types of physical activities count as PA. Walking did not count as PA for Samantha, but it did count as PA for Ellen. *Realizing that physical activity involves meeting a time requirement* was another element of this descriptor. To my knowledge, I am the only researcher who has explored girls' views on this and identified different characteristics of PA from their perspective, thus making unique contributions to science through this work.

However, I am one of many researchers who have asked girls to report the different types of PA in which they engage during a certain period of time. Grieser et al. (2006) asked girls to review a list of 54 physical activities and to check the ones they had done in the past 7 days. However, the activity checklist approach is based on the assumption that all activities on the list should "count" as PA for girls, possibly because the researcher understands those activities as PA. Because I interviewed the 10 girls in my study twice and analyzed their data using a descriptive phenomenological method, I learned that different girls have different views

about what “counts” as PA. This is a unique contribution to the literature, one that has implications for future research. Researchers need to explore what “counts” as PA for different girls, how girls translate those perceptions into specific intentions to engage in certain activities, and finally, how engaging in those activities actually affects certain parameters of health.

When I asked girls how much PA they thought they should get in a day, they all responded in terms of time. That was one basis on which I discerned this life-world element, *realizing that physical activity involves meeting a time requirement*. When I asked girls more about this, some mentioned information they had learned from commercials or their gym teachers. Melanie even stated what the commercials said about getting up and playing for about an hour a day. Eleanor spoke about a gym teacher who had encouraged kids to get an hour of PA a day. . Despite Eleanor’s stated dislike for this gym teacher, she remembered what she told her. In the qualitative work of Thompson et al. (2005), elementary students spoke about their love for gym class. “Furthermore, ‘my physical education teacher’ was unanimously noted as a support that helped the participants be physically active” (p. 430). However, Thompson et al. (2005) did not mention of the role of the gym teacher for junior school (middle-school) students; it would have been helpful to other researchers if Thompson et al. ~~(2005)~~ had drawn that comparison. Although Robbins et al. (2008) found that 11- and 12-year-old girls were less likely than 13- and 14-year-old girls to view gym teachers and coaches as sources of support for PA, my findings suggest that gym teachers may still be important sources of information about PA for some middle-school girls. Interventionists should work with gym teachers to test different approaches to teaching about PA time guidelines, reinforcing guidelines by requiring students to spend that amount of time on PA in gym class.

For a few girls in my study, I realized that life-world was characterized in part by *recognizing a certain feeling associated with being active.* Even with my small sample, I was able to contrast data from two girls who talked about “a runner’s high” – one girl who had

actually experienced it and another girl who said she would not get “a runner’s high” even if she ran for a “long time.” Both girls associated a runner’s high with being physically active; yet, their experiences were very different. Capturing the differences in experiences for participants who share similar life-characteristics is a goal of Porter’s (1998) method, and this is one example of how I achieved that goal in this study. I believe that other researchers can easily understand the life-world element *recognizing a certain feeling associated with being active* as part of the broader descriptor, *understanding what has to happen for an activity to really be physical activity*. In contrast, as noted earlier, Clark et al. (2011) were interested in what physical activity meant to girls and reported several “expressions of how they [participants] felt when being active” (p. 204). Yet, perhaps because they used an interpretive descriptive method, it is difficult to see a direct empirical connection between their theme, “taking care of myself, inside and out” (p. 203) and accompanying data, such as, “I was running through the school field with my dog. I just felt excited or something, kind of like if I kept going fast, I could fly” (Clark et al., 2011, p. 204). While Clark et al. (2011) mentioned feelings occurring with PA, they did not describe what has to happen for an activity to be PA for girls. Those findings are unique to my work.

Striving to meet my own goals in physical activity. This was the phenomenon that I viewed as closely related to the life-world feature, *explaining what it is like for me while I am being active*. To my knowledge, this work is the first in the field to report the specific goals of middle-school girls with regard to PA. I drew that conclusion by reconsidering each of the 10 studies pertaining to youth PA that I reviewed in Chapter 2. The word “goal” was not mentioned in 4 of the studies: Garcia et al. (1995), Kientzler (1999), Robbins et al. (2009), and Taylor et al. (1999). In 4 other studies, authors referred to the “goal” of the method or of the study itself (Clark et al., 2011; Staten et al., 2006; Thompson et al., 2005; Vu et al., 2006).

The authors of just 2 of the 10 studies I reviewed used the word “goal” in reference to the PA of middle-school girls. First, in the discussion of findings Robbins et al. (2003) stated: “Girls should have input into the design of their physical activity program and the goals that they want to achieve” (p. 210). Yet, Robbins et al. (2003) did not obtain or report any data specific to the goals of girls with regard to PA. Second, Grieser et al. (2006) sought “to understand the benefits girls associate with physical activity” (p. 4). Accordingly they asked girls “what they like about physical activity and what good things are associated with being more physically active” (Grieser et al., 2006, p. 4). The finding labeled “working toward a goal” (Grieser et al., 2006, p. 5) apparently came from data for one of those two general questions, because it was included in the section on “perceived benefits of physical activity.” However, no supporting data were reported, and no explanation was offered of how the analysis was done or how that finding emerged. As noted earlier, Grieser et al. (2006) used a generic qualitative method. This could explain why it is difficult to see a direct, empirical or logical connection between “working toward a goal” and the general category of perceived benefits of PA.

In contrast to the work of Grieser et al. (2006), I think there are clear relationships in my findings between the overall phenomenon of striving to meet my own goals in physical activity and each of its four component phenomena: *pushing myself to increase my time or distance, building up my stamina or strength*, *getting to the point where I can compete better,* and *getting to the next level in that activity*. In my review of the earlier studies, I did not find any similar phrases or insights. Some findings reported by Clark et al. (2011) were related to my findings but categorized very differently. Quoting their participant “Kate,” Clark et al. (2011) said, “‘I just like to practice a lot and get better at it’” (p. 201). Clark et al. (2011) viewed those data as an example of one of their two major themes: “physical activity lets girls shine” (p. 201). Again, I have some difficulty seeing the connection between the data and their category. In my taxonomy, I would have viewed those data as an exemplar of the component phenomenon

getting to the next level in that activity. Those data are very similar to what Melissa, one of my participants said. “I want to be one of the better 'B' team basketball players next year or a low 'A' team player.” This comparison shows one difference in the possible outcomes of using a more generic, interpretive method as Clark et al. (2011) did versus using a descriptive phenomenological method like I did in this study.

Researchers and practitioners should recognize the importance to girls of their personal goals with regard to PA and make an effort to understand each girl’s goals before suggesting new goals for her. I agree with Robbins et al. (2003) that girls should have a say in their own goals with regard to physical activities in school programs. However, based on my findings, I can take it a step beyond that and emphasize that girls are already creating their own goals for PA in their daily lives. It is up to practitioners and researchers to explore those goals of each individual girl, and to consider the similarities and differences across those individual goals, as a basis for intervening to help individual girls and to design interventions trials to improve PA.

Findings of Set Three Compared to the Literature

The third set of findings included two contextual features, *realizing how things change for me when I have been active* and *realizing that things get in my way of being physically active*. The associated phenomenon was *making physical activity fit my life.*

Realizing how things change for me when I have been active. Most of the girls in my study noted several changes in their lives that they associated with being active, especially *realizing how my weight is affected because I have been active.* Taylor et al. (1999) reported data implying that girls might lose weight through PA. The positive effects of being active for girls that pertained to weight included a “flat stomach” and “keeping your right size” (p. 76). In contrast, because I probed to learn about how the girls’ experience of PA had changed over time, I learned that some girls thought they had lost weight due to PA.

Having more energy, endurance, and strength because I have been active was another thing that girls linked to being active. Likewise, Grieser et al. (2006) related that some respondents "said that physical activity gave them energy (p. 5); Grieser et al. included "gain energy" (p. 13) in a list of "benefits of physical activity" (p. 13), but there were no specific data from participants as to how or why this happened, in contrast to my findings. With regard to strength, Clark et al. (2011) reported data from a girl who said that "you get stronger . . . from physical activity" (p. 204). Thompson et al. (2005) said that high school student participants mentioned "physical changes" (p. 433) due to PA. "I liked the results [from weight training] . . . and you just notice, like, legs are firmer, stomach was firmer, everything kind of tensed up, I guess" (p. 433). However, Thompson et al. (2005) did not indicate that the junior (middle-school) students mentioned any such changes. The issue of how girls know that they are improving in strength would be important to explore further. I missed one opportunity to do this. As noted in Table 3 (p. 109), Joy said this when I asked what the words physical activity meant to her. "Physical activity to me means that you are breathing really heavy, and you are, I guess improving how strong and how toned you get." I did not go on to explore if she personally had ever felt stronger or more toned due to PA; in future studies, I would follow up and explore that.

In my study, several girls reported a problematic change: *Having a painful injury because I was active.* In their study, Robbins et al. (2009) found that "I have minor aches and pains from activity" (p. 170) was the top barrier to PA perceived by middle-school girls (and boys). They found this finding surprising, because it had not been reported elsewhere as a major barrier. However, in focus groups with middle-school girls, Grieser et al. (2006) found that getting hurt was the most common "negative perception of physical activity" (p. 40). However, neither Robbins et al. (2009) nor Grieser et al. (2006) asked participants about specific instances when they had engaged in PA and experienced injuries. To my knowledge, my study is the first work in which a phenomenological researcher has explored this issue.

Feeling better about myself because I have been active was another change girls realized from being active. As discussed earlier, *feeling better or feeling better about myself* was a reason that the girls were active. However, some girls reported that they actually experienced the change – that is, they felt better about themselves because they were active. To my knowledge, this finding is unique to my study. In contrast, Clark et al. (2011) interpreted data about a girl who was teaching her sister to play badminton as evidence that taking part in such activities "bolstered . . . their sense of self" (p. 202). However, it was not clear whether it was the activity itself or the opportunity to help the sister learn to play that was important to the girl. Those data have a different focus than the data Amanda shared about trying to do more to stretch out her appendectomy scar and so, "feeling better about myself." However, as I noted in Chapter 4, "feeling better about myself" is still a rather vague idea. Researchers should explore in greater depth how a variety of middle-school girls understand this particular outcome of PA.

The Adolescent PA Perceived Benefits Scale (Robbins et al., 2008) is comprised of 10 items. Each item is preceded by the phrase, "A major reason for being physically active or exercising for me is to . . ." (Robbins et al., 2008, p. 103). Participants respond using a 4-point Likert scale (1=not at all true; 4=very true). However, it is not necessarily the case that girls who are asked respond to that scale are actually engaging in PA. In this study, I took the concept of reasons for being physically active several steps farther than Robbins et al. (2008) had done. That is, I explored the reasons that girls were engaging in PA (as detailed in Set One) as well as their perceptions of what happens to them as a result of being physically active. My findings show the importance of discerning not only the reasons that girls have for engaging in PA but also their views of how their lives change as a result of engaging in PA. The latter information would be especially useful to practitioners who are seeking novel ways to help middle-school girls become more active. As one tool to encourage PA, practitioners could tell girls stories about the changes that age-peers perceived in their lives due to engaging in PA.

Realizing that things get in my way of being physically active. All 10 girls spoke of their realization that certain facets of their lives got in their way of being active. In the preliminary study for this project, I used the APAPBarriers Scale (Robbins et al., 2008). To my knowledge, Robbins et al. (2009) is the only research team who has reported a study using that scale. For the 9 items, each participant is instructed to ‘‘Please show how true each statement is regarding certain barriers or problems that prevent or stop you from exercising, being active, or doing sports’’ (Robbins et al., 2009, p. 167). In the study by Robbins et al., (2009), the sample of middle-school girls (*N*= 101) had a mean score of 2.06 (SD = 0.65) on the barriers scale. My sample of middle-school girls (*N* = 10) had a mean score of 2.588 (SD = 0.32). (Higher means scores denote more agreement with the statement). In 7 of the 9 items, my sample had higher means than the sample in the study by Robbins et al. (2009); the means of the other 2 items were almost identical across the two samples. Thus, compared to the girls in the larger study, girls in my study agreed more often that certain issues were “barriers or problems” with regard to PA. However, the study by Robbins et al. (2009) did not yield important information about (a) how those barriers reported actually influenced PA in participants’ daily lives, (b) whether other issues or concerns interfered with PA, or (c) the extent to which participants found ways to be active despite those barriers. Through the descriptive phenomenological study I conducted, I was able to answer such questions, and I will discuss those issues in detail next.

Girls were *realizing that things about me can get in my way of being active*. All 10 girls mentioned at least one thing about themselves that they viewed as getting in their way of being active. Data pertaining to some of the seven elements of this life-world descriptor were reported by Grieser et al. (2006). One element was *realizing that I do not like certain ways of being active*; similarly, about 20% of the girls in the study by Grieser et al. said that they did not like certain sports, especially running. Also, Grieser et al. gave data akin to those I have for the

descriptor *being afraid to fail at doing a physical activity*. One girl said, "I like to watch [basketball], but I don't like to play it because I'm not good. . . . I don't like people to laugh at me" (Grieser et al., p. 6). Although "time away from other things" (Grieser et al., p. 5) was mentioned as a "perceived negative aspect of physical activity" (p. 5), no data were provided to support that claim. In contrast to that generic idea, I found data to support these specific life-world descriptors, each of which is unique to the literature: *having to do things that get in my way of being active*, *having things I would like to do instead of being active*, and *having habits that get in my way of being active*. Health issues emerged in the study by Grieser et al. and in my study, but in very different ways. Grieser et al. said that one girl believed that a friend had exercised too much and had gotten pneumonia. In contrast, several girls in my study shared compelling personal stories, explaining that they were *having health issues that influence how active I can be*. Finally, I did not find data in any other study about youth PA that was comparable to this life-world element: *realizing that the day's events and my mood can influence how active I want to be*. I think this finding is especially fascinating. In interventions designed to increase PA participation, practitioners might begin by asking each girl how her day is going (or has gone), possibly benefitting girls who are not enthused due to their moods or the day's events.

For the girls in this study, life-world was configured in part by *realizing that things going on around me can make it harder for me to be active*, including family influence. One element of this descriptor was *realizing that family members or peers say or do things that limit my physical activity.* That was the case for 5 girls in my sample, and in their qualitative study, Vu et al. (2006) also spoke about negative family influences on PA, especially protective parents. However, the situations raised by the girls in my sample were very complex; the degree to which siblings and their situations affected the girls' opportunity to engage in PA was somewhat

surprising. Such findings suggest that practitioners cannot think solely about a girl's personal circumstances when trying to enhance her PA; the family situation must be considered as well.

Another element of this descriptor was *feeling self-conscious when being active around people*. In the study with middle-school girls by Robbins et al. (2009), the highest mean on the APAPBarriers Scale (Robbins et al, 2008) was for this item, "I feel self-conscious or concerned about my looks when I exercise" (p. 106). However, the scale item does not specify just who would be around during that time. Girls felt particularly self-conscious about their appearance while exercising around boys, according to Taylor et al. (1999), but they provided no data to support that conclusion. However, in my study, 4 girls talked about feeling "self-conscious" around "people" other than family and peers when being active. I was actually surprised that several girls were very concerned about being active in situations when adults might see them. That could be associated with worry that an adult who seems to be watching them could potentially harm them; to avoid upsetting them, I did not explore that with any of the girls.

Knowing what I am up against when it comes to being more active was another facet that girls thought of as getting in their way of being active. Both elements of this descriptor, (a) *realizing the downsides of being active* and (b) *having to work at a goal for physical activity that is not really my goal,* were unique to this study; I did not see anything similar in other research. Some middle-school girls who are engaging in PA realize that they are giving up other opportunities to do so; they are prioritizing PA over other activities while recognizing the downsides of spending time in PA. In my study, only one girl shared that she felt expected to work toward a goal in PA that was not her own. Practitioners should be alert to such situations; those youth could be under stress and develop negative attitudes toward PA as they grow older.

As I have mentioned, all of the girls in my study realized that certain facets of their lives got in their way of being active. However, it is likely that those influences fluctuate from time to time or even from day to day. In this cross-sectional study, I could not really appraise any

changes in such influences over time, but that would be an important topic to consider in a longitudinal study of middle-school girls' experience of being physically active.

Making Physical Activity Fit My Life. This was the phenomenon that I viewed closely related to the two life-world features, *realizing how things change for me when I have been active* and *realizing that things get in my way of being physically active*. Although things got in the girls' way, they were figuring out ways to be active despite those things. This is very exciting new knowledge. Other researchers have not addressed how girls were trying to be active despite facing challenges. I view these findings as a main contribution of my work.

Data revealed eight different intentions of the first component phenomenon, *figuring out ways to be more active when things get in my way.* The sheer number of intentions suggests several different points. First, having thought about the things that made it more challenging to be active, the girls had thought of ways to be active even with those challenges. Second, middle-school girls are in a transitional time of life, when things are changing all around them. They are in a new school; their bodies are changing; they are starting to gain more independence. The fact that they intend to be active, despite challenges, demonstrates that they can be given the responsibility to take the lead in that planning. This means that researchers, teachers, and parents do not need to develop all of the plans to promote and maintain PA for middle-school girls. As evidenced in the intentions I discerned, the middle-school girls in this study were able to develop their own plans. Finally, these findings show that the girls have unique expertise about making PA fit their lives. Researchers should tap into that knowledge and seek girls' guidance to develop PA interventions for youth.

The second component phenomenon was *envisioning physical activity as part of my life in the future.* The girls in this study were able to see themselves as active in most of the instances I explored with them, such as the near future, high school, at the age of a mom, and at the age of a grandma. To my knowledge, other researchers have not explored these sorts of

intentions, as I find no evidence of that work in the literature. It was amazing to me that some girls had clearly thought about this, with no hesitation in responding, and that one girl had already "talked about that" with her dad. Researchers should explore the intermediate and long-term impacts and outcomes of girls' intentions to be physically active at the various future times of their lives. Such work would be a parallel stream to the existing literature reporting outcomes of PA patterns established in childhood. That is, youth who are active are more likely to be active in adulthood (Gordon-Larsen et al., 2004; Telama et al., 2005). It would be important to undertake longitudinal studies of PA patterns, beginning by exploring intentions of middle-school girls to be active in the future and following them into adulthood.

Findings of Set Four Compared to the Literature

The fourth set had one contextual feature and one phenomenon. The contextual feature was *realizing that things can get in the way of being active for girls my age*. The related phenomenon was *suggesting ways that girls my age could be active when things get in their way.* Those data, which are focused on "other girls" rather than the participants themselves, are both similar to and different from data reported in Set Three.

Realizing that things can get in the way of being active for girls my age. While girls realized that things got in their way of being active, they also realized this about other girls their age. Girls mentioned that peers, family members, homework, technological communication devices, and laziness could get in the way of PA for other girls their age. In their qualitative study, Vu et al. (2006) reported that boys "identified a number of barriers that prevented girls from being physically active" (p. 6). The idea is useful, in that middle-school youth, regardless of gender, have some degree of first-hand knowledge about the lives of age-peers. However, the prior study that is most relevant to my findings in this regard is the work of Staten et al. (2006), which like Vu et al. (2006) was part of the TAAG Project.

Staten et al. (2006) designed the study to yield ideas for PA marketing strategies for different “segments” (p. 8) or types of middle-school girls. Although the topic of barriers to PA for age-peers was not included in the list of topics girls explored in the focus groups, one category of findings was “perceptions of barriers to participating in physical activity programs” (Staten et al., 2006, p. 8). As this is the only known study in which peer-focused data have been reported, I will compare my findings with theirs.

Staten et al. (2006) realized that different characteristics of the six segments of girls could overlap, but they documented distinct “barriers to participating in physical activity” (p. 9) for each segment, as follows: (a) “athletic girls”: lack of time; (b) “preppy girls”: concerns about appearance and injury, time; (c) “rebel girls”: heat (due to black clothing) and lack of desire to do something like PA that might be viewed as popular; (d) “quiet girls”: embarrassment, shyness, feeling like they do not fit in; (e) “smart girls”: taking time away from homework, fear of failing at PA; and (f) “tough girls”: no barriers identified (pp. 9-10). Rather than referring to certain types of girls, participants in my study referred, for instance, to “a lot of people . . . [they knew] who made up excuses like, ‘It’s too hot,’ or “It’s too cold,”” to quote Amanda. Some of those references to “a lot of people” are similar to the segments of girls identified by Staten et al. (2006). For instance, although Ellen did not associate this comment with any type of girl, it is similar to the matter of appearance viewed as an adversely influence on “preppy girls” (Staten et al., 2006, p. 9). Referring to girls her age, Ellen said: “They won’t exercise as much as they would because they are like, ‘Oh man, I don’t want to ruin my hair.’ However, Amanda mentioned an issue that was not noted in Staten et al. (2006). “Sometimes people won’t do it (be active) because they are like, ‘Oh, no! That’s weird. Nobody else is doing it. Why should I?’” This is the opposite of the idea that “rebel girls” would not want to do PA if other girls thought it was a cool thing to do. The point here is that any middle-school girl might be able to think of a reason why “people” or “lots of people” her age might have issues with doing PA.

Also, in contrast to Staten et al. (2006), the girls in my study mentioned particular age-peers who were facing certain problems in life – problems that in the opinion of my participants, were adversely affecting their opportunities to do PA. These problems included having a sibling who had been "in trouble" and going through a parental divorce. Personal issues like that could not reasonably be linked to any "segment" of middle-school girls, but my participants thought those problems truly affected PA opportunities for those age-peers. So, I think that researchers should not assume that they can reach all middle-school girls to encourage PA by simply targeting messages to certain "segments" (Staten et al., 2006) of girls.

Finally, in both the study by Staten et al. (2006) and my study, friends were acknowledged as possible adverse influences, making it more challenging for other girls to be active. In fact, in answer to my question about things that would affect age-peers, Ellen began by saying, "Friends, 'cause like, and how they look," and then talked at length about the "hair" issue. I did not explore her mention of "friends" in much detail, but other researchers should do so in the future. This is interesting, because in addition to my own findings in Set One, others have found that friends are positive influences on PA for middle-school girls (Thompson et al., 2005). Finally, it cannot be assumed that girls understand the word "friend" in the same way that they understand the phrase "girls your age." Girls might come up with different lists of problem issues with regard to PA opportunities if they were asked about both friends and girls their age. It would be important to undertake studies to examine this issue more closely.

Suggesting ways that other girls could be active when things get in their way. The girls in this study had little difficulty suggesting how other girls their age could be more active. Several of their suggestions were similar to the ways they had devised to be active when they faced challenges. A few of these suggestions were new to the literature, as other scholars have not approached this topic in the way that I did, including recommending that girls focus on bettering themselves, make time for physical activity, and continue trying to be active. The girls

in my study also suggested that girls find ways to have fun with physical activity and think about the benefits of being active. Those two findings are similar to those of Kientzler (1999), who tried to learn from middle-school girls how rates of participation in PA could be improved. The most common suggestion (54%) from "active" girls was to "teach girls the benefits" (p. 398) of participating in regular PA. The active girls also suggested that more girls would take part if adults could "make it fun" (39%) (p. 398). Both Kientzler (1999) and I had participants who had self-identified as active. In future studies, it would be ideal to gain such "suggestions" from both active and inactive girls and explore how the "suggestions" could be applied in PA interventions.

A Comparison of the Findings to the Construct of Barriers

In Chapter 2, I critiqued the construct of "barriers to physical activity." I concluded that it was not empirically grounded, and that was a key reason to conduct a descriptive phenomenological study to explore the experience of being physically active for middle-school girls. Now that I have completed the analysis, I have concluded that there are several major differences between my findings (the life-world feature that I labeled *realizing that things get in my way of being physically active*) and the relevant literature. I have divided my critique into two parts. First, I will consider the construct of barriers to PA in a general way, relative to my findings. Then, I will raise questions about its measurement for middle-school girls in the APAPBarriers Scale (Robbins et al., 2008), in addition to issues I raised earlier in this chapter.

My findings and the construct of barriers to PA: General thoughts. Because scholars have used the word "barrier" (Pender et al., 2012; Robbins, 2003) to characterize factors that can adversely affect PA, I asked each girl to tell me what the word "barrier" meant to her. Although some girls began to use the word "barrier" after I introduced it, none used the word before I mentioned it. That is, they all used words other than "barrier" when they initially talked about the things that got in their way with regard to PA.

Although the girls in this study did not spontaneously mention the word “barrier,” researchers have used it repeatedly in studies of PA in middle-school girls. The authors of 9 of the 10 studies reviewed in Chapter 2 referred to barriers; Kientzler (1999) was the exception. Although only 2 of the studies were directly influenced by the HPM (Pender, 1982, 1996), the term “barrier,” associated with that theory, surfaced in 7 of the 8 other studies. Various concerns regarding the empirical validity of the construct were identified. For instance, Robbins et al. (2003) and Vu et al. (2006) did not define the term. Garcia et al. (1995), Robbins et al. (2003), and Vu et al. (2006) did not explain how they operationalized the concept. Grieser at al. (2006) asked about things that got in the way of being active but they did not report findings.

In doing this study, I mentioned that it would allow for refinements of constructs, such as “barriers.” Refinements would be based on the findings and new empirical facets of experience that warrant further study (Porter, 1998). Here, I refer to the implied definition of barriers incorporated in the stem of the APAPBarriers Scale: “certain barriers or problems that prevent or stop you from exercising, being active, or doing sports’’ (Robbins et al., 2009, p. 167).

Frankly, despite the widespread use of the construct of barriers to PA, I question its empirical validity even more now than when I started this study. The girls in my study seemed to relate to the idea of talking about things that got in their way or made it harder for them to engage in PA. That is a much different concept than a barrier that *prevents* or *stops* girls from engaging in PA. Legitimate and challenging questions have been raised as to how a girl who has barriers to PA can actually be active (L. Colbert, personal communication, 2011). In this study, I learned that girls who had been asked to complete a scale about barriers did not report later that they had been prevented or stopped from engaging in PA altogether. Yet, despite variations in time devoted to PA, all 10 girls were engaged in PA to some degree. Certainly some had faced issues that made it harder to engage in PA, but it was their intention to continue

engaging in PA, and in fact, they did so. For these reasons, I believe that the word "barrier" is not the best way to label the issues that middle-school girls could face with regard to PA.

The measurement of "barriers": My specific thoughts. Robbins et al. (2008) developed a scale to measure "perceived barriers to action" (Pender et al., 2010, p. 47), which was used in one later study (Robbins et al., 2009). A set of 9 items was developed for this instrument to determine to what extent certain barriers got in the way of middle-school students' PA. I gained new perspectives on this instrument both as a result of using it in the preliminary study to screen a large number of girls and as a result of interviewing the 10 girls later.

The preliminary study: My experience with "barriers." With regard to one item on the APAPBarriers Scale, "I am afraid to fail" (Robbins et al., 2008, p. 106), I had some very interesting experiences during the preliminary study with 302 girls. As girls were completing the computerized version, they were allowed to ask questions. I did not keep track of how many girls asked about this item, but I distinctly remember that it was a common question. Seven of the nine items on the scale (Robbins et al., 2008) include the word "exercise" or "activity" (p. 106); this is one of the two items that does not mention either of those words. Girls would ask me if this item pertained to being physically active or if it pertained to anything in general. My response was to restate the directions from the scale: "Please show how true each statement is regarding certain barriers or problems that prevent or stop you from exercising, being active, or doing sports" (Robbins et al., 2008), p. 103). It is possible that other girls had this question but did not ask for clarification and might have answered it in a way that was not accurate for them.

Furthermore, the empirical validity of the APAPBarriers Scale can be questioned. The directions to the participants include the word "barriers" (Robbins et al., 2008, p. 103). As I noted earlier, none of the 10 girls in my study used that word at all until I asked them what it meant to them. Including the word "barrier" in scale directions may bias respondents,

stimulating them to think about their circumstances in ways that are not consistent with their experiences.

Based on what I have learned through this study, I would eliminate the word "barrier" from the research with middle-school girls unless the participant uses the word. The APAPBarriers Scale (Robbins et al., 2008) could be refined as follows: "Please show how true each statement is regarding certain things that make it harder for you to exercise, to be active, or to do sports." In other words, I recommend revision of the scale that would be more consistent with the interview question I used in this study.

I would not recommend that researchers use the APAPBarriers Scale (Robbins et al., 2008) or any similar scale if they want to develop a rich understanding of the experience of being physically active for middle-school girls. Obviously, a method like the one I used in this study would be much more appropriate then. However, there are times when it is appropriate to use such a scale. With that said, I think that middle-school students should develop questions for the scale. Whereas Robbins et al. (2008) conducted focus groups to get feedback from middle-school students on scale items, there was no indication that the scale items were written using girls' words or those of the research team. If girls are involved developing actual items for the scale, their peer respondents will be less likely to be confused about items like, "I am afraid to fail" (Robbins et al., 2008, p. 106).

What I learned about "barriers": My views on validity. Based on my findings, I raise questions about the validity of some of the 9 items on the APAPBarriers Scale (Robbins et al., 2008). I view some items as vague. For example, one item pertains to a lack of motivation *and* feeling too lazy to exercise as a potential barrier to being active. During my preliminary study, some girls identified this item as a potential barrier. However, only after interviews with the girls did I get clarification on their actual views. Some girls talked about feeling a lack of motivation, but they did not view themselves as lazy. Thus, one cannot assume that a girl who rates such

an item on a scale of “truth” is answering it in a way that is entirely true. There is a distinction between lack of motivation and too lazy, and this scale item is an example of the threat to construct validity associated with measuring overlapping constructs.

As noted earlier in Set One, I learned that girls did not necessarily need to have their friends’ help to be active. Those findings reveal a construct validity issue with the APAPBarriers scale (Robbins et al, 2008). One of the statements is “I have to exercise alone” (Robbins et al., 2008, p. 106). Although middle-school girls are viewed as highly reliant on peers for support in PA (Robbins et al., 2008), some participants in my study revealed that exercising alone, without friends, was not a barrier to their PA.

Finally, In view of the potential importance of these influences on PA of things that are external to girls, especially other people, it is somewhat surprising that 8 of the 9 items of the APAPBarriers Scale begin with the word “I” (Robbins et al., 2008, p. 106). The only other item is this one: “It is very hard work (to be physically active)” (Robbins et al., 2008, p. 106). If middle-school girls identify challenges in being physically active that have to do with other people or situations, the scope of the APAPBarriers Scale (Robbins et al., 2008) may be limiting. In prior studies, researchers who have used such scales might have failed to capture or document the range of challenges to PA that participants were facing. Rather than asking girls to complete a barriers scale, researchers might want to interview them, as I did, to explore how they perceive various factors that influence their experience of being physically active.

The Potential Significance of the Study and Its Implications

This study was designed to describe the experience of being physically active for middle-school girls who had previously reported at least an average level of PA and above-average barriers to PA on standardized measures of those variables. Five knowledge gaps were identified that follow directly from the general lack of data about the experience of being

physically active for middle-school girls. In the ensuing paragraphs I consider ways in which I addressed each of those knowledge gaps in this study.

The first gap that I identified was the lack of knowledge about girls' intentions with regard to taking part in PA. That is, there is little information about girls' perceptions about PA (such as what it is like while they are doing PA) or the types of activities in which they engage in daily life. Accordingly, little is known about girls' intentions with regard to taking part in PA. I addressed this gap directly in Set One by providing considerable detail in the phenomenon, *Getting Up and Doing Something to Keep My Body Moving* and in Set Two through description of the life-world feature, *Explaining What It Is Like for Me While I Am Being Active.*

In Set One in the phenomenon, *Getting Up and Doing Something to Keep My Body Moving,* I provide information about the types of activities in which the girls engaged in daily life, incorporating categories about where the activity took place (outside, inside, at school) and with whom it occurred (friends, parent, siblings). Future studies with middle-school girls would be enhanced if girls were asked what activities they engaged in (as I did), rather than being given a laundry list of physical activities and asked to "check" the applicable ones. When the researcher allows girls to report directly what activities they do, there is potential to more accurately capture the nature of that activity and its relevance to the girl's daily life and intentions to engage in PA.

In Set Two in the life-world feature, *Explaining What It Is Like for Me While I Am Being Active,* I provided new information about the actual experience of engaging in PA -- what it was like while the girls were physically active. Across the sample, girls differed so much in what they thought was "enough physical activity," and only a few actually had "enough" per federal guidelines. In future studies, it would be really interesting to focus on "the things that have to happen for an activity to really be physical activity" and to have girls reflect on that in detail, for themselves and for age-peers. The variations in these facets of experience across individuals

warrant description and explanation. It is difficult to advise girls how they might feel if they increase their PA if there is little information to share about what it is really like to do PA.

The second gap that I identified was that there are limited data about personal and social factors that could influence the experience of PA for middle-school students. To date, researchers have encapsulated those factors within the construct of barriers. While researchers have documented a variety of perceived barriers to PA in middle-school age youth (Garcia et al., 1995; Grieser et al., 2006; Robbins et al., 2003; Robbins et al., 2009; Taylor et al., 1999; Vu et al., 2006), a score on a measure of barriers to PA is not an explanation of how a middle-school girl understands a given obstacle to her own PA. Critically, also, the focus on barriers has resulted in a lack of basic knowledge about a more positive contextual aspect – factors that could enhance a girl's opportunities to engage in PA. I addressed this very important gap in Set One, by detailing the life-world features of *Realizing the Extent to Which Certain Things in My Life Influence Me to Be More Physically Active* and *Having My Own Reasons for Being Active* and in the phenomenon of Set Two, *Striving to Meet my Own Goals in Physical Activity.*

In Set One, with the life-world feature called *Realizing the Extent to Which Certain Things in My Life Influence Me to Be More Physically Active,* I dealt with the knowledge gap about personal and social factors that could influence the experience of PA for middle-school students. Girls spoke of many things about their lives that they considered influences on their PA. I focused specifically in this set on the certain facets of girls' lives that fostered their opportunities to be physically active, such as family, family or friends, or family and friends. These were just some of the variations, and furthermore, the notion of "family" was very broad and rich, involving siblings, parents, grandparents, cousins, and aunts included. Researchers need to do more to capture the extent to which other people are involved in girls' PA experiences. For instance, the APAPBenefits Scale (Robbins et al., 2008), includes the item, "Spend time with family, friends, or team members" (p. 105), as a reason to be active. Future

research would be significantly enhanced if this item was not so general. Rather, I would recommend a separate question for each type of family member or include a write-in option to specify which family member had influenced the respondent. However, even those additions to a scale would not yield the kind of rich data about family involvement that I gained by interviewing each of the 10 girls twice, conducting most of the interviews in their homes.
In other findings, I addressed the gaps about personal and social factors that influenced the experience of PA for middle-school girls and factors that could enhance a girl's opportunities to engage in PA. I did so by discerning this life-world feature in Set One, *Having My Own Reasons for Being Active* and this phenomenon in Set Two, *Striving to Meet My Own Goals in Physical Activity*. Particular things about each girl's life, including perceived pressure from parents or from themselves, were coupled with their own reasons for being active.

The third gap that I identified was that scholars have not asked girls to explain how they deal with obstacles to engaging in PA. I thought it was likely that some girls realize that they face obstacles to being physically active, although they go on to try to maintain or even increase their activity, but there was no evidence about that. Prior to this study, those intentions had not yet been revealed. I addressed that gap in Set Three, with regard to the life-world feature, *Realizing That Things Get in My Way of Being Physically Active*, and the phenomenon, *Making Physical Activity Fit My Life.*

With regard to *Realizing That Things Get in My Way of Being Physically Active*, an important point to make is that a score on a barriers scale does not mean everything, and in fact, it might not mean much. I interviewed girls whose scores who were at the mean or above on the APAPBarriers Scale (Robbins et al., 2008), which uses a 4-point Likert-Scale. A "1" on the scale denotes that the statement is "not at all true" (p. 106) as a thing to "prevent or stop you from exercising, being active, or doing sports" (p. 106). A "2" on the scale denotes that the statement is "not very true" and a "3" is "sort of true" (Robbins et al., 2008) p. 106). In my

sample of 10 girls, the mean on the scale was 2.588, denoting a level between 2 and 3 or between “not very true” and “sort of true.” However, when I spoke to the girls during the interviews, each girl reported at least one facet of her life that made being active more challenging for her. These were the aspects of life-world that influenced their intentions, and they were unique to each participant in the sample.

The fourth knowledge gap that I identified stems in part from two facts about most of the prior research on PA among youth. That is, study designs have been cross-sectional, and data have been in the form of responses to standardized instruments. In such studies, young people have not had a chance to reflect retrospectively about changes they already have experienced with regard to being physically active. Furthermore, when data consist only of closed-ended responses to standardized questions about current PA, respondents do not have a chance to reflect prospectively. I addressed this gap in Set Three by delineating findings for the life-world feature, *Realizing How Things Change for Me When I Have Been Active.* Almost all of the girls (9 out of 10) realized that things changed for them when they had been engaging in PA. Of the four life-world descriptors, three were positive in tone. That is, the girl gained something from being active; that is the usual focus in the literature with regard to PA. However, I would like to focus on the negative descriptor that was identified, *having a painful injury because I was active.* It is actually rather rare to consider of negatives associated with being active. However, this shows that when researchers take time to explore the experiences of middle-school girls who are actually engaging in the PA, new knowledge can result.

The final knowledge gap that I identified stems from a general observation about the research literature and the recommendations about PA issued by national authorities. Adults (practitioners, teachers, and parents) have viewed themselves as the experts on how youth can become more physically active and on the reasons that youth should do so (Kientzler, 1999). Middle-school girls who view themselves as physically active might have good ideas about how

other girls who face obstacles could become physically active. I addressed this gap in Set Four, in the life-world feature, *Realizing That Things Can Get in the Way of Being Active for Girls My Age,* and in the phenomenon, *Suggesting Ways That Other Girls Could be Active When Things Get in Their Way.*

Although most of the relevant work has been qualitative or mixed methods (quantitative and qualitative), Kientzler (1999) was the only scholar in my review who said that youth should provide information about how to keep youth physically active. That is, Kientzler viewed the girls as experts and was interested in their unique perspective on the topic of interest. Likewise, in the study I conducted, the girls were the experts. Although they do not have higher education degrees or expert training, they are the experts about middle-school girls and PA, because they are living the experience. As Kientzler (1999) mentioned, it is really important to hear from the perspective of the experts.

In recent years, the VERB® campaign was developed and geared to youth to get them moving (http://www.cdc.gov/youthcampaign). The mission was to "increase and maintain physical activity among tweens" – youth age 9-13 (http://www.cdc.gov/youthcampaign). This program, which ran for 4 years from 2002-2006, was developed by top researchers in the field and heavily supported financially. However, the outcomes of the campaign were mixed, and as noted, it is not operating currently. While this demonstrates that getting middle-school girls physically active is a complex matter, it may also demonstrate the need to involve the girls themselves as the experts. Researchers can develop an intervention guided by well-known theories, one that employs rigorous methods, but it may in fact not be successful in creating the desired outcome. Again, although my study was not an intervention, I believe that my experience, in viewing girls as the experts, can be a guide to anyone whose goal is to increase PA levels for middle-school youth.

Finally, although the findings of this descriptive phenomenological study cannot be generalized, they can offer suggestions to those who would develop of PA interventions and the design other nursing research studies with middle-school girls. The taxonomy of findings that is a main product of this study is potentially a very useful tool. Practitioners could use it as a starting point to open a conversation with girls about what they are trying to do with regard to being physically active (the intentions, component phenomena and phenomena) and what facets of their lives are influencing their intentions (the life-world elements, descriptors, and features). The findings are a basis for expanding the knowledge base within the nursing domain and within the broader health-science disciplines. The girls' personal experiences provide a practical basis for nurse researchers, practitioners, and parents in further understanding the girls' situations, as they try to plan and implement interventions to encourage middle-school girls to become active or to continue being active.

Limitations

Because ensuring generalizability is not an aim of qualitative research (Morse, 1989), the small sample size is not viewed as a limitation. I purposely planned to select a sample from a population that was likely to be relatively rare – girls who reported both high levels of PA and high barriers to PA. My adviser had previously published a paper pertaining to sampling of rare populations for phenomenological studies (Porter, 1999), which I consulted. "For these studies, the intent is to describe the participants' experience rather than to generalize from their experience to that of the whole population" (Porter, 1999, p. 796). However, one limitation is concerned with establishing inclusion criteria for the sample. Although I had applied purposive sampling strategies to obtain a homogeneous sample, one criterion was based on the girls' PA level. As mentioned previously, things did not quite go as planned, and I had to change the criterion for the cut-point of being active. The raises the question as to whether participants were really in the category of moderate to high PA.

Despite this concern, I have some degree of confidence that the girls were more active than the general population. To identify and recruit girls that were at the median or above on the PA measure helped ensure that the girls were active. I also took measures to address this potential concern. That is, I used the best available measure, the PAQ-C (Kowalski et al., 2004), I spoke with experts on how to deal with this problem, and I asked the girls if they thought they were active. With the cross-sectional design of this study, there is always the chance that I did not truly capture the PA level of the girls correctly. Although I might have addressed that particular concern with establishing reliability through a re-test of PA levels, that was not really possible in this case.

The unavoidable time lapse between the preliminary study and the interviews could have altered situations for the girls in unknown ways. Many key things could have changed for the girls during that time, perhaps explaining the lack of coherence between the sample mean on the PAQ-C (Kowalski et al., 2004) and some girls' reports of their activity levels. Some girls may have experienced noteworthy changes in their activity levels between the preliminary study and the interviews. Perhaps some girls identified certain things in the preliminary study as limiting their PA, but later, by the time of the interviews, those issues were no longer a concern. Furthermore, completing the scales during the preliminary study might have stimulated some girls to think about any issues they faced that were limiting their PA. Some girls might have learned how to deal with things that did bother them at the time of the preliminary study and found ways to be more active by the time the interviews took placed. Furthermore, although I reminded the girls how they had responded to certain items on the instruments and asked them to explain their answers, the time lapse might have made that request difficult for them.

All of the points I made in the prior paragraph pertain to the girls themselves, but as my findings show, many other people are involved in any girl's experience of being physically active. So, I cannot forget to mention that circumstances could have changed for family,

friends, or both – changes that influenced the girls' experiences from the time of the preliminary study to the time of the interviews. In any case, in future studies, it would be ideal to screen girls with any standardized measures and then conduct interviews promptly, within a few weeks if possible.

Another potential limitation of the study pertains to the variation in the seasons of the year between the preliminary study and the interviews. There are seasonal variations in PA for youth (Tucker & Gilliland, 2007). The preliminary study took place in the fall; that is when I screened the PA level of the girls. Some interviews were done in the very cold months of the year, potentially limiting opportunities for girls to be as active as they had been during the fall.

Conclusion

In conducting this study, I learned much from the girls, particularly about things that got in their way of being active. First, all of the girls reported certain facets of their lives that got in their way of being active, and many of these things had not appeared in the published literature. This is significant. Second, it is important that while all of the girls spoke about things that got in their way, none of the girls referred to those things as "barriers." In fact, none of the girls used the word "barrier" until I mentioned it. Yet each girl knew what a barrier was. Each girl was able to give a good answer to the question, "Tell me what the word 'barrier' means to you." It is important that girls did not use the word "barrier." The girls in my study seemed to relate the idea of talking about things that got in their way or made it harder for them to engage in PA. That is a much different concept than a barrier that *prevents or stops girls* from engaging in PA.

After continued "toilsome concentration on the data" (Husserl, 1913/1962, p. 259), I realized that researchers and practitioners can really learn something from my unique work I conducted. This work was unique in that no one else to date has conducted similar work. It is my hope that the findings, once disseminated in professional journals, will have an impact on practice and research. In continuing to conduct studies about PA with youth, I will remember

the lessons I learned from the experts, the girls themselves. I will remember how very important and essential it is to focus on each girl as an individual, as that is the rationale for trying to understand her life-world and trying to understand her intentions, what she is trying to do, before making plans for her with regard to her PA. Joy summed it up in this wise observation. “Every girl has a different life, so there are various barriers in everybody’s lives that keep them from doing physical activity things.”

APPENDIX A

PHYSICAL ACTIVITY QUESIONNAIRE FOR CHILDREN (PAQ-C)

Formatted for computer completion.

We are trying to find out about your level of physical activity from the **last 7 days** (in the last week). This includes sports or dance that make you sweat or make your legs feel tired, or games that make you breathe hard, like tag, skipping, running, climbing and others.

Remember:

1. There are no right and wrong answers – this is not a test.
2. Please answer all the questions as honestly and accurately as you can – this is very important.

1. Physical activity in your spare time: Have you done any of the following activity in the past 7 days (last week)? If yes, how many times? (Mark only 1 circle per row.)					
	No (1)	1-2 times (2)	3-4 times (3)	5-6 times (4)	7 times or more (5)
Skipping	○	○	○	○	○
Rowing/canoeing	○	○	○	○	○
In-line skating	○	○	○	○	○
Tag	○	○	○	○	○
Walking for exercise	○	○	○	○	○
Bicycling	○	○	○	○	○
Jogging or running	○	○	○	○	○
Aerobics	○	○	○	○	○
Swimming	○	○	○	○	○
Baseball/Softball	○	○	○	○	○
Dance	○	○	○	○	○
Football	○	○	○	○	○
Badminton	○	○	○	○	○
Skateboarding	○	○	○	○	○
Soccer	○	○	○	○	○
Street Hockey	○	○	○	○	○
Volleyball	○	○	○	○	○
Floor Hockey	○	○	○	○	○
Basketball	○	○	○	○	○
Ice Skating	○	○	○	○	○
Cross-Country Skiing	○	○	○	○	○
Ice Hockey/ringette	○	○	○	○	○
Other:_____	○	○	○	○	○
Other: _____	○	○	○	○	○

2. In the last 7 days, during your physical education (gym) classes, how often were you very active (playing hard, running, jumping, throwing)? (Check one only).		
	I don't' do PE (Gym) Class	o (1)
	Hardly ever	o (2)
	Sometimes	o (3)
	Quite often	o (4)
	Always	o (5)

3. In the last 7 days, what did you normally do at lunch (besides eating lunch?) (check 1 only)		
	Sat down (talking, reading, doing schoolwork)	o (1)
	Stood around or walked around	o (2)
	Ran or played a little but	o (3)
	Ran around and played quite a bit	o (4)
	Ran and played hard most of the time	o (5)

4. In the last 7 days, on how many days right after school, did you do sports, dance, or play games in which you were very active? (Check 1 only).		
	None	o (1)
	1 time last week	o (2)
	2 or 3 times last week	o (3)
	4 times last week	o (4)
	5 times last week	o (5)

5. In the last 7 days, on how many evenings did you do sports, dance, or play games in which you were very active? (Check 1 only).		
	None	o (1)
	1 time last week	o (2)
	2 or 3 times last week	o (3)
	4 or 5 times last week	o (4)
	6 or 7 times last week	o (5)

6. On the last weekend, how many times did you do sports, dance, or play games in which you were very active? (Check 1 only).		
	None	o (1)
	1 time	o (2)
	2-3 times	o (3)
	4-5 times	o (4)
	6 or more times	o (5)

7. Which one of the following describes you best for the last 7 days? Read all five statements before deciding on the one that describes you.		
	All or most of my free time was spent doing things that involve little physical effort	○ (1)
	I sometimes (1-2 times last week) did physical things in my free time (i.e. played sports, went running, swimming, bike riding, did aerobics)	○ (2)
	I often (3-4 times last week) did physical things in my free time	○ (3)
	I quite often (5-6 times last week) did physical things in my free time	○ (4)
	I very often (7 or more times last week) did physical things in my free time	○ (5)

8. Mark how often you did physical activity (like playing sports, games, doing dance, or any other physical activity) for each day last week.					
	None (1)	Little Bit (2)	Medium (3)	Often (4)	Very Often (5)
Monday	○	○	○	○	○
Tuesday	○	○	○	○	○
Wednesday	○	○	○	○	○
Thursday	○	○	○	○	○
Friday	○	○	○	○	○
Saturday	○	○	○	○	○
Sunday	○	○	○	○	○

9. Were you sick last week, or did anything prevent you from doing your normal physical activities? (Check 1).		
	Yes	○
	No	○
	If YES, what prevented you	_____

APPENDIX B

THE ADOLESCENT PHYSICAL ACTIVITY PERCEIVED BARRIERS SCALE (APAPBARRIERS)

Formatted for computer completion.

Please show how true each statement is regarding certain barriers or problems that prevent or stop you from exercising, being active, or doing sports.

	Not at all true (1)	*Not very true (2)*	*Sort of true (3)*	*Very true (4)*
1. I feel self-conscious or concerned about my looks when I exercise.	○	○	○	○
2. I am not motivated or I am feeling too lazy to exercise.	○	○	○	○
3. I am too busy to exercise.	○	○	○	○
4. I have to exercise alone.	○	○	○	○
5. I am afraid to fail.	○	○	○	○
6. I have minor aches and pains from activity.	○	○	○	○
7. I am too tired to exercise.	○	○	○	○
8. I had a bad day at school.	○	○	○	○
9. It is very hard work to exercise.	○	○	○	○

APPENDIX C

IRB APPROVAL

Minimal Risk IRB (Health Sciences)

9/2/2011

Submission ID Number:	2011-0347
Title:	Documenting girls physical activity barriers and benefits according to physical activity level: Screening physical activity level and interviewing high active high barrier girls.
Principal Investigator:	SUSAN RIESCH
Point-of-Contact:	SUZANNE SASS
IRB Staff Reviewer:	SHERRY HOLCOMB

The convened MR IRB conducted a full review of the above-referenced initial application. The study was approved for the period of 12 months with the expiration date of 8/21/2012. To access the materials approved by the IRB, including any stamped consent forms, recruitment materials and the approved protocol, if applicable, please log in to your ARROW account and view the documents tab in the submission's workspace.

If you requested a HIPAA waiver of authorization, altered authorization and/or partial authorization, please log in to your ARROW account and view the history tab in the submission's workspace for approval details.

Prior to starting research activities, please review the Investigator's Responsibility guidance, which includes a description of IRB requirements for submitting continuing review progress reports, changes of protocol and reportable events: http://arrowhelp.hsirbs.wisc.edu/content/investigator-responsibilities.

Please contact the IRB office at 608-263-2362 with general questions. For questions related to this submission, contact the assigned staff reviewer.

APPENDIX D

CONSENT FORM

University of WISCONSIN-MADISON
Adult CONSENT for Child to Participate in Research: Study 2
Fall 2011/Winter 2012

Title of the Study: Documenting girls' physical activity barriers and benefits according to physical activity level: *Interviewing high active high barrier girls.*

Study Investigator: **Principal Investigator:**
Susan K. Riesch, Ph.D., RN, FAAN,
Phone: (608) 263-5169
Email: skriesch@wisc.edu
Student Researcher:
Suzanne M. Sass-DeRuyter, MS, APNP, RN
Phone: (262) 264-0041
Email: smsass@wisc.edu

Study Sponsor: UW-Madison School of Nursing
600 Highland Ave. CSC H6/238
Madison, WI 53792

INVITATION AND SUMMARY

Your daughter is invited to be in a research study. A research study is a way to find out about something. This study is a continuation of the past study that your daughter was in. This study is also about physical activity in girls age 11-14.

Your daughter is invited to be in this study because: (1) she is a girl between the ages of 11 and 14, (2) a student at Beaver Dam (WI) Middle School/St. Joseph's Catholic Middle School, (3) was in the first study ("Documenting girls' physical activity barriers and benefits according to physical activity level: *Screening physical activity level"*), (4) answered questions on the survey in the first study that suggest that she is physically active on most days, and (5) answered questions on the survey in the first study that suggest that she has many barriers to physical activity. The long term goal of our research is to get girls to become more physically active. For your daughter to be in this study, we must have consent from you and assent for your daughter. Participation is completely voluntary.

WHAT IS THE PURPOSE OF THIS STUDY?
The purpose of this study is to learn more about girls who are physically active even though they have personal barriers to being active.

The information learned from this study will be used in the future to help girls who are not physically active on most days of the week deal with their own barriers to physical activity. That is, to get these girls physically active, even though they have many of their own barriers to being active.

WHAT WILL MY DAUGHTER'S PARTICIPATION INVOLVE?
To be in this study, your daughter will be interviewed by the student researcher (Suzanne). Your daughter will be interviewed two different times. Each interview should take no longer than 45 minutes. It will be done in your home, at school, or the local public library. You and your daughter will pick a date that works best for you two and the student researcher. The interviews will be audio-recorded.

ARE THERE ANY RISKS FOR ME OR MY DAUGHTER?
There are no physical risks to being in this study. Sometimes, when asking questions about physical activity, and benefits and barriers to physical activity, people may feel uncomfortable. Your daughter does not have to answer any questions that make her feel uncomfortable. If at any time your daughter feels uncomfortable during the interview, the student researcher (Suzanne) who is a Nurse Practitioner, will talk to your daughter in private. She will make sure that she feels better before she leaves. If she does not feel better, she will be referred to her health care provider. In the event that she tells the student researcher that she has intentions to harm herself or others, the student researcher will talk to you about this. If the student researcher comes to your home to conduct the interview, as a professional licensed to practice nursing in the State of Wisconsin, she is mandated to report any evidence of child abuse to the authorities.

ARE THERE ANY BENEFITS TO ME OR MY DAUGHTER?
You (the parent) or your daughter is not expected to benefit directly from being in this study. Your daughter being in this study may benefit other people in the future. We will learn more about girls' physical activity and their own barriers and benefits of physical activity.

WILL MY DAUGHTER GET PAID FOR BEING IN THIS STUDY?
Your daughter will get $15 for each interview she takes part in. A total of $30 will be given to your daughter if she is a part of both interviews.

IF MY DAUGHTER DECIDES TO START THE STUDY, CAN SHE CHANGE HER MIND OR CAN SHE BE WITHDRAWN FROM THE STUDY WITHOUT MY PERMISSION?
You and your daughter's decision to be in this study is voluntary. You do not have to sign this form if you do not want your daughter to be in this study. You and your daughter may completely withdraw from this study at any time. The relationship with your school will not change if your daughter is in this study or not.

WILLL MY DAUGHTER'S CONFIDENTIALITY BE PROTECTED?
The information collected from your daughter during the interviews will be used by the researchers and research staff of UW-Madison. When the study is over, the student researcher will write a report about what was learned. The report will not include you or your daughter's name.

No one other than the researchers will know that your daughter is in this study. All information provided by your daughter during this study will remain anonymous and is kept on a secure server. Your daughter's names, address, or email address will not be linked to their interviews.

WHAT IF I HAVE QUESTIONS OR CONCERNS?
Please take as much time as you need to think over whether or not you want your daughter to be in this study. If you have any questions about this study at any time, you can contact Suzanne M. Sass-DeRuyter by telephone (262) 264-0041 or email: smsass@wisc.edu OR the Principal Investigator Susan K. Riesch by telephone (608) 253-5169 or email: skriesch@wisc.edu.

AGREEMENT TO PARTICIPATE IN THIS STUDY

I have read this CONSENT and authorization form describing the research study procedures, risks, and benefits. I have had a chance to ask questions about the study. I have received answers to my questions. I agree for my daughter to be in this research study.

Name of Parent (please print): _____

Name of Participant (CHILD) (please print): _____

Signature of parent _____ Date: _____

YOU WILL KEEP A COPY OF THIS FORM AFTER SIGNING IT.

Signature of person obtaining consent and authorization:

Name: _____

Signature: _____ Date: _____

APPENDIX E

ASSENT FORM

University of WISCONSIN-MADISON
Child ASSENT for Child to Participate in Research: STUDY 2
Fall 2011/Winter 2012

Title of the Study: Documenting girls' physical activity barriers and benefits according to physical activity level: *Interviewing high active high barrier girls.*

Study Investigator: **Principal Investigator:**
Susan K. Riesch, Ph.D., RN, FAAN,
Phone: (608) 263-5169
Email: skriesch@wisc.edu
Student Researcher:
Suzanne M. Sass-DeRuyter, MS, APNP, RN
Phone: (262) 264-0041
Email: smsass@wisc.edu

Study Sponsor: UW-Madison School of Nursing
600 Highland Ave. CSC H6/238
Madison, WI 53792

What is this study about?

You are invited to be in a research study. A research study is a way to find out about something. This study is the second part of the previous study that you were part off. This study is also about physical activity in girls age 11-14. This study is being done to learn more about girls that are physically active even though they have things that make it harder to be active.

What will I need to do if I am in this study?

To be in this study, you will be interviewed by the student researcher. You will be interviewed two different times. Each interview should take no longer than 45 minutes. It will be done in your home, at school, or the local public library. You and your parent will pick a date that works best for you two and the student researcher. The interviews will be audio-recorded.

Can I stop being in this study?

You may stop being in this study at any time and no one will mind. It is your choice.

Will anything bad happen to me if I am in this study?

We cannot say for sure that your answers will be kept secret. Sometimes, when talking about physical activity, people may feel sad, angry, or upset. You do not have to answer a question if you do not want to. If you feel sad, angry, or upset, the student researcher will talk to you. She will make sure that you feel better or get care for whatever is bothering you.

What good things might happen to me if I am in this study?

We do not think being in this study will help you. You may feel good knowing that what we find out from this study may help other people someday.

Will I be given anything for being in this study?

You will get $15 for each interview you take part in. A total of $30 will be given to you if you are part of both interviews.

Will anyone know that I am in this study?

No one other than the researchers and your parent will know that you are in this study. The only way that people would know that you are in this study is if you or your parent told them. The audio-recordings of your interviews will be kept private. The recording will not have your name on it. When the study is done, we will write a report about what was learned. This report will not have your name on it or that you were in the study. We will only tell your parent about what you said if we think you are feeling sad or not feeling well.

Who can I talk to about this study?

If you have any questions about this study or any problems, you can talk to your parent. If your parent has more questions, they can contact the research team (either Suzanne Sass-DeRuyter or Susan Riesch). Suzanne Sass-DeRuyter's phone number is (262) 264-0041 and her email is: smsass@wisc.edu. Susan Riesch's phone number is (608) 253-5169 or her email is: skriesch@wisc.edu.

What if I don't want to be in this study?

You do not have to be in this study. It is up to you. You can pick if you want to be in the study or not and you can stop being in the study whenever you want. If you say okay now, but change your mind later, that is okay too. Just tell one of the research team members.

AGREEMENT TO PARTICIPATE IN THIS STUDY
CHILD AUTHORIATION:

Your mom or dad (guardian) has to give permission for you to be in this study if you decide you want to be in it. I have been told about the study and what I will need to do if I agree to be a part of it. I agree to be in this study. I have been told that I can stop at any time. I asked and got answers to my questions. I can keep a copy of this paper.

Name of Participant (CHILD) (please print): _____

Name of Parent (please print): _____

Signature of Child: _____ Date: _____
YOU WILL KEEP A COPY OF THIS FORM AFTER SIGNING IT.

PRINCIPAL INVESTIGATOR or PERSON OBTAINING ASSENT:

I have discussed this research study with the child using language that is understandable and appropriate. I believe I have fully informed the participant of the nature of the study and its possible risks and benefits. I believe the participant understood this explanation and assented to participate in this study.

Signature of person obtaining consent and authorization:

Name: _____

Signature: _____ Date: _____

APPENDIX F

INITIAL RECRUITMENT MATERIALS

LETTER (PARENT) FOR POTENTIAL STUDY RECRUITMENT

Date

Dear Parents of a Beaver Dam Middle School/St. Joseph's Catholic Middle School girl,

I am the doctoral student from the School of Nursing at UW-Madison who surveyed your daughter at her school about physical activity last fall. I would like to invite your daughter to be in my next study. Her scores on the surveys indicated she was high active in spite of barriers to physical activity.

The purpose of my next study is to learn more about girls who are physically active even though they have barriers to being active.

Girls in this study will be interviewed two different times. Each interview will last up to 45 minutes. Interviews will be audio-recorded. Interviews will be about 1 to 4weeks apart.

Parent consent and child assent will be signed when I meet you and your daughter in person to talk about the study. If you and your daughter agree to be in the study, you will sign the consent form and your daughter will sign the assent form at that time.

Girls who are in this study will get $15 for each interview they are in. They can get up to $30 if they are in both interviews.

If you have questions or comments you can call me at (262) 264-0041 or email me at: smsass@wisc.edu. You can also contact one of my advisors, Susan Riesch (608) 263-5169 or skriesch@wisc.edu or Eileen Porter (608) 263-5273 or hporter2@wisc.edu.

Your daughter does not have to be in this study. It is you and your daughter's choice. Your daughter's relationship with the school will not be affected whether or not she is in this study.

If there are any other questions I can answer about the study, please contact me.

Thank you for you and your daughter's interest in this study!

Suzanne M. Sass-DeRuyter, APNP, RN
PhD Student
University of Wisconsin-Madison
School of Nursing

EMAIL SCRIPT FOR POTENTIAL STUDY RECRUITMENT

Hi (person's name here),

I am the doctoral student from the School of Nursing at UW-Madison who surveyed your daughter at her school about physical activity last fall. I would like to invite your daughter to be in my next study. Her scores on the surveys indicated she was high active in spite of barriers to physical activity.

The purpose of my next study is to learn more about girls who are physically active even though they have barriers to being active.

Girls in this study will be interviewed two different times. Each interview will last up to 45 minutes. Interviews will be audio-recorded. Interviews will be about 1 to 4 weeks apart.

Parent consent and child assent will be signed when I meet you and your daughter in person to talk about the study. If you and your daughter agree to be in the study, you will sign the consent form and your daughter will sign the assent form at that time.

Girls who are in this study will get $15 for each interview they are in. They can get up to $30 if they are in both interviews.

If you have questions or comments you can call me at (262) 264-0041 or email me at: smsass@wisc.edu. You can also contact one of my advisors, Susan Riesch (608) 263-5169 or skriesch@wisc.edu or Eileen Porter (608) 263-5273 or hporter2@wisc.edu.

Your daughter does not have to be in this study. It is you and your daughter's choice. Your daughter's relationship with the school will not be affected whether or not she is in this study.

If you have any more questions about the study, please contact me. You can either email me again at smsass@wisc.edu or call me at (262) 264-0041.

Thank you for you and your daughter's interest in this study!

Suzanne M. Sass-DeRuyter, APNP, RN
PhD Student
University of Wisconsin-Madison
School of Nursing

TELEPHONE SCRIPT FOR STUDY RECRUITMENT

Hi, my name is Suzanne Sass DeRuyter. I am the doctoral student from the School of Nursing at UW-Madison who surveyed your daughter at her school about physical activity last fall. I would like to invite your daughter to be in my next study because her scores on the surveys indicated she was high active in spite of barriers to physical activity.

If the question is about the purpose of the study: The purpose of my next study is to learn more about girls who are physically active even though they have barriers to being active.

If the question is about what is expected of girls in the study: Girls in this study will be interviewed two different times, about 1 to 4 weeks apart. Each interview will last up to 45 minutes. Interviews will be audio-recorded. We can meet at a place convenient to you and your daughter.

If the question is about the consent process: Parent consent and child assent will be signed when I meet you and your daughter in person to talk about the study. If you and your daughter agree to be in the study, you will sign the consent form and your daughter will sign the assent form at that time.

If the question is about getting something in return for being in the study: Girls who are in this study will get $15 for each interview they are in. They can get up to $30 if they are in both interviews.

If you have questions or comments you can call me at (262) 264-0041 or email me at: smsass@wisc.edu. You can also contact one of my advisors, Susan Riesch (608) 263-5169 or skriesch@wisc.edu or Eileen Porter (608) 263-5273 or hporter2@wisc.edu.

If the question is about voluntariness: Your daughter does not have to be in this study. It is you and your daughter's choice. Your daughter's relationship with the school will not be affected whether or not she is in this study.

Are there any other questions that you have about the study?

APPENDIX G

RECRUITMENT MATERIALS INDICATING THAT THE RESEARCHER HAS TO MEET OTHER REQUIREMENTS PRIOR TO INTERVIEWING

LETTER TO THE PARENT / LEGAL GURADIAN

Date

Dear Parents of a Beaver Dam Middle School/St. Joseph's Catholic Middle School girl,

I am the doctoral candidate from the School of Nursing at UW-Madison who surveyed your daughter at her school about physical activity last fall. I would like to invite your daughter to be in my next study. Her scores on the surveys indicated she was high active in spite of barriers to physical activity.

The purpose of my next study is to learn more about girls who are physically active even though they have barriers to being active.

Girls in this study will be interviewed two different times. Each interview will last up to 45 minutes. Interviews will be audio-recorded. Interviews will be about 1 to 4weeks apart.

Parent consent and child assent will be signed when I meet you and your daughter in person to talk about the study. If you and your daughter agree to be in the study, you will sign the consent form and your daughter will sign the assent form at that time.

Girls who are in this study will get $15 for each interview they are in. They can get up to $30 if they are in both interviews.

Even though you are getting this letter now to tell you that your daughter is eligible to participate, the interviews will not begin for awhile. I have to meet certain school requirements before I can start the interviews. I will send you a letter in the mail when I am able to start the interviews. If you have questions or comments you can call me at (262) 264-0041 or email me at: smsass@wisc.edu. You can also contact one of my advisors, Susan Riesch (608) 263-5169 or skriesch@wisc.edu or Eileen Porter (608) 263-5273 or hporter2@wisc.edu.

Your daughter does not have to be in this study. It is you and your daughter's choice. Your daughter's relationship with the school will not be affected whether or not she is in this study.

If there are any other questions I can answer about the study, please contact me.

Thank you for you and your daughter's interest in this study!

Suzanne M. Sass-DeRuyter, APNP, RN
PhD Candidate
University of Wisconsin-Madison
School of Nursing

EMAIL TO PARENT / LEGAL GUARDIAN

Hi (person's name here),

I am the doctoral candidate from the School of Nursing at UW-Madison who surveyed your daughter at her school about physical activity last fall. I would like to invite your daughter to be in my next study. Her scores on the surveys indicated she was high active in spite of barriers to physical activity.

The purpose of my next study is to learn more about girls who are physically active even though they have barriers to being active.

Girls in this study will be interviewed two different times. Each interview will last up to 45 minutes. Interviews will be audio-recorded. Interviews will be about 1 to 4 weeks apart.

Parent consent and child assent will be signed when I meet you and your daughter in person to talk about the study. If you and your daughter agree to be in the study, you will sign the consent form and your daughter will sign the assent form at that time.

Girls who are in this study will get $15 for each interview they are in. They can get up to $30 if they are in both interviews.

Even though you are getting this email now to tell you that your daughter is eligible to participate, the interviews will not begin for awhile. I have to meet certain school requirements before I can start the interviews. I will send you an email when I am able to start the interviews. If you have questions or comments you can call me at (262) 264-0041 or email me at: smsass@wisc.edu. You can also contact one of my advisors, Susan Riesch (608) 263-5169 or skriesch@wisc.edu or Eileen Porter (608) 263-5273 or hporter2@wisc.edu.

Your daughter does not have to be in this study. It is you and your daughter's choice. Your daughter's relationship with the school will not be affected whether or not she is in this study.

If you have any more questions about the study, please contact me. You can either email me again at smsass@wisc.edu or call me at (262) 264-0041.

Thank you for you and your daughter's interest in this study!

Suzanne M. Sass-DeRuyter, APNP, RN
PhD Candidate
University of Wisconsin-Madison
School of Nursing

TELEPHONE SCRIPT FOR PARENT / LEGAL GUARDIAN

Hi, my name is Suzanne Sass DeRuyter. I am the doctoral candidate from the School of Nursing at UW-Madison who surveyed your daughter at her school about physical activity last fall. I would like to invite your daughter to be in my next study because her scores on the surveys indicated she was high active in spite of barriers to physical activity.

If the question is about the purpose of the study: The purpose of my next study is to learn more about girls who are physically active even though they have barriers to being active.

If the question is about what is expected of girls in the study: Girls in this study will be interviewed two different times, about 1 to 4 weeks apart. Each interview will last up to 45 minutes. Interviews will be audio-recorded. We can meet at a place convenient to you and your daughter.

If the question is about the consent process: Parent consent and child assent will be signed when I meet you and your daughter in person to talk about the study. If you and your daughter agree to be in the study, you will sign the consent form and your daughter will sign the assent form at that time.

If the question is about getting something in return for being in the study: Girls who are in this study will get $15 for each interview they are in. They can get up to $30 if they are in both interviews.

If the question is about scheduling the interviews: Even though I am calling you now to tell you that your daughter is eligible to participate, the interviews will not begin for awhile. I have to meet certain school requirements before I can start the interviews. I will call you again when I am able to start the interviews. If you have questions or comments you can call me at (262) 264-0041 or email me at: smsass@wisc.edu. You can also contact one of my advisors, Susan Riesch (608) 263-5169 or skriesch@wisc.edu or Eileen Porter (608) 263-5273 or hporter2@wisc.edu.

If the question is about voluntariness: Your daughter does not have to be in this study. It is you and your daughter's choice. Your daughter's relationship with the school will not be affected whether or not she is in this study.

Are there any other questions that you have about the study?

APPENDIX H

RECRUITMENT MATERIALS INDICATING THAT THE RESEARCHER HAS MEET REQUIREMENTS AND ACTIVE RECRUITMENT WILL BEGIN

LETTER TO THE PARENT / LEGAL GUARDIAN

Date

Dear Parents of a Beaver Dam Middle School/St. Joseph's Catholic Middle School girl,

I am the doctoral candidate from the UW-Madison School of Nursing who conducted the survey at your daughter's school last fall. I am now able to conduct interviews with the girls who meet criteria for my next study.

I am inviting your daughter to be interviewed because she is between ages 11 to 14, speaks, reads, and writes English, and her scores on last fall's survey indicated she was high active in spite of barriers to physical activity.

The purpose of this study is to learn more about girls who are physically active even though they have barriers to being active.

Girls in this study will be interviewed two different times. Each interview will last up to 45 minutes. Interviews will be audio-recorded. Interviews will be about 1 to 4 weeks apart.

Parent consent and child assent will be signed when I meet you and your daughter in person to talk about the study. If you and your daughter agree to be in the study, you will sign the consent form and your daughter will sign the assent form at that time.

Girls who are in this study will get $15 for each interview they are in. They can get up to $30 if they are in both interviews.

I am now able to start interviewing. Parents/legal guardians who want their daughter to be in this study will have to contact me. You can either call me (262) 264-0041 or email me at: smsass@wisc.edu. You can also contact one of my advisors, Susan Riesch (608) 263-5169 or skriesch@wisc.edu or Eileen Porter (608) 263-5273 or hporter2@wisc.edu.

Your daughter does not have to be in this study. It is you and your daughter's choice. Your daughter's relationship with the school will not be affected whether or not she is in this study.

If there are any other questions I can answer about the study, please contact me.

Thank you for you and your daughter's interest in this study!

Suzanne M. Sass-DeRuyter, APNP, RN
PhD Candidate
University of Wisconsin-Madison
School of Nursing

EMAIL SCRIPT TO PARENT / LEGAL GUARDIAN

Hi (person's name here),

I am the doctoral candidate from the UW-Madison School of Nursing who conducted the survey at your daughter's school last fall. **I am now able to conduct interviews with the girls who meet criteria for my next study.**

I am inviting your daughter to be interviewed because she is between ages 11 to 14, speaks, reads, and writes English, and her scores on last fall's survey indicated she was high active in spite of barriers to physical activity.

The purpose of this study is to learn more about girls who are physically active even though they have barriers to being active.

Girls in this study will be interviewed two different times. Each interview will last up to 45 minutes. Interviews will be audio-recorded. Interviews will be about 1 to 4 weeks apart.

Parent consent and child assent will be signed when I meet you and your daughter in person to talk about the study. If you and your daughter agree to be in the study, you will sign the consent form and your daughter will sign the assent form at that time.

Girls who are in this study will get $15 for each interview they are in. They can get up to $30 if they are in both interviews.

I am now able to start interviewing. Parents/legal guardians who want their daughter to be in this study will have to contact me. You can either call me at (262) 264-0041 or email her at: smsass@wisc.edu. You can also contact one of my advisors, Susan Riesch (608) 263-5169 or skriesch@wisc.edu or Eileen Porter (608) 263-5273 or hporter2@wisc.edu.

Your daughter does not have to be in this study. It is you and your daughter's choice. Your daughter's relationship with the school will not be affected whether or not she is in this study.

If you have any more questions about the study, please contact me. You can either email me again at smsass@wisc.edu or call me at (262) 264-0041.

Thank you for you and your daughter's interest in this study!

Suzanne M. Sass-DeRuyter, APNP, RN
PhD Candidate
University of Wisconsin-Madison
School of Nursing

EMAIL SCRIPT FOR PARENT / LEGAL GUARDIAN

Hi, my name is Suzanne Sass DeRuyter. I am the doctoral candidate from the UW-Madison School of Nursing who conducted the survey at your daughter's school last fall. I am now able to conduct interviews with the girls who meet criteria for my next study.

If the question is about eligibility for the study: I am inviting your daughter to be interviewed because she is between ages 11 to 14, speaks, reads, and writes English, and her scores on last fall's survey indicated she was high active in spite of barriers to physical activity.

If the question is about the purpose of the study: The purpose of this study is to learn more about girls who are physically active even though they have barriers to being active.

If the question is about what is expected of girls in the study: Girls in this study will be interviewed two different times. Each interview will last up to 45 minutes. Interviews will be audio-recorded. Interviews will be about 1 to 4 weeks apart.

If the question is about the consent process: Parent consent and child assent will be signed when I meet you and your daughter in person to talk about the study. If you and your daughter agree to be in the study, you will sign the consent form and your daughter will sign the assent form at that time.

If the question is about getting something in return for being in the study: Girls who are in this study will get $15 for each interview they are in. They can get up to $30 if they are in both interviews.

If the question is about scheduling the interviews: I am now able to start interviewing. Parents/legal guardians who want their daughter to be in this study will have to contact me. You can either call me at (262) 264-0041 or email her at: smsass@wisc.edu. You can also contact one of my advisors, Susan Riesch (608) 263-5169 or skriesch@wisc.edu or Eileen Porter (608) 263-5273 or hporter2@wisc.edu.

If the question is about voluntariness: Your daughter does not have to be in this study. It is you and your daughter's choice. Your daughter's relationship with the school will not be affected whether or not she is in this study.

Are there any other questions that you have about the study?

APPENDIX I

INITIAL INTERIVEW GUIDE

First Interview

A_1 What activities do you do?

Probe: When do they happen? For example, during school, after school, in your free time
Probe: How do they happen? For example, do you participate in e.g. soccer on a team or do you play with friends in your backyard?
Probe: How did it get started that you play e.g. soccer?
Probe: What was it about e.g. soccer that you like?
Probe: Tell me more about what this is like for you to be physically active in e.g. soccer.
Probe: Do you feel any kind of pressure to be physically active or to play e.g. soccer?

A_2 Tell me what the words “physical activity” mean to you.

Probe: What does the word “physical” mean to you?
Probe: What activities do you think of as physical?

A_3 Do you think you are physically active?

A_4 How much physical activity do you think you should get in a day?

A_5 Do you think you get enough physical activity every day?

Probe: How do you know you are getting enough physical activity?
Probe: What changes happen to you when you are getting enough physical activity?

A_6 What are your reasons for/for not thinking you are physically active?

Probe: Tell me about how that happens?
Probe: Tell me what it is about you that makes the difference?

Second Interview

B_1 For example, not having enough time is a common thing that makes it harder for girls to get physical activity. You say that you e.g. do not have enough time, but yet you get enough physical activity. Tell me more about that.

Probe: Tell me about how that happens?

Probe: Tell me what it is about you that makes the difference?

B_2 Do things happen that make it harder for you to be physically active?

Probe: If so, what are these things and what are they like?

Probe: When that happens, what do you do to get physical activity?

Probe: What problems come up that get in your way of being physically active?

[Explore each response and then ask: When that problem comes up, how do you work it out to still get physical activity?

B_3 On the survey you completed at school, you said that e.g. "x" was something that made it harder or stopped you from being physically active. Tell me more about that.

Probe: Tell me why/why not it was harder for you?

Probe: Do you think that certain things get in your way more than others? Why/why not.

***Ask question #3 for each identified barrier on The Adolescent Physical Activity Perceived Barriers Scale that was not already addressed in question #1 and/or #2.*

B_4 Tell me what 'the word' barrier means to you.

B_5 Do you think of any of the things that make it harder for you to get physical activity as barriers?

Probe: Tell me more about why/why not e.g. "x" is a barrier.

B_6 Do you think girls your age have barriers or things that make it harder for them to be physically active?

Probe: What kind of barriers could girls your age have to physical activity?

Probe: What barriers to physical activity are probably most common in girls your age?

Probe: I don't want to know any names, but do you know of a situation when a girl faced a barrier to getting enough activity? Explore reasons for any response.

B_7 What do you get out of being physically active?

Probe: What does it do for you to be physically active?
Probe: What are you trying to do by being physically active?
Probe: What you do like about being physically active?
Probe: Are there any downsides to being physically active?

B_8 Do you think you can be physically active?

APPENDIX J

TABLE OF RESPONSES FOR PILOT OF INTERVIEW GUIDE

A_1	**"What activities do you do?"**
#82	**RESPONDENT:** I do walking. Like after school I'll go and walk the block by our house. Once in a while we have a bike downstairs, like one of those workout bikes, I'll go on that like maybe twice a week or something for like 10 to 15 minutes sometimes. It kind of depends on how much homework I get.
#184	**RESPONDENT:** Like sports? *(pause)* **INTERVIEWER:** *(nod)* **RESPONDENT:** Well, I just started tap dance. Ummmm… I'm signing up for volleyball and *(pause)* that's mostly it.

A_2	**"Tell me what 'the words' physical activity means to you."**
#82	**RESPONDENT:** Physical activity to me would mean like working and like, kind of being like in motion where it's hard, like where you eventually work up a sweat and like you're getting a good workout, you know. Like you're tried, but then you feel really good about yourself because you accomplished something.
#184	**RESPONDENT:** *(stumbling for words)*…Like… that….no… gosh. That it's something that makes you tired when you do it and it is like physical. **INTERVIEWER:** Are you able to think of a different word other than physical to tell me what the words "physical activity" means to you? **RESPONDENT:** ahhhhhhhhhhh… sigh. *(long pause).* **INTERVIEWER:** So it makes you tired when you do it. **RESPONDENT:** Yeah.

A_3	**"Do you think you are physically active?"**
#82	**RESPONDENT:** Yes. I would say I am fit for my age.
#184	**RESPONDENT:** Mmm. Hmm. Yeah.

A_4	**"How much physical activity do you think you should get in a day?"**
#82	**RESPONDENT:** Well, I strive for 60. Sometimes I meet that goal, sometimes I fall a little bit behind. Like today, I'd say I only got like 45 so far, being down at my grandma's. So that means I'll go home and then I'll do the extra minutes to get to my goal.
#184	**RESPONDENT:** Like how many hours? **INTERVIEWER:** Or how much do you think in general. **RESPONDENT:** Well maybe like an *(pause)* hour, half and hour. **INTERVIEWER:** A day? **RESPONDENT:** Yeah.

A_5	**"Do you think you get enough physical activity every day?"**
#82	**RESPONDENT:** Yeah.
#184	**RESPONDENT:** Yeah. *In the context:* **INTERVIEWER:** So do you think based on what you are telling me you should get an hour to half hour a day to be physically active? **RESPONDENT:** Yeah. **INTERVIEWER:** Do you think that you get that? **RESPONDENT:** Yeah.

A_6	**"What are your reasons for/for not thinking you are physically active?"**
#82	**RESPONDENT:** No, except for that I'm continuing to strive at my goals and continuing to work out. *In the context:* **INTERVIEWER:** Okay. That's wonderful. And then what are your reasons for thinking that you are physically active? You covered, you basically said because of the way you feel. Is there anything else that you think is important for me to know today about you? **RESPONDENT:** No, except for that I'm continuing to strive at my goals and continuing to work out.
#184	**RESPODNENT:** *(long, long pause)* **INTERVIEWER:** Is it the time that you spend or is the way that it makes you feel for example? **RESPONDENT:** Its… *(pause)…* Hang on I've got to think. *(giggle… long, long pause)…* I think it is basically because the time I spend doing my stuff. How hard I work at it and stuff.

B_1	**"e.g. Not having enough time is a common thing that makes it harder for girls to get physical activity. You say that you e.g. do not have enough time, but yet you get enough physical activity. Tell me more about that."**
#82	**RESPONDENT**: When like I know tonight I may not get in my full time because I have a lot of homework so like if I don't have as much homework tomorrow then I might put in the extra time somewhere. Like where I might take a break and add in the extra time. Or like sometimes I will also, if I miss a whole week, I say okay I'm not going to count that towards my goal. I'll just add it in slowly like a couple of minutes on each time until I am caught up again.
#184	**RESPONDENT:** Well basically because I don't want to fail at it, I want to try hard. But if I don't do it I feel like I failed like I didn't do it.

B_2	**"Do things happen that make it harder for you to be physically active?"**
#82	**RESPONDENT**: Recently I have had a little bit of a cold so I'm not able to go as far, as long, because of my health. Also I have, also when the menstruation cycle comes around I find it harder to exercise because you are in more pain and everything. So I may usually try not to count that towards my goal since I can't always control it. So then I try to just keep going as much as I can. If I can't do it than I don't really worry about it because I can just catch up.
#184	**RESPONDENT:** I don't understand. What types of things? *In the context::* **INTERVIEWER:** Do things happen that make it harder for you to be physically active? **RESPONDENT:** I don't understand. What types of things? **INTERVIEWER:** For example, are there things that get in the way that make it harder for you to be physically active? For example, like school, friends (interrupted)… **RESPONDENT:** Yeah. Like school, because if I have a lot of work or if I am not doing very good at school, I think it is more important to work on that first before.

B_3	**"On the survey you completed at school, you said that e.g. "x" was something that made it harder or stopped you from being physically active. Tell me more about that."**
#82	**RESPONDENT**: Sometimes peer pressure like if I have friends over I won't do it because they don't want or they think it is weird. So I won't do it that night or something.
#184	**RESPONDENT:** Well, basically when I have a bad at school, I will listen to music and will just practice my dance moves.

B_4	**"Tell me what 'the word' barrier means to you."**
#82	**RESPONDENT**: A barrier I automatically think of as a wall like something you, that stops you, that prevents you from going on. So it's like my sister's basketball. It is sometimes… it is a barrier to my exercise because I can't always go outside if it is winter, I'm most likely not going to go outside and walk around as much as I want to or something like that.
#184	**RESPONDENT:** Barrier? I have no clue. *In the context:* **INTERVIEWER:** Tell me what the word barrier means to you. **RESPONDENT:** Barrier? I have no clue. **INTERVIEWER:** Have you ever heard the word used before? **RESPONDENT:** I think so. **INTERVIEWER:** Does anything come to your mind? **RESPONDENT:** Oh. Yeah. Something in your way.

B_5	**"Do you think of any of the things that make it harder for you to get physical activity as barriers?"**
#82	**RESPONDENT**: Well my appendicitis is definitely a barrier for me and always constantly trying to find a way to move around it. Homework and other conflicts that I already talked to you with is also… mainly those are my barriers.
#184	**RESPONDENT:** Not really. **INTERVIEWER:** Can you tell me more? **RESPONDENT:** I don't know. It is just I try to do it.

B_6	**"Do you think girls your age have barriers or things that make it harder for them to be physically active?"**
#82	**RESPONDENT**: I think a lot of things that make it harder for us. Like friends and like the drama because some kids caught up in the drama that they forget about looking after their own selves...aside from cleaning and cleansing, like being healthy by activeness.
#184	**RESPONDENT:** Yeah. **INTERVIEWER:** What kind of barriers do you think that they have? **RESPONDENT:** In our gym class a lot girls don't want to do the stuff because they are going to get all sweaty and their hair is going to get all messed up. I don't really care about that kind of stuff because my friends don't care what I look like so.

B_7	**"What do you get out of being physically active?"**
#82	**RESPONDENT**: I'm trying to increase my chances for like less cancer, possibly for less heart attack and like trying to maintain the healthiest life I can possibly for my age range now.
#184	**RESPONDENT:** I just feel proud. **INTERVIEWER:** Proud because...(interrupted) **RESPONDENT:** I can do it and I worked hard and stuff.

B_8	**"Do you think you can be physically active?"**
#82	**RESPONDENT**: Yeah. I always find time or I make a way that I can get physical activity.
#184	**RESPONDENT:** (nod - yes)

APPENDIX K

REVISED INTERVIEW GUIDE

First Interview

A_1 What activities do you do?

Probe: When do they happen? For example, during school, after school, in your free time
Probe: How do they happen? For example, do you participate in e.g. soccer on a team or do you play with friends in your backyard?
Probe: How did it get started that you play e.g. soccer?
Probe: What was it about e.g. soccer that you like?
Probe: Tell me more about what this is like for you to be physically active in e.g. soccer.
Probe: Do you feel any kind of pressure to be physically active or to play e.g. soccer?

A_2 Tell me what the words “physical activity” mean to you.

Probe: What does the word “physical” mean to you?
Probe: What activities do you think of as physical?

A_3 Do you think you are physically active?

A_4 Additional Question For what reasons do you think of yourself as physically active/not physically active?

A_5 How much physical activity do you think you should get in a day?

A_6 Do you think you get enough physical activity every day?

Probe: How do you know you are getting enough physical activity?
Probe: What changes happen to you when you are getting enough physical activity?

A_7 What are your reasons for/for not thinking you are physically active?

Second Interview

B_1 For example, not having enough time is a common thing that makes it harder for girls to get physical activity. You say that you e.g. do not have enough time, but yet you get enough physical activity. Tell me more about that.

Probe: Tell me about how that happens?

Probe: Tell me what it is about you that makes the difference?

B_2 Revised Question What sort of things happen that make it harder for you to be physically active?

Probe: If so, what are these things and what are they like?

Probe: When that happens, what do you do to get physical activity?

Probe: What problems come up that get in your way of being physically active? [Explore each response and then ask: When that problem comes up, how do you work it out to still get physical activity?

B_3 On the survey you completed at school, you said that e.g. "x" was something that made it harder or stopped you from being physically active. Tell me more about that.

Probe: Tell me why/why not it was harder for you?

Probe: Do you think that certain things get in your way more than others? Why/why not.

***Ask question #3 for each identified barrier on The Adolescent Physical Activity Perceived Barriers Scale that was not already addressed in question #1 and/or #2.*

B_4 Additional Question Is there anything else that gets in your way with being physically active?

B_5 Tell me what 'the word' barrier means to you.

B_6 Do you think of any of the things that make it harder for you to get physical activity as barriers?

Probe: Tell me more about why/why not e.g. "x" is a barrier.

B_7 Do you think girls your age have barriers or things that make it harder for them to be physically active?

Probe: What kind of barriers could girls your age have to physical activity?

Probe: What barriers to physical activity are probably most common in girls your age?

Probe: I don't want to know any names, but do you know of a situation when a girl faced a barrier to getting enough activity? Explore reasons for any response.

B_8 What do you get out of being physically active?
Probe: What does it do for you to be physically active?
Probe: What are you trying to do by being physically active?
Probe: What you do like about being physically active?
Probe: Are there any downsides to being physically active?

B_9 Do you think you can be physically active?

B_10 Additional Question Do you see yourself being physically active in high school?
Probe: Tell me more about that.

B_11 Additional Question Do you see yourself being physically active later, if you were a mom?
Probe: Tell me more about that.

B_12 Additional Question Do you see yourself being physically active later, if you were a grandma?
Probe: Tell me more about that.

APPENDIX L

IRB ARROVAL OF INTERVIEW GUIDE

Minimal Risk IRB (Health Sciences)
4/27/2012

Submission ID Number:	2011-0347-CPOO3
Title:	Documenting girls physical activity barriers and benefits according to physical activity level: Screening physical activity level and interviewing high active high barrier girls.
Principal Investigator:	SUSAN RIESCH
Point-of-Contact:	SUZANNE SASS
IRB Staff Reviewer:	CAROL PECH

A designated MR IRB member conducted an expedited review of the above-referenced change of protocol application. The change of protocol application was approved by the IRB member for the remainder of the approval period. This study expires on 8/21/2012. The change of protocol application qualified for expedited review pursuant to 45 CFR 46.110 and, if applicable, 21 CFR 56.110 and 38 CFR 16.110. You must log in to your ARROW account in order to view the specific changes approved by the IRB.
To access the materials approved by the IRB, including any stamped consent forms, recruitment materials and the approved protocol, if applicable, please log in to your ARROW account and view the documents tab in the submission's workspace.

If you requested a HIPAA waiver of authorization, altered authorization and/or partial authorization, please log in to your ARROW account and view the history tab in the submission's workspace for approval details.

Please review the Investigator Responsibilities guidance (http://go.wisc.edu/m0lovn.), which includes a description of IRB requirements for submitting continuing review progress reports, changes of protocol and reportable events.

Please contact the appropriate IRB office with general questions: Health Sciences IRBs at 608-263-2362 or Education Research and Social & Behavioral Science IRBs at 608-263-2320. For questions related to this submission, contact the assigned staff reviewer

APPENDIX M

EXAMPLE OF THE INTERVIEW QUESTIONS AND PROBES FOR A FIRST INTERVIEW

A_1 [So the first question I'm going to ask you is, what activities do you do?] I do walking. Like after school, I'll go and walk the block by our house. Once in a while… we have a bike downstairs, like one of those workout bikes. I'll go on that like maybe twice a week or something for like 10 to 15 minutes sometimes. It kind of depends on how much homework I get.

Spontaneous probe: [How much work you have. So homework is something that, if you have a lot of it, you probably wouldn't do a lot of activities that night?] Yeah.

Spontaneous probe: [Are you, now, when you walk around the block, is that with a friend or is that with yourself?] Mainly it's by myself. But sometimes I do wait until my younger sister gets home.

Spontaneous probe: [How old is your sister?] She's in 5th grade.

Spontaneous probe: [Okay. And you're in what grade?] 7th.

A_2 A_2 PROBE_2 [And what kind of activities do you think of as being physical activities?] Like when I think of physical activities… like if I think of like walking, I think like long distance or like long period walking, like running. Sometimes I… like during the summer, I think of swimming.

Spontaneous probe: [Are your family members, so you said that your sister is very active, are your parents active too?] Well, they do go for their walks every night because my dad has to stay healthy with the new semi laws and everything. So, yeah, I'd say they're getting better about being active. [They're getting better about being active.] (nod).

A_3 A_3 [Do you think that you're physically active?] Yes. I would say I am fit for my age.
Spontaneous probe: [Okay. So if you compare yourself to a lot of your friends or your peers, the people that are in your grade, do you feel that you're pretty comparable, that you're pretty physically active?] Yes.
Spontaneous probe: [Do you feel like you're more active than most kids or less active than?] I'd say I'm pretty average because, like I said, not every night am I physically active. It's just like most of the time.
Spontaneous probe: [So would you say like 5 or more times, less than 5 times?] I'd say around 5 times because the weekends get pretty crazy. [So, it's easier for you to do it during the weekdays. So school days versus the weekends?] Yes.

APPENDIX N

EXAMPLE OF THE INTERIVIEW QUESTIONS AND PROBES FOR A SECOND INTERVIEW

Thank you so much for coming back for the 2nd interview. I really enjoyed reviewing our conversation from last time. I have a few questions that I thought of after our 1st interview and that is where we will start today.

What I am really trying to do is to understand what you are trying to do in regard to your activity. You said a few things last time that really jumped out at me, so I want to start with those to see if these are things you are trying to do.

First, you said that you *"strive for 60."* So, I was thinking that "striving for 60" is something you are really trying to do.

Tell me more about that.
Where did this idea/this number come from?
Are your "striving for 60" or have you achieved 60?
How long have you been "striving for 60?"

You said that it is "a goal" of yours to be active because of your appendicitis when you were 5. You mentioned that your "doctors always told you [me] not to do anything." Would I be right in thinking that you are *trying to be more active than the doctor said I should be*?

Tell me more about this.

What was it like to have your doctors tell you something like that? You surgery was about 8 years ago. Are the doctors still saying that to you?

Do you think about what they said when you are walking or playing sports or getting on the bike? How does what your doctor said affect you, as far as your activity goes?
Does what the doctor said hold you back from being active in any way?

Last time you spoke about stretching out the area where you had your appendicitis so that you would be "able to like get more endurance and like stamina to like be able to compete with my (your) sister." So, it is true that you are "trying to get more endurance and stamina"?

How are you going about doing that?

You also said that you were trying to do that to like be able to compete with your [my] sister, because right now she can like outdo me in everything." Would you say that you are "competing with your sister?"

What do you mean by "compete" with your sister?
Do you feel like you are competing with anyone else in the same way as your sister?

You also spoke about “finding my limits every day” in regard to being active after your appendicitis. So, it seemed that “finding my limits every day” is something you are really trying to do. Am I right about that?

Tell me more about what it is like to be finding your limits every day.
How do you define “your limits?”
Tell me what it feels like to “find your limits every day?”
How do you know that you “find your limits?”

You stated that you *“would say that I am fit for my age.”*

Tell me more about this.
Are you trying to be “fit” for your age?
Are you becoming “fit” or are you “fit”.
Do you have a goal about staying fit?

You said that you *“made yourself (myself)f a goal that to either stay at the same size or I could drop a size without being over obsessive about it.”*

Tell me more about this.
Have your achieved your goal?
Are you in the process of achieving your goal?”
What happens when you do achieve your goal?
Tell me more about “without being over obsessive about it.”

So, that really helps me to understand the main things that you are trying to do. Now I just want to ask a few more things about your activities.

At our last meeting, one thing you said was: “I do walking.”

Tell me more about that.
Do you have a certain purpose in mind?
After you said, “I do walking,” you went on to say, “Like, I walk the block.” So, I was interested in knowing if you only walk the block or if you do this kind of somewhere else too.
What is it about “walking” that you like/dislike?
How much time do you spend “walking?”
How did it get started?
Do you walk alone or with others?
How does walking happen for you “alone, with friends?”
How much time do you probably spend walking?”
Do you think walking counts as being physical activity?
How does walking make you feel?

Then I wanted to ask more about what it's like to "walk the block." Can you tell me more what "walking the block" is?

Tell me more about that.
Describe what it is like for you to "walk the block."
Do you have a certain purpose in mind when you "walk the block"?
What is it about "walking the block" that you like/dislike?
How much time do you spending "walking the block?"
How did it get started?
You said that sometimes you walk the block with your sister. How does that happen compared to when you walk by yourself? Do you ever walk the block with anyone else?
Are you going somewhere when you "walk the block?"
How much time do you probably spend "walking the block?"
How does "walking the block" make you feel?

You also said that you "bike downstairs."

Tell me more about that.
Describe what "bike downstairs" is like for you?
Do you have a certain purpose in mind?
What is it about "bike downstairs" that you like/dislike?
How much time do you spend on the "bike downstairs?"
How did it get started that you "bike downstairs?"
How does biking happen for you "alone, w/ friends?"
How much time do you think you think you spend on the "bike downstairs?"
How does "biking downstairs" make you feel?

You also talked about a "treadmill in the basement"

Tell me more about that.
Describe what doing the "treadmill in the basement" is like for you?
Do you have a certain purpose in mind?
What is it about "treadmill in the basement" that you like/dislike?
How much time do you spend on the "treadmill in the basement?"
How did it get started that you go on the "treadmill in the basement?"
How does being on the treadmill happen for you "alone, w/ friends?"
How much time do you think you think you spend on the "treadmill in the basement?"
How does being on the treadmill make you feel?

You said that you'd gone out for volleyball and that that the "sport only lasts 3 weeks."

Did the 3 weeks include practices and all of your games? .

You said *"it's weird"* that basketball only last 6 weeks – what is weird about that?

Do you wish that was different?
How would you change it?
For what reason would you change it.

You said that you *"help out during practice a lot"* at your sister's basketball practice.

Tell me more about that.
How much time do you spend helping out?
What do you do to help out at practice?
How did it get started?
If you were not at your sister's practice, what would you be doing instead?

You said that you *"wish that they would do sports for 6th graders because I know that some of my friends get in the habit of being lazy and not really doing anything in that time period when, so that when sports are open, they choose kind of not to because they got in that habit."*

Tell me more about that.
Did you actually see this happen when you went out for volleyball and some of your friends did not?
But some of your friends went out for volleyball, right?
Okay, did you talk to any of them about whether they were going out or not? Did what they said make any difference in your decision to go out?
Does it bother you that your friends are not "going out?" For what reasons does it bother you?
Is there anything that you think the school nurse or a teacher could do about it when girls get in the habit of being lazy?

Last time you mentioned that *"I always thought it was kind of fun to go around and play and like, I don't know, outside. I feel comfortable outside like a lot, like only time I don't really feel comfortable is winter because it's always so cold." "Sometime I, like during the summer, I think of swimming." So, I had the idea that you associate certain activities with certain seasons. Would I be right in thinking that?*

Tell me more about what swimming is like for you.
Tell me more about any other activities you associate with summer instead of winter.
Tell me about the activities that you do in winter time.
Tell me more about what it is like for you to be physically active during winter time.
Does the amount of physical activity that you get depend on the season?
Do you think you get enough physical activity during the winter?

In regards to activity and the pain after your appendicitis, you said *"even though it hurts in the beginning, it makes it feel better"*

Tell me more about that.
How does it make you feel better?

You said, *“Like your tried, but then you feel really good about yourself because you accomplished something”*

Tell me more about that.

Can you tell me about a time recently that you felt the same way? Tell me a story about it.

“I think if I start exercising, I’ll feel better about myself so then I’ll be happy and I’ll be able to get along with her better.”

Tell me more about that.

Describe what “able to get along with her better” is like for you.

APPENDIX O

TAXONOMY OF FINDINGS

Set One: Context and Experience

(1) *Realizing the Extent to Which Certain Things in My Life Influence Me to Be More Physically Active* (Context)

- (1 1) Being influenced by my family to be more physically active
- (1 2) Recognizing the extent to which my friends influence my physical activity
  - (1 2 1) Knowing that my friends help me to be active
  - (1 2 2) Knowing that having friends around helps me feel more confident with physical activity
  - (1 2 3) Knowing that it is nice but not necessary to do physical activity with a friend
  - (1 2 4) Knowing that I do not need my friends to help me be active
  - (1 2 5) Knowing that I am different from my friends when it comes to physical activity
- (1 3) Being able to be active in a certain way in a certain place
- (1 4) Finding that I really like to do a certain kind of physical activity
- (1 5) Feeling pressure to be active
  - (1 5 1) Feeling pressure from my parents to be active
  - (1 5 2) Realizing that I put pressure on myself to be active

(2) *Having My Own Reasons for Being Active (Context)*

- (2 1) Being healthy, staying healthy, or both
- (2 2) Looking healthy
- (2 3) Losing or maintaining weight
- (2 4) Feeling better or feeling better about myself
- (2 5) Having fun
- (2 6) Doing something with my time
- (2 7) Realizing that I have to be active in that situation
- (2 8) Hoping to help my parent(s) become physically active

(3) *Getting Up and Doing Something to Keep My Body Moving* (Experience)

(3 1) Doing something active at school

(3 1 1) Doing something active at school that is required

(3 1 2) Choosing a built-in option for a required activity at school

(3 1 3) Doing something active at school that is optional

(3 2) Doing something active outside

(3 2 1) Doing something active outside by myself

(3 2 2) Doing something active outside with a friend

(3 2 3) Doing something active outside with a family member

(3 2 4) Doing something active outside with a family member and friend

(3 2 5) Doing something outside either alone or with a family member

(3 3) Doing something active inside

(3 3 1) Doing something active inside by myself

(3 3 2) Doing something active inside with someone else

Set Two: Context and Experience

(4) *Explaining What It Is Like for Me While I Am Being Active* (Context)

(4 1) Understanding what has to happen for an activity to really be physical activity

(4 1 1) Realizing that working hard is part of being active

(4 1 2) Thinking that only certain types of activity count as “physical” activity

(4 1 3) Realizing that physical activity involves meeting a time requirement

(4 2) Recognizing a certain feeling associated with being active

(5) *Striving to Meet my Own Goals in Physical Activity* (Experience)

(5 1) Pushing myself to increase my time or distance

(5 2) Building up my stamina or strength

(5 3) Getting to the point where I can compete better

(5 4) Getting to the next level in that activity

Set Three: Context and Experience

(6) *Realizing How Things Change for Me When I Have Been Active* (Context)
- (6 1) Realizing how my weight is affected because I have been active
- (6 2) Having more energy, endurance, and strength because I have been active
- (6 3) Having had a painful injury because I was active
- (6 4) Feeling better about myself because I have been active

(7) *Realizing That Things Get in My Way of Being Physically Active* (Context)
- (7 1) Realizing that things about me can get in my way of being active
  - (7 1 1) Having to do things that get in my way of being active
  - (7 1 2) Having things I would like to do instead of being active
  - (7 1 3) Having habits that get in my way of being active
  - (7 1 4) Realizing that I do not like certain ways of being active
  - (7 1 5) Having health issues that influence how active I can be
  - (7 1 6) Realizing that the day's events and my mood can influence how active I want to be
  - (7 1 7) Being afraid to fail at doing a physical activity
- (7 2) Realizing that things going on around me can make it harder for me to be active
  - (7 2 1) Realizing that family members or peers say or do things that limit my physical activity
  - (7 2 2) Feeling self-conscious when being active around people
  - (7 2 3) Being unable to control something that gets in my way of being physically active
- (7 3) Knowing what I am up against when it comes to being more active
  - (7 3 1) Realizing the downsides of being active
  - (7 3 2) Having to work at a goal for physical activity that is not really my goal

(8) *Making Physical Activity Fit My Life* (Experience)
- (8 1) Figuring out ways to be more active when things get in my way
  - (8 1 1) Creating a flexible schedule that includes physical activity
  - (8 1 2) Making up the activity I missed
  - (8 1 3) Deciding that I am okay with looking like the active girl that I am

(8 1 4) Finding ways to make physical activity more fun

(8 1 5) Working past the pain

(8 1 6) Choosing the best place to be active

(8 1 7) Sticking with an activity instead of quitting or quitting too soon

(8 1 8) Going ahead with my physical activity even if peers think it is weird

(8 2) Envisioning physical activity as part of my life in the future

(8 2 1) Planning ahead for activities that I might do in the near future

(8 2 2) Planning ahead for activities I might do in high school

(8 2 3) Seeing myself as being active at the age of a mom

(8 2 4) Seeing myself as being active at the age of a grandma

Set Four: Context and Experience

(9) *Realizing That Things Can Get in the Way of Being Active for Girls My Age* (Context)

(10) *Suggesting Ways That Other Girls Could be Active When Things Get in Their Way* (Experience)

(10 1) Suggesting that girls focus on bettering themselves

(10 2) Suggesting that girls make time for physical activity

(10 3) Suggesting that girls find ways to have fun with physical activity

(10 4) Suggesting that girls think about the benefits of being active

(10 5) Suggesting that other girls continue trying to be active

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