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Negative Experiences in Physical Education Class and Avoidance of Exercise

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NEGATIVE EXPERIENCES IN PHYSICAL EDUCATION CLASS
AND AVOIDANCE OF EXERCISE

being

A Thesis Presented to the Graduate Faculty
of the Fort Hays State University in
Partial Fulfillment of the Requirements for
the Degree of Master in Science

by

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ABSTRACT

One of our nation's growing concerns is obesity and the effect it has on one's health and overall quality of life. Determining the underlying causes for an individual's avoidance of exercise is crucial in battling the obesity crisis. The impact negative feelings involving Physical Education classes taken in adolescence may have on one's current exercise routines and barriers to current participation in exercise were examined in the current study. Measures of barriers to exercise, self-esteem, current exercise routines and negative experiences involving Physical Education classes were examined. A total of 101 participants completed the measures of barriers to exercise, self-esteem, current exercise routines and negative experiences involving Physical Education classes. Results indicated that higher levels of negative experiences involving Physical Education classes are associated with lower levels of self-esteem and current exercise participation and a higher number of reported barriers to exercise. Results also indicate that the associations between negative experiences in Physical Education, self-esteem, barriers to exercise and current exercise participation do not significantly differ between men and women.

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INTRODUCTION

OVERVIEW

Physical activity is a key determinant of good health. The Mayo Clinic reports that not only does physical activity promote physical health, but mental health as well. With an array of interventions that have taken place over the past decade to promote exercise and health, many adults still choose not to exercise. One of the strategies adopted by many countries to combat inactivity in adults is to promote physical activity in children and youth.

Adolescence is an important time to learn health related habits that should carry into adulthood (Santrock, 2012). A common intervention used in most developed countries is Physical Education classes. This has a large potential to promote physical activity in adolescence. School Physical Education is an academic course that is mandatory for most adolescents (Fairclough, 2012). According to the National Association of Sport and Physical Education, or NASPE, one of the national standards for K-12 Physical Education requires that individuals recognize the value of physical activity for health, enjoyment, challenge, self-expression and social interaction (American Alliance for Physical Education, Recreation & Dance, 2013). Although Physical Education class has been a required class for decades, it has not seemed to meet this standard and increase physical activity or other healthy habits into adulthood. The inadequacy of this is evidenced by increasing obesity levels and the decline in the number of people obtaining the weekly recommended minutes of exercise (Mayo Clinic 2012).

Recently emerging research suggests that Physical Education classes may actually have a detrimental effect on the way adolescents view exercise. Adolescents have reported feeling insecure and embarrassed during Physical Education classes (Van Daalen, 2005).

This literature review focuses on adolescent development, exercise and obesity trends, current Physical Education curriculum in middle schools and high schools, barriers to exercise that begin in adolescence and the anxiety, stress, and self-esteem issues common in adolescence. Various coping skills adolescents use when faced with a threatening or stressful situation will be examined. Differences in the way that males and females face adolescence will also be reviewed. This current study focusses on the implications of anxiety and stress in regards to the adolescent population; and specifically, the future detriments involving self-esteem and exercise motivation that could be encountered if the adolescent is subject to stress and anxiety during Physical Education classes. The purpose of this study is to understand the effects of anxiety caused by Physical Education classes in adolescence and the short term and long term repercussions, i.e. lower levels of self-esteem, possible exercise anxiety and exercise avoidance.

Literature Review

Physical Activity Levels and Obesity

Physical activity levels of adolescents continue to steadily decline; only 3% of adolescents aged 12-15 are attaining the Center for Disease Control's daily recommended minutes for physical activity (Camhi, Phillips & Young, 2011). This pattern of inactivity

appears to continue into adulthood. The National Health Interview Survey-Youth Risk Behavior Survey confirms that levels of physical activity begin to decrease during early adolescence and decrease further as one enters into adulthood (Krouscas, 1999). The CDC (2012) reports that only a small percentage of adults in the United States meet the recommended physical activity guidelines (See CDC results in next paragraph). The benefits of regular physical activity have been widely publicized. Benefits include, but are not limited to, decreased risk of cardiovascular disease, decreased risk of diabetes, and decreased risk of depression (Mayo Clinic, 2012).

Surprisingly, even with the available knowledge pertaining to the documented benefits of regular exercise, 4 out of 10 adults remain sedentary; they never engage in physical activity or exercise (CDC, 2012). Obesity and physical inactivity are two of our nation's top health concerns. Obesity can occur when an individual consumes more calories than burned with physical activity. Physical activity can combat obesity by increasing calories burned, whereas a sedentary lifestyle decreases calories burned (Flora, 2007). Obesity has an alarming economic impact on the United States health care system. According to the CDC, 147 billion dollars were spent on direct and indirect medical expenses for obese healthcare patients. The economic and health implications associated with inactivity and obesity warrant immediate attention.

The United States government has worked diligently for decades to implement a variety of strategies to promote health and educate children and adults on the importance of participating in physical activity. In 2001, Congress granted the CDC \$125 billion

dollars to launch a program, entitled VERB, which means “an action word” (Collin & Wechsler, 2008), directed at encouraging children to develop healthy habits that would last a lifetime (Collins & Wechsler, 2008). VERB is a media campaign with a goal of increasing and maintaining physical activity among children aged nine to thirteen years. President George W. Bush launched a campaign in 2002, entitled The Healthier U.S. Initiative. The goal behind the initiative was to help Americans, especially children, live longer and healthier lives. The President’s Healthier U.S. initiative consisted of four goals that should benefit Americans and their health: be physically active every day; eat a nutritious diet; get preventive screenings; and make healthy choices concerning alcohol, tobacco, drugs and safety (Federal Food and Drug Administration, 2004). The current president and first lady have equally emphasized the importance of fitness and nutrition. Some of the items on President and Michelle Obama’s agenda in targeting obesity have been to have healthier school lunches, ban soda and snack machines in schools, and encouraging children to join the Presidents fitness challenge. The Obama’s have entitled the current fitness initiative “Let’s Move” (letsmove.gov, 2012)

The World Health Organization also actively promotes healthy lifestyles for individuals of all ages. Currently the World Health Organization is promoting healthier habits among individuals who are working. Employers are encouraged to implement physical fitness routines for their employees into their workday. Another popular intervention and trend in the United States regarding obesity is health fitness clubs. The number of health clubs and resources available to combat obesity is continually growing. The attorney general reports that nearly 40 million Americans belong to more than 26,000

health clubs in the United States today. Having a gym membership and using it are two different things. Eighty percent of people who purchase a gym membership use the membership only five times a month or less. Despite the many efforts to increase physical activity and decrease obesity, the obesity epidemic continues to grow.

Determining the common variables that prevent Americans from participating in and enjoying regular exercise is an important element in fighting the obesity epidemic.

Barriers to Exercise

With rates of obesity on the rise, healthcare providers and researchers have been trying to gain a better understanding of the factors that motivate or inhibit individuals to exercise. For many individuals, low perceived self-efficacy regarding ability to exercise and stiffness or soreness are unpleasant feelings they may be associating with exercise. All of these unpleasant feelings may be avoidance promoting experiences (Ulmer, Stetson, & Salmon, 2010). Experiential avoidance occurs when an individual avoids a situation that is difficult or causes discomfort. Previous negative experiences with exercise could cause an individual to feel inadequate, creating a barrier to future participation in exercise. The individual would rather avoid activities that are associated with negative experiences.

Current studies have suggested one common barrier that prohibits individuals from participating in regular exercise is lack of confidence due to low self-esteem (Brinthaupt, Kang, & Anshel, 2010). Negative self-concept has been documented as being related to avoiding exercise and physical activity. Positive self-concept has also

been acknowledged as a key factor in predicting one's participation in exercise (Cumming et al., 2010). Individuals with low self-confidence often fear they will appear inadequate while exercising (Brinthaupt, Kang, & Anshel, 2010). Minimal research exists pertaining to what causes this lack of confidence concerning exercise. Current research does suggest that individuals lack self-confidence to participate in exercise; but why they lack the self-confidence has yet to be identified. Personal beliefs and perceptions regarding exercise should be identified in the research. Also, factors and experiences that inhibit an individual's desire to participate in physical activity, or create a pathway for lack of confidence regarding exercise, should be discovered. How an individual has experienced exercise in the past, may be a key in understanding the reasons why most of the adult population currently does not participate in regular exercise.

If individuals perceive themselves as insufficient or inadequate regarding exercise, avoidance of exercise is likely to occur. Theory and research have determined that attitudes one forms about situations, activities and people often predict an individual's future behavior. Developing positive attitudes about exercise and health is crucial. A longitudinal study involving thousands of students showed that adolescents who had positive attitudes about exercise were more likely to participate in future exercise for more than a year later (Digelidi, Papaioannou, Lapidis, & Christodoulidis, 2003).

Studies have found that exercising in front of others may be another potential barrier to exercise. Numerous people have reported exercise to be aversive and embarrassing when mirrors and audiences are present (Flora, 2007). Exercising in front

of others creates a sense of self-awareness and feelings of inadequacy, which can cause anxiety. If an individual perceives exercise as a negative event, or feels insecure while exercising, it is likely future participation would diminish (Flora, 2007).

Without determining the underlying thought processes and feelings regarding avoidance of exercise, little can be accomplished to accurately develop interventions encouraging more active lifestyles. Many interventions to promote exercise have been implemented to attempt to combat our nation's obesity crisis and encourage people to participate in exercise. It is of great importance to understand the psychological variables that create barriers to exercise, such as anxiety and stress. Obesity in children, adolescents, and adults is on the rise and the negative implications of sedentary lifestyles are devastating. Intervention to increase enjoyment of physical activity and positive attitudes involving exercise during adolescence is crucial due to the fact that research shows adolescence as the time period in which healthy lifetime habits and attitudes are developed. Adolescence is however, a difficult developmental period, and a time when people may be at their most vulnerable and self-conscious while participating in exercise.

Healthy Physical and Cognitive Development during Adolescence

Adolescence has been characterized as a period of significant turmoil or crisis (Fox, Halpern, Ryan, & Lowe, 2010). Many changes occur during adolescence including physical or biological, as well as social and psychological, changes. As an adolescent goes through puberty, increases in hormones commonly result in moodiness, acne, and other major physical changes (Santrock, 2012). During puberty a growth spurt is taking place and physical maturation is occurring, making it possible for sexual reproduction.

Tissue and organ growth are also increasing due to production of cortisol, testosterone and estrogen. The peak of pubertal growth peaks at 11 ½ years for girls and at 13 ½ years for boys. During this time, adolescents' interests in their bodies and body image emerge. Females often have more negative body issues than males during the peak of pubertal growth (Santrock, 2012). In addition to the many physical changes occurring during adolescence; drastic social changes occur concurrently (Matz et al., 2010).

One major social change that occurs during adolescence involves attending a new and larger school. As the adolescent moves from elementary school to middle school or junior high school, their social environment becomes much less familiar. Many psychological changes also occur revolving around a new desire for independence and the adolescent's search for their own identity or sense of self (Spray, Warburton, & Stebbings, 2014). Adolescents believe that others are as preoccupied with them as they are with themselves. This is referred to as adolescent egocentrism (Santrock, 2012). Two common types of social thinking that occur with adolescent egocentrism during the search for identity involves the imaginary audience and the personal fable.

The imaginary audience is a type of thinking in which adolescents believe that everyone is watching them and noticing every minute thing about them. This imaginary audience phenomenon related to adolescence may cause adolescents to feel very self-conscious over clothing and appearance or performing various tasks in front of their peers. The personal fable is also part of adolescent egocentrism, it creates a sense within adolescents that they are alone in their uniqueness and others are not experiencing similar

struggles. (Santrock, 2012). Feelings of being singled out and alone can be extremely stressful causing unnecessary anxiety for the adolescent.

Anxiety and stress during adolescence. Anxiety is defined as an adaptive psychological, physiological and behavioral state that facilitates coping when confronted with an actual or potential threat (McCormick, 2012). Anxiety is a highly unpleasant feeling of fear and apprehension. Events and feelings that are seen as threatening often lead to anxiety and withdrawal (Tillfors, Persson, Willen, & Burk, 2012). Psychological stress is defined as the perception of an environment as related to the individual as being dangerous to his/her wellbeing (Natvig, Albrektsen, Anderssen, & Qvarnstrom, 1999). Research consistently documents the transition from childhood into adolescence being characterized by a “pileup” of stressful situations. Repeated exposure of these social and psychological stresses has commonly been known to lead to anxiety (McCormick & Green, 2012).

Previous studies suggest that most adolescents face some type of stress on a daily basis. Minor stresses, such as fights with peers, excess acne, appearance, school work, and several transitions per day between multiple classes, can each be viewed by the adolescence as extremely stressful. The stress experienced by the adolescent can affect their development (Santrock, 2012). Studies have shown that having minor stressors on a daily basis over a period of time can cause chronic stress. Although these minor stresses are not classified as major life events; the everyday tension surrounding them may lead to a highly stressful life. Adolescents view minor stresses much differently than an adult,

because they are still learning appropriate coping strategies and processing skills (McCormick & Green, 2012). Adults have the capacity to make more appropriate decisions and implement proper coping skills when faced with an uncomfortable or stressful situation.

Adolescents commonly deal with major stresses as well. Major stresses can include divorce, family conflict, bullying, peer pressure, sex, and social defeat. Peer rejection can be a detrimental stressor during this delicate time. If adolescents feel instability in their relationship with peers, this often causes stress and anxiety. Recent research also shows that minor stresses on a regular or daily basis may actually have more impact on health and well-being than major stresses (Ames et al., 2005). There is considerable evidence that links these environmental stressors that adolescents face to the onset of lifelong anxiety and depression (Fox, Halpern, Ryan, & Lowe, 2010).

During adolescence there is an elevated level of social comparison, thus making it more likely to interpret peer behavior as threatening which may provoke stress and anxiety (Tillfors, Persson, Willen, & Burk, 2012). Social comparison occurs as adolescents compare themselves to others, and they feel that peers are comparing them to others as well. How adolescents believe they are viewed by others is referred to as the looking glass self (Santrock, 2012). The concept of the looking glass self or imaginary audience may heighten insecurities during adolescence. Social anxiety may also develop as the adolescent interprets the judgment of their peers as rejecting or threatening. Social anxiety refers to a fear of being scrutinized or rejected in social or performance situations

and individuals with social anxiety often avoid experiences that threaten judgment from their peers. Individuals with social anxiety are typically fearful during social interactions and situations. Non-threatening social and peer interactions play a crucial role in adolescent psychosocial adjustment, and thus avoidance of these interactions may have an impact on appropriate social development.

Positive relationships and interactions with peers during adolescence can provide a great source of support and intimacy, but less positive interactions can cause extreme feelings of isolation, humiliation, discomfort and inadequacy (Lashbrook, 2000). Adolescents compare themselves with their peers on many levels including appearance, abilities, and social hierarchy. Excess stress, that may come along with the many changes the adolescent deals with on a daily basis, has a negative effect on adolescent brain development. Although it is normal for individuals to face stress and anxiety at each developmental stage in life, excess stress can produce long term obstacles. Normal sources of anxiety for children ages 6-12 years include: fears of school (including fears of taking tests and getting poor grades), injury, natural events, parental punishment, and rejection by peers. Normal sources of anxiety for adolescents' ages 13-18 years include: fears of injury (especially injuries that may disfigure the body), anxiety about feelings of social alienation and rejection (See Table 1).

Table 1

Normal Types of Fears and Anxiety during Childhood and Adolescent Development

-
1. Birth to 6 months: fears of excessive or unexpected sensory stimuli, loss of support, and loud noises
 2. 6-9 months: fears of strangers and novel stimuli, such as masks and heights
 3. 1 year: fears of separation, injury, or toilets
 4. 2 years: fears of monsters, imaginary creatures, loss of loved object or person and robbers
 5. 3 years: fears of dogs, large animals, and being alone
 6. 4-5 years: fears of the dark, separation from parents, and abandonment
 7. 6-12 years: fears of school (including fears of taking tests and getting poor grades), injury, natural events, parental punishment, and rejection by peers
 8. 13-18 years: fears of injury (especially injuries that may disfigure the body), anxiety about feelings of social alienation and rejection and fear of the macabre
-

The average age anxiety is diagnosed is during adolescence. Exposure to stressful and threatening experiences has been linked to anxiety and dysfunction in adolescence (McCormick & Green, 2012). Elevated levels of social novelty during adolescence along with increased desire for peer approval leave the adolescent more prone to view peer behavior as threatening. Individual self-worth is based upon what peers think, or perception of what peers think of them. The influence of peer acceptance during

adolescence is critical (Rudolph, Caldwell & Conley, 2005). Considerable evidence links negative peer interactions such as; rejection, low peer acceptance, bullying, negative peer judgments and insecurities; as being common adolescent stressors that lead to anxiety (Fox et al., 2010).

A limited amount of anxiety is normal during all stages of life. It is developmentally appropriate for adolescents to feel anxiety about how their peers perceive them. (See Table 1 for areas developmentally appropriate for all ages). (Khodabakhsh, 2013). There is a strong relationship between stress and anxiety and proper brain development. Stress and anxiety can inhibit proper brain development due to increased production of cortisol that is released when stress and anxiety are present (McCormick & Green, 2012).

Adolescent brain structure. During adolescence the brain is still developing. Recent research also stresses the plasticity of the adolescent brain, emphasizing the continuing development of the prefrontal cortex throughout adolescence (Santrock, 2012). Plasticity is the way in which neural pathways in the brain are reorganized by experiences. Environmental factors, minor and major stresses, play a role in plasticity of the brain, brain development and brain function. Stress hormones, such as cortisol, are increased during stressful situations.

The brain is still maturing during adolescence; excess stress can inhibit proper development. Evidence strongly supports excessive stress and anxiety in adolescence leading to altered brain development (Ames et al., 2005). Although stress hormones are released when the adult experiences stress, it is of greater concern when excess stress

hormones are released during adolescence. Excess stress hormones are released when stress is encountered on a frequent or regular basis. Minimizing stress is crucial during adolescence as the brain is still maturing and developing (McCormick & Green, 2012). Too much of any one stress hormone can be toxic. Excess stress hormones can lead to “wear and tear” of multiple organs, including the brain (American Academy of Pediatrics, 2011). The part of the brain called the hippocampus functions to stop excess cortisol production. Chronic stress inhibits the hippocampus’ ability to work properly, leading to impairments in memory and mood-related functions (American Academy of Pediatrics 2012). Magnetic Resonance Imaging, a computerized image of the brain’s tissues and biochemical activities, have shown that the adolescent’s brain is undergoing significant structural changes.

One of those changes involves synapses, or gaps between neurons. These gaps are the place in which connections between axons and dendrites occur. Synaptic connections in the adolescent brain are “pruned”, which means the synaptic connections that are not continuously used or exercised amazingly disappear. By the end of adolescence the brain has fewer synaptic connections than it did during childhood. The activities the adolescent enjoys and continues to engage in will determine the connections in the brain that are strengthened or the ones that disappear (Santrock, 2012). This is extremely important when we look at long term participation in exercise and the way the adolescent views exercise.

Another part of the brain still developing is the amygdala. The amygdala helps control our emotions. This part of the brain develops at a faster rate than the pre-frontal cortex of the brain. This imbalance of fully developed portions of the brain with the still developing parts of the brain, inhibit the adolescent in controlling their emotions when dealing with stress and anxiety (American Academy of Pediatrics, 2011). The corpus callosum is a part of the brain that assists and individual in decision making processes, this part of the brain is thickening during adolescence. Since the brain is still going through major developmental changes; it often makes it difficult for the adolescent to make decisions that in their best interests.

Due to these many maturational processes taking place in the adolescent brain, the adolescent is extremely sensitive to stressful events. Females have a stronger sensitivity to stressful events and negative peer interactions than males (Oldehinkel & Bouma, 2011). There are differences present in the structure of the male and female brain. Magnetic Resonance Imaging have shown that compared to males, females have more gray matter, or receiving part of the neuron and cell bodies. Females also have thicker cortex, or outer layer, in various regions. This could explain the differences in the ways in which males and females experience and cope with the changes of adolescence. Numerous studies have also shown a higher number of anxiety related symptoms reported by adolescent females than by adolescent males (Bendera, Rinholdt-Dunne, & Bjorn, 2012).

Gender Differences during Adolescence. Attitudes regarding their changing bodies have been found to be very different between male and female adolescents. Female adolescents are more likely to suffer from social uncertainty, depressed mood, and worries (Oldehinkel & Bouma, 2011). Females report being less satisfied with their changing bodies, whereas males report greater satisfaction with their bodies. As females go through puberty, their body fat increases; in contrast, boys' muscle mass increases (Santrock, 2012). Due to these factors, females' self-esteem tends to decline during adolescence due to them having a more negative body image than males. Society tends to send an unrealistic message to females about what the ideal female physique should be. A recent study of involving popular magazines revealed that women's magazines had 10.5 times more advertisements and articles promoting weight loss than men's magazines. The self-discrepancy model classifies the various forms believed to be associated with desires of what one wish they are, the ideal self; and who they actually are, the actual self. Self-discrepancies begin in late childhood or early adolescence. The discrepancy between the two variations of one's self and their ideal self can contribute to a person's vulnerability to experience emotional distress (Hankin & Roberts, 1997). Female adolescents often believe that others are judging them on their failure to meet society's or their own ideal standards (Flora, 2007). Females have a great desire to be evaluated positively by others and actually develop self-worth on feedback from others.

Female adolescents also are reported to having more depressive symptoms than males. Evidence indicates that girls' higher risk of depression could be accounted for by

a greater amount of sensitivity to the common everyday stressors that were previously discussed (Oldehinkel & Bouma, 2011). Females tend to have a great need for close relationships, are more sensitive to interpersonal matters, and also seem to worry more than males. Excessive anxiety, stress, negative peer-evaluations and negative self-evaluations during this critical stage of life for males and females is directly tied to lower levels of self-esteem, self-concept or self-worth in adolescence and adulthood. Female adolescents also report lower levels of self-esteem than male adolescents.

Self-Esteem and Adolescence. As discussed earlier in this literature review, lower self-esteem may be a barrier to exercise. Beginning during the adolescent period, individuals are capable of distinguishing between specific types of self-worth. Physical competence and physical appearance are critically important levels of an individual's physical self-esteem and are recognized as such during adolescence. Self-esteem refers to one's evaluation of themselves. One's evaluation of self may not always be realistic (Santrock, 2012). Self-esteem decreases as the adolescent makes the transition to middle school (Spray et al., 2014). Physical appearance, or how physically attractive the adolescent perceives himself/herself to be, is one of the most important factors in development of self-esteem.

Adolescents often develop self-esteem on their comparisons of themselves with their peers. How their peers judge them also plays a substantial role in self-efficacy during adolescence. Participating in unfamiliar tasks in the presence of peers can provide great anxiety for the adolescent. Social contexts, such as those provided by peers, greatly influence the development of the adolescent's self-esteem. The way individuals evaluate

themselves and self-esteem has been shown to predict participation in physical activities and exercise (Fairclough & Stratton, 2012).

Peer judgments become significantly more important increasing the link between peer approval and self-esteem during adolescence. The judgments of the peer group become incorporated into one's self-esteem. Peer approval is critical during this time to assist in developing self-esteem (Rudolph et al., 2005). Negative judgments from peers may result in victimization, rejection and other stressful situations for the adolescent. Developing positive self-esteem in young people and adolescence is central to their future well-being. Experiences encountered at school during adolescence have been argued as affecting most self-esteem aspects of development that occur (Spray et al., 2013). Rejection; the opposite of inclusion, has an adverse effect on the average individual's self-esteem (Kashdan, Weeks, & Savostyanova, 2011). Rejection is painful, if it comes from someone that is close to us or from a peer we hardly know, it can be devastating. Rejection defeats the feeling and need of belonging while causing feelings of anxiety, depression, and anger (Breen & Kashdan, 2011) Rejection often leads one to disengage from the situation to avoid future hurt. People, especially adolescents, greatly desire social acceptance and inclusion. Adolescents are extremely sensitive to rejection. Not only does rejection affect one's self-esteem, rejection has been shown to elicit higher levels of cortisol as other stressful situations do, which can inhibit proper brain development. Adolescence is an extremely difficult time involving many physical and biological changes. Due to all the transitions and development taking place, extreme

precautions are necessary to ensure their health; mentally and physically as adolescents lay the groundwork for our future society. It is of great importance to eliminate stress and anxiety in the adolescent population to increase self-esteem and self-worth. One of the many methods that are used to encourage physical health in children and adolescents is Physical Education. Physical Education has a curriculum outcome goal of promoting lifelong enjoyment of exercise (See Table 2) (American Alliance for Physical Education, Recreation and Dance, 2013). Recent research shows that Physical Education class may not be promoting enjoyment of exercise as it is intended to; and more so, may be a detriment to the enjoyment of current and future participation in exercise.

Table 2

National Standards and Grade-Level Outcomes for K-12 Physical Education

Standard 1 - The physically literate individual demonstrates competency in a variety of motor skills and movement patterns.

Standard 2 - The physically literate individual applies knowledge of concepts, principles, strategies and tactics related to movement and performance.

Standard 3 - The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.

Standard 4 - The physically literate individual exhibits responsible personal and social behavior that respects self and others.

Standard 5 - The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction

Physical Education Class as a Barrier to Exercise

The nation's valid concern about obesity and physical inactivity is not a new one. In the late 19th century Physical Education classes were developed under the recommendation of physicians, with the objective of promoting health among our youth (Prusak et al., 2011). Studies have shown that attitudes can be altered with appropriate practices and acquisition of appropriate knowledge and understanding (Digelidi et al., 2003). Physical Education class currently exists with the concurrent objective of providing children and adolescents with the foundation of a healthy lifestyle, that encourages a lifetime of physical activity. In order for this to occur; appropriate strategies and learning opportunities are critical to develop positive attitudes involving exercise.

Physical Education Class is a potentially powerful intervention to promote fitness, due to the classes' ability for it to reach many children and adolescents. Physical Education is a mandated course in nearly all developed countries for all children in grades kindergarten through the 8th grade. It has great potential to influence the way adolescents perceive exercise and fitness. Government and Health advocates insist increasing the minutes of participation in Physical Education class aids in targeting the nation's obesity crisis (Camhi et al., 2011). In contrast to these beliefs, enrollment in Physical Education classes among high school students is only 31% (CDC, 2012). Physical Education Classes are falling short of meeting the intended course objective of creating a lifelong love of fitness.

A study conducted in 2005 examined the reasons for the drastic decrease of adolescents enrolling in Physical Education Class. A group of school nurses concluded that Physical Education classes often led to competition, evaluation and degradation (Van Daalen, 2005). Interviews were conducted with the participants during which each participant reported having feelings of embarrassment, insecurities, intimidation and nervousness before and during Physical Education class. Adolescents in this study also reported that “Physical Education class was not a positive experience” (Van Daalen, 2005, p.117). Other studies have revealed some specific reasons behind the negative feelings adolescents have regarding Physical Education class. Studies have found that it increases the fear about performing in front of peers and feeling vulnerable about their peers viewing their changing bodies. A study conducted in 2011 evaluated the feelings of adolescents regarding participation in Physical Education class. Results of this study indicated the nature of Physical Education classes generated feelings of embarrassment, exposure and judgment during participation by adolescents (Fisette, 2011). Physical Education is usually very sport-oriented and often competitive activities make up much of the curriculum. These competitive activities decrease motivation for students that have inferior athletic ability when compared with their peers (Digelidi et al, 2003).

Another reason that Physical Education can be intimidating to the adolescent is that a portion of the adolescent participants have much more experience in these activities due to personal experiences outside of school, i.e. previous participation in competitive sports teams. While other adolescent participants in Physical Education class have little or no exposure, and may be at a disadvantage compared with their experienced peers.

Adolescents that feel at a disadvantage in the competitive activities that entail current Physical Education curriculum will likely form negative attitudes about exercise in general (Digelidi et al, 2003). Adolescents instinctively compare themselves to their peers, which may lead to feelings of inadequacy. Peterson (2011) hypothesized that the objectification of the body is also intensified during Physical Education class because students have the opportunity to observe other students' performances and bodies. Adolescents are forced to undress in front of their peers in order to change into gym attire, then instructed to perform a variety of sometimes foreign activities in front of peers. Overweight adolescents, or adolescents who perform poorly at these unfamiliar tasks, may be targets for bullying.

Bullying is defined as verbal or physical behavior that is intended to intimidate someone less powerful (Santrock, 2012). Studies have reported that Physical Education class is a potential setting for increased bullying. One reason for increased bullying is due to individual's being overweight. Adolescents are also often left out and teased due to their weight during Physical Education class (Peterson, Puhl, & Luedicke, 2011). Below average performance during Physical Education class has also been documented as a risk factor for becoming a target of bullying (Bejerot, Edgar, & Humble, 2010). A recent study reported that as many as 84% of adolescent students have witnessed peers being bullied due to their weight during Physical Education classes. Bullying is linked to suicide, anxiety and depression in adolescence (Santrock, 2012).

Adolescents are already at an increased risk for anxiety due to the many psychological, physical and social changes taking place during the crucial transition from childhood to adulthood, as detailed earlier in this literature review. During adolescence the increased self-awareness that is heightened due to the enormous amount of physical and emotional changes taking place during puberty, could make Physical Education class a forefront for anxious feelings regarding peer evaluation (Santrock, 2012). Studies have shown that individuals feel rejected, traumatized, insecure, inadequate and self-conscious during Physical Education class (Van Daalen, 2005). These experiences are associated with low perceived self-worth and self-esteem. Therefore, it is of great concern that our culture requires our vulnerable adolescents to participate in mandated Physical Education class. During Physical Education class adolescents are instructed to participate in various, often unfamiliar, tasks in front of their toughest audience, their peers during the time when their self-awareness and self-consciousness is at its peak. Studies have shown that up to 21% of middle school students strongly dislike Physical Education class. Common reasons for the intense dislike include: feelings of isolation, inadequate athletic ability, and dislike of competition (Krouscas, 1999)

Physical Education teachers incorporate common goals in their lesson plans: learning sport centered motor skills, competition, and forced exercise (Prusak et al., 2011). These types of activities are stressful for adolescents to complete in front of their peers, particularly for the adolescents with little prior athletic experiences. If an adolescent associates stress and anxiety with physical activities, they are not likely to choose to exercise in adolescence or into adulthood. Most educators agree that Physical

Education class should prepare and encourage children and adolescents to participate in physical activity for a lifetime (Ennis, 2010). This objective seems unattainable unless the current curriculum is modified. Changes made to the curriculum should be sufficient for adolescents to feel comfortable and confident during participation.

Physical Education classes should focus on reducing: bullying, competition, evaluation, embarrassment, and insecurities among the adolescent population. By reducing these experiences regarding Physical Education class in adolescence, it could increase exercise enjoyment into adulthood. Efforts should be made to provide children and adolescents with choices of activities they feel comfortable participating in. Adolescents should not be required to perform an unfamiliar task in front of peers. Alternatives, such as walking or bicycling, should be offered in place of sports of a competitive nature. In addition, complete privacy should be offered to adolescents when changing into workout attire. Modifications to the current curriculum could decrease anxiety related to Physical Education and increase positive feelings related to exercise.

Bullying, feelings of inadequacy, peer judgment, and insecurities are all common threats associated with Physical Education classes. These stressors and threats found to be associated with Physical Education class are detrimental to an adolescent's mental health due the increased risk of anxiety. As previously discussed, anxiety and stress are common problems occurring during adolescence that can have detrimental effects on long term emotional and physical health and self-esteem (Mayo Clinic, 2012). In order for Physical Education to assist in promoting life -long physical activity among

adolescents, the thoughts and feelings of the adolescent regarding participation, should be prioritized.

Since Physical Education class has commonly been linked to negative feelings and negative peer interactions, coping strategies to deal with the anxiety will be used. A common coping strategy used to deal with anxiety is avoidance. Avoidance is a behavioral strategy that prevents exposure to a feared situation (Wong & Moulds, 2011). Avoidance is a natural human tendency that occurs at the earliest signs of possible danger as a way to avoid situations that might lead to negative outcomes (Kashdan et al., 2011). Research suggests that rejection, which often occurs during Physical Education class, and social anxiety both commonly lead to intentional avoidance of future similar experiences (Breen & Kashdan, 2011). Experiential avoidance involves avoiding situations that have been previously threatening or are perceived as threatening. Avoidance of anxiety related factors associated with Physical Education class may perhaps explain the significant decline of adolescents participating in current and future regular exercise routines and physical activity. Habits developed in adolescence commonly continue into adulthood (Santrock, 2012).

Adolescence is a crucial period of growth and development in life. During this time there are many physical, emotional, and psychological changes that occur. The adolescent's brain is still in the process of developing and changing. A supportive environment; in which a healthy lifestyle is encouraged, is crucial during this time. Healthy physical and psychological adolescent development is crucial to securing a productive society for years to come. Positive experiences in childhood and adulthood lay

the groundwork for individuals to mature into productive members of society. Research has shown that current experiences involving Physical Education class may be a cause of anxiety and stress in the adolescent population suggesting a great need for further investigation.

IMPLICATIONS

Research looking at the relationship between forced participation in Physical Education classes and long term exercise habits is extremely limited. This research focused on negative memories involved with Physical Education and current exercise habits. Research exists on both topics, but none that tie the two together. This research could lead to more appropriate methods that would encourage adolescents and adults to participate in and enjoy physical activity. More importantly, increasing enjoyment involving physical activity would assist in combatting obesity and inactivity in adolescence and adulthood. Negative schemas, or mental structures, are likely formed when adolescents are anxious during Physical Education class (Santrock, 2012). These potential schemas are likely continually associated with physical activity. Negative experiences associated with physical activity could lead to avoidance of exercise in the present and future. Research shows stress hormones are released with exposure to pictures depicting previous stressful experiences, years after the stressful experience occurred (Matz et al., 2010). This could imply that years after negative experience associated with Physical Education class, an individual may still associate exercise with these memories. Interventions to address barriers to exercise must be accomplished.

PURPOSE

The purpose of this study was to examine the relationship between negative experiences involved with Physical Education classes during adolescence and how the negative experiences may lead to anxiety impacting current levels of self-esteem. This increase in anxiety and lower levels of self-esteem may create potential barriers to exercise. This study also examined negative experiences in Physical Education and its impact on current attitudes revolving around exercise and current participation levels involving exercise among young adults. This study looked at the variables of attitudes toward exercise and self-esteem in regards to levels of negative experiences reported involving Physical Education classes.

HYPOTHESES

Hypothesis One: The researcher hypothesized that there would be a negative correlation between negative feelings about Physical Education and current level of participation in regular exercise. Participants that report negative feelings and memories regarding Physical Education classes will be less likely to currently participate in regular exercise. This hypothesis was based on the literature that suggests when anxiety is provoked in a particular situation, the individual is likely to avoid similar situations to avoid future anxiety (e.g., Kashdan et al. , 2011).

Hypothesis Two: The researcher hypothesized that there would be a positive correlation between numbers of barriers to exercise reported and higher negative feelings and memories regarding Physical Education classes. Participants will report a greater

number of barriers to exercise if the participant reports negative feelings regarding Physical Education class during middle and high school. Especially in regards to experiences that provoked anxiety about participating in P. E. classes. This was hypothesized due to the human tendency to use an avoidance coping mechanism when encountered with anxiety provoking activities (e.g., Matz, et al., 2010, Brinthaupt et.al., 2010).

Hypothesis Three: The researcher hypothesized that there would be a negative correlation between levels of negative experiences regarding middle school and high school Physical Education classes and reported and levels of self-esteem. The more negative experiences reported by the participant, he/she will be more likely to report lower self-esteem levels. This was hypothesized based on studies that show self-esteem is directly impacted by experiences in Physical Education class and other early experiences as the adolescent moves to middle school or junior high school (e.g., Spray et al., 2013).

Hypothesis Four: The researcher hypothesized that females will report more negative feelings regarding Physical Education classes than males. This was hypothesized due to the statistics that females have a greater need for approval in adolescence, put more value in societies' expectations and are typically less satisfied with their bodies when compared with males (e.g., Bendera et al., 2012).

Hypothesis Five: The researcher hypothesized that there would be a stronger negative relationship between negative feelings and memories regarding Physical Education classes and current participation in regular exercise in female participants than

male participants. This hypothesis was also based on females' tendency to avoid situations that have previously provoked anxiety and the females' tendency to worry about body image more than males (e.g., Camhi et al., 2011).

Hypothesis Six: The researcher hypothesized that there would also be a stronger positive correlation between negative experiences with Physical Education classes and reported barriers to exercise in females than males. This was hypothesized due to statistics that report females have a greater risk for anxiety over negative peer interactions and are typically less satisfied with their body (e.g., Cumming et al., 2010).

Hypothesis Seven: The researcher hypothesized that there would be a stronger negative relationship between self-esteem and negative experiences involving Physical Education classes in female participants than male participants. This was hypothesized due to research that documents the tendency for females to worry more and place more value on their self-worth based on what others think about them and negative interactions with peers (e.g., Rudolph et al., 2005).

METHOD

Participants

Participants were recruited from a local college in central Kansas, and were required to be 18 years of age or older. Traditional and non-traditional aged students were invited to participate in this study. Males and females were recruited for this study. Participants were recruited from various departments within the university. Participants in the study received extra credit for research participation. There were a total of 101 participants in this study; this was the adequate sample size needed to obtain appropriate levels of power (Cohen, 1992). Participants were 18-52 years old ($M=21.68$, $SD=5.05$) and mostly Caucasian (76.2 %). All participants were enrolled at a university, located in south central Kansas. A majority, 67.3% of the participants were female. Thirty three percent of the sample was male.

Measures

Demographic Information. Participants were asked to complete a basic questionnaire regarding demographic information. Information included was age, ethnicity, year in school and gender. Participants were asked to select a response for Ethnicity (“Caucasian”, “Hispanic”, “African-American”, “American Indian”, “Native Hawaiian or Pacific Island” or “Asian”) with an open ended option of “other.” Participants were asked their age. Participants were asked to their year in school (“Freshman”, “Sophomore”, “Junior”, or “Senior”) with an open ended “other” as an

additional option. Participants were also to only check one box for gender (“Male” or “Female”). (See Appendix C).

Barriers Scale. The study included a survey to obtain information on the number of barriers to exercise that participants reported. Participants were asked to complete the *Barriers Scale* (Sechrist, Walker, & Pender, 1994). This scale is a measure of attitudes regarding exercise and the barriers and benefits perceived to inhibit or promote participation in exercise (See Appendix D). The participants were given statements that relate to ideas about exercise. Directions for completing the survey were to indicate the degree to which they agreed or disagreed with the statements by circling SA for strongly agree, A for agree, D for disagree, or SD for strongly disagree. Calculation of Cronbach's alpha for the 43-item instrument yielded a standardized alpha of .95. Factor analysis yielded a nine-factor solution initially which explained a variance of 65.2%. Test-retest reliability was accomplished with a sample of 66 healthy adults at a two-week interval. Test-retest reliability was found to be .89 on the total instrument. The instrument may be scored and used in its entirety or as two separate scales (Funk, 1991). For this study the instrument was scored and used in its entirety

Rosenberg Self-Esteem Scale. The participants were also administered *The Rosenberg Self-Esteem Scale* to evaluate current levels of self-esteem (See Appendix E). Directions for completing this scale were “Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle SA. If you agree with the statement, circle A. If you disagree, circle D. If you strongly disagree, circle SD.” The

SES was scored as a Likert scale. The 10 items were answered on a four point scale ranging from strongly agree to strongly disagree. Zero points given for strongly disagree and 3 points given for strongly agree. The scale generally has high reliability: test-retest correlations are typically in the range of .82 to .88, and Cronbach's alpha for various samples are in the range of .77 to .88. The self-esteem variable was evaluated in relation to negative experiences involving Physical Education class and exercise attitudes and frequency of exercise participation.

The Exercise Questionnaire. Participants were asked to complete a survey regarding their current exercise routine (See Appendix F). The participants were asked to answer how often they could make the statements regarding current exercise patterns, 1=Never, 2=Sometimes, 3=Usually, 4=Always. This measure has been psychometrically validated on ninety subjects. The internal consistency ratio was 0.96 and the test-retest reliability (two weeks) was also 0.96. This measure was used to assess current levels of exercise participation. The variable regarding current levels of current exercise participation was analyzed in comparison to levels of negative experiences reported regarding Physical Education classes in Middle School and High School.

Middle School and High School Physical Education Survey. Attitudes regarding participant's attitudes about Physical Education class were evaluated using an author-constructed survey (See Appendix G). The survey asked participants to rank their least to favorite classes during middle school and high school in the order of 1-7. Participants were also asked if they enrolled in Physical Education classes when it was not mandatory. Participants were also asked "True", "False" questions regarding their

experiences during Physical Education classes. (i.e. I was often embarrassed during middle school or high school Physical Education classes). This scale was constructed based on information obtained about attitudes involving Physical Education as documented in the literature review. The data obtained from the Physical Education classes survey was scored on a Likert scale from 0-15. Zero equaling no negative feelings or experiences regarding Physical Education classes, 15 corresponding with highly negative feelings involving Physical Education. A point was given for self-reporting Physical Education as one of their least favorite classes (bottom 3), a point if they did not enroll in Physical Education classes that were not mandatory and additional points were given for each True/False answer that relates to negative experiences on any of the 13 True/False questions.

Procedure

Participants completed the Demographics, Barriers to Exercise, Rosenberg Self-Esteem, The Exercise Questionnaire and Attitudes about Middle School and High School Physical Education surveys, in that order. The researcher strategically placed the attitudes about Physical Education survey last with intentions that it will not have an order effect on the self-esteem survey, exercise barriers survey and exercise routine survey.

Participants were informed of the nature of the study and the anonymity of their responses prior to participation. Participants did not include their names on any of the surveys. Surveys were filled out during class time while the researcher remained present. Informed consent was obtained prior to participation and participants were orally

debriefed and provided with a written copy of debriefing following the study. (See Informed Consent form in Appendix A and Debriefing in Appendix B).

The Barriers to Exercise Scale. For calculating the total barriers to exercise score for each participant The Barriers to Exercise scale was completed by each participant. Three points were given to each participant who strongly agreed with each barrier statement, two points for agree, one point for disagree and zero points for strongly disagree. Points were then summed for the 43 statements to calculate the barriers to exercise score.

The Rosenberg Self-Esteem Scale. For calculating self-esteem levels The Rosenberg Self-Esteem scale was completed by each participant. Participants were directed to choose a response to ten statements: strongly agree, agree, disagree or strongly disagree on the Rosenberg Self-Esteem scale. Each response received 0-3 points. The total self-esteem score was calculated based on the total number of points from all ten statements.

The Exercise Questionnaire. For calculating current exercise levels, The Exercise Questionnaire was completed by each participant. Participants were given seven statements regarding current exercise routines. The Exercise questionnaire included seven statements concerning personal exercise habits. Participants were instructed to “circle the number that reflects how strongly each statement applies.” Participants could choose 1=Never, 2=Sometimes, 3=Usually or 4=Always. Zero points were given when the statement “never” applied to the participant; three points were given if the statement “always” applied to the participant. The points from all seven items were summed to

obtain each participants current exercise score. A total of 21 points could be obtained on the current exercise routine questionnaire.

Middle School and High School Physical Education Survey. For calculating negative experiences in Physical Education scores, the middle school and high school Physical Education survey included was completed by each participant. This survey provided an opportunity for the participants to rank their favorite to least favorite classes while in middle school and high school. The eight classes to be ranked were “Reading/Language arts”, “Art”, “Algebra”, “Physical Education”, “Writing”, “Social Studies”, “Music” and “Science.” The participants were also asked an open ended question in which they documented the electives they chose to take that were not required; but classes taken by choice. The survey also included thirteen statements regarding negative experiences in Physical Education class in which the participants chose true if the statement applied to them or false if it did not. A total possible score on the negative experiences involving Physical Education survey was fifteen. One point was given if Physical Education class was rated one of the bottom four favorite classes, an additional point if Physical Education or related courses were not chosen as electives and a possible point for each true or false response on the statements indicating negative experiences involving Physical Education in middle school and high school.

RESULTS

Barriers to Exercise

The barriers to exercise score was calculated using the Barriers to Exercise Scale (Sechrist et al., 1994). Overall, reported number of barriers to exercise measured in the range of 0-73 ($M=33.33$, $SD=16.26$). A majority of participants, (99%) obtained at least a score of five or more on the Barriers to Exercise Scale. One participant (1%) recorded a score of zero barriers to exercise. The levels of barriers to exercise reported by males and females were similar. Female participants reported slightly more barriers to exercise ($M=33.40$, $SD=15.78$) than males ($M=30.12$, $SD=16.49$).

Self-Esteem

The Rosenberg Self-Esteem scale was used to measure self-esteem levels of participants in this study. Lower sums from the scale indicate lower levels of self-esteem; higher sums indicate higher levels of self-esteem. Self-esteem levels from this sample ranged from 5-30 ($M=20.47$, $SD=5.54$). Self-esteem levels among men ($M=20.18$, $SD=5.28$) were slightly lower than self-esteem levels of females ($M=20.60$, $SD=5.71$).

The Exercise Questionnaire

Results from the Exercise Questionnaire completed by this sample ranged from 1-21. Lower levels indicate infrequent exercise participation, while higher levels indicate more frequent exercise participation. The mean total for levels of current exercise routine for this sample was 12.01($SD=4.96$). Males ($M= 13.00$, $SD=4.97$) from this sample reported higher levels of current exercise than females ($M=11.53$, $SD=4.92$).

Middle School and High School Physical Education Survey

Most participants reported at least some negative experiences or feelings involving middle school and high school Physical Education classes. Five participants reported zero negative experiences involving Physical Education classes. Reported levels of negative experiences in Physical Education classes from this sample ranged from 0-15. The mean total negative physical education score for this sample was 4.96 ($SD=4.18$) with a median score of 3. Lower scores indicated less negative experiences involving Physical Education classes in middle school and high school, while higher scores indicate a greater number of negative experiences associated with Physical Education in middle school and high school. Males from this sample ($M=5.36$, $SD=3.83$) reported higher levels of negative experiences regarding Physical Education than females from this sample ($M=4.76$, $SD=4.35$).

Results for Hypotheses

Hypothesis One: It was hypothesized that there would be a negative correlation between negative feelings about Physical Education and current level of participation in regular exercise. A bivariate correlation was conducted to examine the relationship between negative experiences involving Physical Education and current Participation in exercise, $r=-.45$, $p<.01$. The significance of this correlation led to a rejection of the null hypothesis. Participants who reported more negative feelings and memories regarding Physical Education classes in middle school and high school were less likely to currently participate in regular exercise.

Hypothesis Two: It was hypothesized that there would be a positive correlation between numbers of barriers to exercise reported and higher negative feelings and memories regarding Physical Education classes. A bivariate correlation was conducted to examine the relationship between the numbers of barriers reported and negative experiences in Physical Education, $r=.48, p<.01$. The significance of this correlation led to a rejection of the null hypothesis. Participants whom reported a greater number of barriers to exercise also reported higher levels of negative experiences regarding Physical Education class during middle and high school.

Hypothesis Three: It was hypothesized that there would be a negative correlation between levels of negative experiences regarding middle school and high school Physical Education classes and reported levels of self-esteem. A bivariate correlation was conducted to examine the relationship between negative experiences in Physical Education and current levels of self-esteem, $r=-.42, p<.01$. The significance of this correlation led to a rejection of the null hypothesis. Participants whom reported high levels of negative experiences involving Physical Education classes in middle and high school reported lower levels of self-esteem.

Hypothesis Four: It was hypothesized that females will report more negative experiences regarding Physical Education classes in middle school and high school than males. An independent t-test was performed to assess whether the dependent variable, negative feelings regarding Physical Education classes, significantly differed across the males and females, $t(1,99) = .67, p>.01$. Due to the insignificant difference between

males ($M=5.36$, $SD=3.83$) and females ($M=4.76$, $SD=4.35$) regarding the number of negative experiences reported, the null hypothesis was retained.

Hypothesis Five: It was hypothesized that there would be a stronger negative relationship between negative feelings and memories regarding Physical Education classes and current participation in regular exercise in female participants than male participants. A bivariate correlation was performed to compare the relationship between current exercise participation and level of negative experiences involved in physical education classes (the same variables from hypothesis one); the correlations were run for males and females separately. The strength of each correlation based on gender was compared. Contradictory as to what was expected the correlation for women ($r=-.43$, $p<.01$) was lower than the correlation for males ($r=-.55$, $p<.01$). To examine whether the correlation was significantly lower, a follow-up hierarchical multiple regression was performed to identify the significance of this difference using the interaction of gender and negative experiences in Physical Education Classes in relation to current exercise routine. The criterion was reported levels of exercise participation. The predictor in the first step was gender. In the second step, negative experiences in Physical Education classes was added, and, finally, in the third step the interaction between gender and negative experiences was added. The question was: Does the interaction of the two add to the prediction of the variance in participation in exercise over the main effect of each variable alone. The results showed that Step 1 (gender) did not significantly predict variance in current levels of exercise, $F(1,100) = 1.97$, $p>.05$. Step 2 did significantly predict variance in barrier to exercise, $F(2, 99) = 14.81$, $p<.01$, with an R^2 of .23,

indicating that 23% of the variance in current levels of exercise participation was explained by gender and negative experience in Physical Education together. However, only negative experiences in Physical Education classes contributed significantly ($\beta = -.46$, $t = -5.20$, $p < .01$). In Step 3, the action of gender and negative experiences did not contribute significantly to the explanation of variance in barrier to exercise, $F(3, 98) = 10.16$, $p > .05$. Due to the insignificance of this interaction, the null hypothesis was retained. The interaction of gender and negative experiences involving Physical Education classes did not have a significant effect on current levels of exercise.

Hypothesis Six: It was hypothesized that there would be a stronger positive correlation between negative experiences with Physical Education classes and reported barriers to exercise in females than males. A bivariate correlation was performed to compare the relationship between number of reported barriers to exercise and level of negative experiences involved in physical education classes (the same variables from hypothesis two); the correlations were run for males and females separately. The strength of each correlation based on gender was compared. As expected the correlation for women ($r = .52$, $p < .01$) was higher than the correlation for males ($r = .43$, $p < .01$). To examine whether the correlation was significantly higher, a follow-up hierarchical multiple regression was performed to identify the significance of this difference using the interaction of gender and negative experiences in Physical Education Classes in relation to reported number of barriers to exercise. The criterion was in barriers to exercise. The predictor in the first step was gender. In the second step, negative experiences in Physical Education class was added, and, finally, in the third step the interaction between

gender and negative experiences was added. The question was: Does the interaction of the two add to the prediction of the variance in barrier to exercise over the main effect of each variable alone? The results showed that Step 1 (gender) did not significantly predict variance in barriers to exercise $F(1,100) = .90, p > .05$. Step 2 (gender and negative experiences in Physical Education classes) did significantly predict variance in barrier to exercise, $F(2,99) = 16.45, p < .01$ with an R^2 of .25, indicating that 25% of the variance in barrier to exercise was explained by gender and negative experience in Physical Education together. However, only negative experience in Physical Education contributed significantly ($\beta = .50, t = 5.63, p < .01$). In Step 3, the action of gender and negative experiences did not contribute significantly to the explanation of variance in barriers to exercise, $F(3, 98) = 10.87, p > .01$. Due to the insignificance of the interaction, the null hypothesis was retained. Females did not report significantly more barriers to exercise based on negative experiences in Physical Education class than men.

Hypothesis Seven: It was hypothesized that there would be a stronger negative relationship between self-esteem and negative experiences involving Physical Education classes in female participants than male participants. A bivariate correlation was performed to compare the relationship between levels of self-esteem and negative experiences involved in physical education classes (the same variables from hypothesis three), the correlations were run for males and females separately. The strength of each correlation based on gender was compared. The strength of each correlation based on gender was compared. Contradictory to what was expected, the correlation for women ($r = -.41, p < .01$) was lower than the correlation for males ($r = -.46, p < .01$). To examine

whether the correlation was significantly lower, a follow-up hierarchical multiple regression was performed to identify the significance of this difference using the interaction of gender and negative experiences in Physical Education Classes in relation to reported levels of self-esteem. The criterion was levels of self-esteem. The predictor in the first step was gender. In the second step, negative experiences in Physical Education class was added, and, finally, in the third step the interaction between gender and negative experiences was added. The question was: Does the interaction of the two add to the prediction of the variance levels of self-esteem over the main effect of each variable alone? The results showed that Step 1 (gender) did not significantly predict variance in barriers to exercise, $F(1,101) = .13, p > .05$. Step 2 (gender and negative experiences involving Physical Education) did significantly predict variance in levels of self-esteem, $F(2,99) = 10.65, p < .01$ with an R^2 of .18, indicating that 18% of the variance in levels of self-esteem was explained by gender and negative experiences in Physical Education together. However, only negative experiences in Physical Education contributed significantly ($\beta = .50, t = 5.63, p < .01$). In Step 3, the action of gender and negative experiences did not contribute significantly to the explanation of variance in barrier to exercise $F(3, 98) = 7.08, p > .01$. Due to the insignificance of the interaction, the null hypothesis was retained. Females did not report lower levels of self-esteem based on negative experiences in Physical Education class than men.

DISCUSSION

The purpose of the current study was to examine experiences, memories and feelings regarding Physical Education class, and also to determine the impact negative experiences or feelings involving Physical Education classes during adolescence has on an individual's self-esteem, barriers to exercise, and amount of exercise in adulthood. Since self-perceptions are often developed during childhood and adolescence and carried into adulthood; it was hypothesized that negative experiences involving Physical Education would be detrimental to self-esteem and future barriers to and amount of exercise.

Four measures were utilized to evaluate how negative experiences in Physical Education classes in middle school and high school related to current levels of self-esteem, reported barriers to exercise and current participation in exercise. Many of the findings validated the researcher's original hypotheses. Ninety-eight percent of the sample reported negative experiences during Physical Education classes. Higher levels of negative feelings were associated with lower levels of self-esteem and less participation in regular exercise. However, some of the results were not congruent with the researcher's original hypotheses. Self-esteem and current attitudes regarding exercise were equally affected in males and females who reported higher levels of negative experiences in Physical Education classes. Interpretations of results are discussed below.

Hypothesis One: There will be a negative correlation between negative feelings about Physical Education and current level of participation in regular exercise.

Results indicated that there was a negative correlation between current participation in exercise and negative feelings and experiences involving Physical Education classes. The higher the number of negative experiences reported regarding Physical Education class, the less likely one was to currently participate in regular exercise. These findings support research that adolescents are extremely sensitive to stressful events, negative experiences with school, and negative evaluation from peers. All of these experiences have a large impact on development of self-esteem and self-perception. Negative experiences in adolescence are associated with negative self-concept, which has been documented as a barrier to participation in exercise (Brinthaup et al., 2010). When an individual has negative feelings and attitudes regarding Physical Education classes, it quite possibly has a direct effect on individual's self-concept and confidence leading to avoidance of exercise. In addition to negative self-perception, an individual who has had negative experiences during Physical Education class, or feels at a disadvantage in Physical Education class, may form a negative attitude regarding exercise in general. When negative emotions are associated with a particular activity, a common coping strategy used to prohibit anxiety is avoidance. Individuals who feel inferior to their peers, or embarrassed or inadequate while participating in Physical Education class, may generalize these negative feelings and the anxiety that accompanied them to all forms of exercise, avoiding exercise all together.

Hypothesis Two: *There will be a positive correlation between reported number of barriers to exercise and negative feelings about Physical Education.*

Results indicated that there was a positive correlation between reported number of barriers to exercise and negative feelings about Physical Education. The number of barriers to exercise, or factors that inhibit an individual from exercising increased as the level of negative feelings associated with Physical Education classes increased. Physical activity is highly publicized and documented to be essential to good health. Benefits of exercise include decreased risk of cardiovascular disease, decreased risk of diabetes and decreased risk of depression (Mayo Clinic, 2012). For individuals to disregard the stern warnings regarding sedentary behavior, they feel obligated to present justification. This justification translates into barriers to exercise. Even with all the documented dangers of not participating in physical activity, exercise is not a priority; but instead a burden. Negative experiences and feelings associated with Physical Education classes may lead one to view exercise as a burden; an unenjoyable task rather than a beneficial, leisurely activity. For an individual to make an activity a priority, positive past experiences must be associated with that activity. Individuals typically don't prioritize activities that are unenjoyable or activities that have made them feel inferior or embarrassed.

Hypothesis Three: There will be a negative correlation between current levels of self-esteem and negative feelings regarding Physical Education.

The results of the current study indicate that there is a negative correlation between current levels of self-esteem and negative feelings regarding Physical Education classes. Participants that reported higher levels of negative feelings regarding Physical Education reported lower levels of self-esteem. This would suggest that negative experiences regarding Physical Education classes are detrimental to the development of

positive self-esteem. During adolescence physical competence is recognized as an important piece of an adolescent's self-esteem. Self-esteem developed in adolescence is largely based on comparisons of themselves with their peers (Santrock, 2012).

Physical Education is a class that adolescents can easily feel judged, rejected, and inferior since they are making comparisons between themselves and their peers. Often times an individual is asked to perform in front of their peers, leaving a sense of vulnerability. Participating in unfamiliar tasks in the presence of peers can provide great anxiety for an adolescent (Fairclough, 2012). Negative experiences regarding Physical Education such as: bullying, comparing oneself to peers and feeling inadequate, feeling inferior, feeling self-conscious undressing in front of peers, being embarrassed, and worrying about what classmates think of you; are all experiences that play a key role in the development of self-esteem during adolescence. These results support current research that negative experiences regarding peer evaluations have a direct effect on development of self-esteem (Rudolph, Caldwell & Conley, 2005).

Hypotheses Four: Females will report more negative feelings regarding Physical Education classes, than males.

Results indicated that females and males reported similar levels of negative experiences regarding Physical Education classes, with no significant difference. It was hypothesized that females would report more negative experiences regarding Physical Education due to their tendency to be more likely to suffer from social uncertainty (Oldehinkel & Bouma, 2011). Many of the commonly reported negative experiences involving Physical Education involve comparing yourself to peers or feeling judged or

scrutinized by peers; thus, it was thought that females would report more negative experiences regarding Physical Education classes than males. Other variables that were thought to lead to females reporting higher levels of negative experiences in Physical Education classes than males was females' tendency to be more sensitive to negative peer evaluations, anxiety, and interpersonal matters and the pressure the media tends to put on females regarding weight and shape.

The results of this study indicated that males actually had higher, but not significantly higher, levels of negative experiences regarding Physical Education classes. One possible explanation for males having just as many or more negative experiences in Physical Education classes could be due later onset of puberty for males (Santrock, 2012). Males may tend to feel even more self-conscious undressing in front of their peers. The normal range of puberty gives the possibility that some males may complete the sequence of puberty before a male of the same chronological age even begins the sequence. Although adolescent females typically tend to be less satisfied with their bodies at the onset of puberty; both males and females are certainly concerned with body image. Another plausible explanation for the results of this hypothesis testing could be the increasing pressures society puts on males to perform well in athletics. Inadequacy while performing in Physical Education classes may be more detrimental to a male's self-perception due to pressure to perform well in athletics. Adolescent males tend to have unrealistic expectations for success as an athlete (Santrock, 2012). The prevalence of male professional athletes being viewed as role models has increased in the last couple of decades; leaving many adolescent males with a strong desire to excel in athletics.

Hypothesis Five: *There will be a stronger negative relationship among female participants that report negative feelings and memories regarding Physical Education classes and current participation in regular exercise than the negative relationship of males whom report negative relationship between negative feelings involving Physical Education classes and participation in regular exercise.*

Results indicated that males and females that had negative experiences involving education did not significantly differ in the current participation in exercise. Females were hypothesized to be affected more by negative experiences in Physical Education leading to less participation in regular exercise again due to their tendency to be more influenced by peer acceptance and are also more susceptible to prevalence of lifetime anxiety (Mayo Clinic, 2012). This study did not support this theory. Both females and males that reported negative experiences report significantly lower levels of participation in exercise. These results lend support that both males and females prior experiences with Physical Education classes greatly affect their current participation in exercise. These results provide insight to the possibility that male adolescents may be just as concerned with peer acceptance and body image as females.

Low perceived self –performance and ability associated with negative experiences while participating in Physical Education class, promotes avoidance of future exercise in males and females. Males and females both tend to avoid exercise following higher levels of negative experiences in Physical Education class. This is known as experiential avoidance, or the conscious effort to avoid a particular anxiety provoking activity (Ulmer, Stetson, & Salmon, 2010). Approach systems are potentially used by an individual when

activities are seen as rewarding; avoidance is used when an individual sees the activity as unrewarding or unpleasant (Kashdan, Weeks, & Savostyanova, 2011).

Hypothesis Six: There will be a stronger positive relationship among female participants that report negative feelings and memories regarding Physical Education classes and barriers to exercise than the positive relationship of males whom report negative relationship between negative feelings involving Physical Education classes and barriers to exercise.

Results indicated that females did not report significantly more barriers to exercise when negative experiences in Physical Education class were reported. There was a significantly positive relationship between negative experiences in Physical Education classes and reported barriers to exercise in both male and female participants. The researcher again assumed that females would report more barriers to exercise when more negative experiences were reported due to the female population being more prevalent to anxiety and being more concerned with negative peer evaluations than males (Oldehinkel & Bouma, 2011) . Results indicated that there was a strong relationship between current exercise routine and reported barriers to exercise resulting in similar results for hypotheses five and six. This strong positive relationship between these two independent variables may explain these results. Males and females both similarly avoid exercise after experiencing negative feelings and events during Physical Education classes.

As earlier discussed, as one disregards the importance of regular exercise, they must also justify the reason for this disregard. The present study found that individuals who do not participate in regular exercise also report more barriers to exercise; quite

possibly as a means of justifying this behavior. These results emphasize the importance of positive early experiences regarding physical activity to promote a lifelong desire to exercise and adopt healthy habits for both males and females (American Academy of Pediatrics, 2011). Early negative experiences in Physical Education class is detrimental to current participation in exercise promoting the need to justify sedentary behavior by reporting barriers to exercise.

Hypothesis Seven: There will be a stronger negative relationship among female participants that report negative feelings and memories regarding Physical Education classes and levels of self-esteem than the negative relationship between males whom report negative feelings involving Physical Education classes and levels of self-esteem.

Results indicated that negative experiences regarding Physical Education classes and the effects they had on self-esteem did not significantly differ between males and females. There is a strong negative relationship between negative experiences in Physical Education class and self-esteem in both males and females. Research shows that females tend to have lower negative body images than males during adolescence (Santrock, 2012). Females also strongly base self-worth on peer evaluations and place a higher value on peer judgments when evaluating self-worth. Due to these factors, the researcher assumed that females' self-esteem would be more affected by negative experiences in Physical Education classes than males.

Adolescents develop self-esteem as they compare themselves to peers. During Physical Education class these comparisons are based on not only performance but body shape and size. Although males tend to develop more muscle mass than fat at the onset of

puberty; results indicate comparisons and self-evaluations during Physical Education class also have a strong relationship with the self-esteem levels of males. Males whom go through puberty later than their peers may be most susceptible to negative experiences in Physical Education class and lower levels of self-esteem. Peer approval during adolescence is critical to development of positive self-esteem (Rudolph et al., 2005). Negative experiences in Physical Education classes directly affect the self-esteem levels of males and females.

Concluding Discussion

Negative experiences involving Physical Education classes in adolescence may have a detrimental effect on self-esteem, future participation in exercise and number of barriers to exercise reported by participants in this study. In order for Physical Education to make a beneficial impact in the development of healthy behavior, changes must be made to the current curriculum. Susceptibility to peer evaluation and judgments must be reduced. Adolescents should not be made to perform novel tasks in front of their peers during this crucial stage of development. Locker rooms should be constructed so that each individual has more privacy while changing into gym attire. Competition should be limited and focus should be shifted to lifelong fitness and wellness. The benefits of physical activity must be emphasized and promoted during Physical Education classes in order to make a lasting impact on the adolescent's future lifestyle.

Limitations

This study had several limitations. First, participants in this study were students at a small, rural, Midwestern University. Therefore, this study failed to include participants who

are less educated or those from urban areas. This study also lacked a diverse population in terms of gender and ethnicity. The majority of participants were white and approximately 70% of participants were female. Therefore, this research may not generalize to the population. A larger percentage of males would have been helpful when comparing male and female participants on self-esteem, current participation in exercise and levels of self-esteem. The data obtained from this study was self-reported. Exercise routines and self-esteem are sensitive topics for some individuals; self-report measures may not provide completely truthful data when pertaining to sensitive subject areas.

This study was largely based on correlational data. It is impossible to insinuate negative experiences in Physical Education classes caused lower levels of self-esteem, lower levels of current participation in exercise or higher levels of reported barriers. One could argue that these variables may have contributed to the higher levels of negative experiences in Physical Education class. The study does not provide insight into which came first. Participants may have suffered from low self-esteem or dislike for exercise leading to experiencing negative experiences in Physical Education classes.

This research was based on memories from adolescence. Using adolescent participants rather than adults, would have provided more accurate information regarding the negative impact negative experiences in Physical Education class has on the adolescent. It is likely that other factors influence self-esteem, current exercise routines, and reported barriers to exercise. One variable that would have added great value to this study would have been body weight and mass. It would have been helpful to know if participants that reported higher levels of negative experiences involving Physical Education classes were overweight. Other factors that were not obtained in current study that could contribute are participation in

competitive sports outside of Physical Education classes, parental marital status, and age at onset of puberty.

Directions for Further Research

Results obtained from the current study support the need for further research regarding Physical Education classes and the effect they have on adolescents. Future research should examine current Physical Education curriculum and how it affects adolescents. Comparisons of various curriculums should be done to determine which design is best for development of positive attitudes regarding exercise in the adolescent population. A longitudinal study beginning in adolescence would provide excellent insight into the impact negative experiences in Physical Education class has on current self-esteem levels and attitudes regarding exercise and the changes that take place each year. Efforts should be made to ensure adolescents have positive experiences involving exercise and Physical Education classes to ensure positive attitudes regarding exercise into adulthood. Diminishing stressful events during adolescence, including negative experiences involving Physical Education class, should be the ultimate goal of research pertaining to this topic.

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APPENDIX A

Informed Consent

CONSENT TO PARTICIPATE IN RESEARCH

Department of Psychology, Fort Hays State University

Study title: Negative Experiences Involving Physical Education and Avoidance of Exercise

Name of Researcher: Daphne Brown

Contact Information email: djbigham@mail.fhsu.edu, phone: 785-213-8764

Name of Faculty Supervisor & Contact Information: Dr. Carol Patrick, email: cpatrick@fhsu.edu, phone: 785-628-4406

You are being asked to participate in a research study. It is your choice whether or not to participate.

Your decision whether or not to participate will have no effect on benefits or services such as your academic standing, to which you are otherwise entitled. Please ask questions if there is anything you do not understand.

What is the purpose of this study?

The purpose of the study is to understand barriers to exercise and variables that may increase them.

What does this study involve?

If you agree to participate, you will be asked to complete four brief surveys. The length of time it will take to participate in this study is approximately 25 minutes. Approximately 100 participants will be included in this study.

Are there any benefits from participating in this study?

Your participation in this study may help researchers understand reasons for the decline in physical activity. Determining potential barriers for lack of physical activity is the most important benefit. Improvements in curriculum could be made to combat the decline in physical activity in the adolescent and adult population.

Will you be paid or receive anything to participate in this study?

You will not receive any compensation for participation in this study, unless your instructor provided extra credit for participation.

What about the costs of this study?

There are no costs for participating in this study other than the time you spend completing the surveys.

What are the risks involved with being enrolled in this study?

It is unlikely that there would be any harm involved in participation in this study. In case of any psychological distress caused directly from study, you should contact me or Dr. Patrick immediately so that we may assist you in receiving appropriate assistance. You may also contact the Kelly Center directly for help at (785) 628-4401.

How will your privacy be protected?

The information collected as data for this study includes: demographic information, barriers scale, current exercise routines survey, self-esteem scale and attitudes about Physical Education in middle school and high school survey. Efforts will be made to protect the identities of the participants and the confidentiality of the research data used in this study: names will not be used on any of the collected data. Once data is entered into a data analysis program all surveys will be shredded and data will be stored on my personal computer files locked by password. The information collected for this study will be used only for the purposes of conducting this study. What we find from this study may be presented at meetings or published in papers but your name will not ever be used in these presentations or papers.

Other important items you should know:

Withdrawal from the study: If you decide to participate, you are free to withdraw your consent and to discontinue your participation at any time and without any penalty. Your decision to stop participation will have no effect on the on benefits or grades you receive.

Whom should you call with questions about this study?

Questions about this study *or concerns about a research related injury* may be directed to the researcher in charge of this study: Daphne Brown at (785)213-8764.

If you have questions, concerns, or suggestions about human research at FHSU, you may call the Office of Scholarship and Sponsored Projects at FHSU (785) 628-4349 during normal business hours.

CONSENT

I have read the above information about Anxiety and Avoidance of Exercise and have been given an opportunity to ask questions. By signing this I agree to participate in this study and I have been given a copy of this signed consent document for my own records. I understand that I can change my mind and

withdraw my consent at any time. By signing this consent form I understand that I am not giving up any legal rights, and I am over 18 years of age.

Signature and Date

APPENDIX B

Debriefing

Debriefing

Thank you for participating in the Negative Experiences involving Physical Education and Avoidance of Exercise study!

The purpose of this study was to investigate whether negative experiences and feelings involving past Physical Education classes could have an effect on current attitudes regarding exercise.

The researcher believe that participants experiences involving Physical Education class have a relationship with current exercise participation, reported barriers to exercise and levels of self-esteem.

By participating in this research you have provided information which will help further research on Physical Education curriculum and preventive mental health strategies targeting adolescents. This research can be used to inform others of the potential stresses Physical Education may cause the adolescent population, which may lead to a negative perception of exercise. This negative perception developed in adolescence may be a detriment to future exercise participation.

We do not believe this study will cause psychological stress but if it does, please seek counseling at the Kelly Center, Picken Hall Room 111 or (785) 628-4401.

Daphne Brown

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785-213-8764

Dr. Carol Patrick

cpatrick@fhsu.edu

785-628-4406

APPENDIX C

The Barriers Scale

DIRECTIONS: Below are statements that relate to ideas about exercise. Please indicate the degree to which you agree or disagree with the statements by circling SA for strongly agree, A for agree, D for disagree, or SD for strongly disagree.

- | | |
|---|-----------|
| 1. I enjoy exercise. | SA A D SD |
| 2. Exercise decreases feelings of stress and tension for me. | SA A D SD |
| 3. Exercise improves my mental health. | SA A D SD |
| 4. Exercising takes too much of my time. | SA A D SD |
| 5. I will prevent heart attacks by exercising. | SA A D SD |
| 6. Exercise tires me. | SA A D SD |
| 7. Exercise increases my muscle strength. | SA A D SD |
| 8. Exercise gives me a sense of personal accomplishment. | SA A D SD |
| 9. Places for me to exercise are too far away. | SA A D SD |
| 10. Exercising makes me feel relaxed. | SA A D SD |
| 11. Exercising lets me have contact with friends and persons I enjoy. | SA A D SD |
| 12. I am too embarrassed to exercise. | SA A D SD |
| 13. Exercising will keep me from having high blood pressure. | SA A D SD |
| 14. It costs too much to exercise. | SA A D SD |
| 15. Exercising increases my level of physical fitness. | SA A D SD |
| 16. Exercise facilities do not have convenient schedules for me. | SA A D SD |
| 17. My muscle tone is improved with exercise. | SA A D SD |
| 18. Exercising improves functioning of my cardiovascular system. | SA A D SD |
| 19. I am fatigued by exercise. | SA A D SD |
| 20. I have improved feelings of wellbeing from exercise. | SA A D SD |
| 21. My spouse (or significant other) does not encourage exercising. | SA A D SD |
| 22. Exercise increases my stamina. | SA A D SD |

- | | |
|---|-----------|
| 23. Exercise improves my flexibility. | SA A D SD |
| 24. Exercise takes too much time from family relationships. | SA A D SD |
| 25. My disposition is improved with exercise. | SA A D SD |
| 26. Exercising helps me sleep better at night. | SA A D SD |
| 27. I will live longer if I exercise. | SA A D SD |
| 28. I think people in exercise clothes look funny. | SA A D SD |
| 29. Exercise helps me decrease fatigue. | SA A D SD |
| 30. Exercising is a good way for me to meet new people. | SA A D SD |
| 31. My physical endurance is improved by exercising. | SA A D SD |
| 32. Exercising improves my self-concept. | SA A D SD |
| 33. My family members do not encourage me to exercise. | SA A D SD |
| 34. Exercising increases my mental alertness. | SA A D SD |
| 35. Exercise allows me to carry out normal activities without becoming tired. | SA A D SD |
| 36. Exercise improves the quality of my work. | SA A D SD |
| 37. Exercise takes too much time from my family responsibilities. | SA A D SD |
| 38. Exercise is good entertainment for me. | SA A D SD |
| 39. Exercising increases my acceptance by others. | SA A D SD |
| 40. Exercise is hard work for me. | SA A D SD |
| 41. Exercise improves overall body functioning for me. | SA A D SD |
| 42. There are too few places for me to exercise. | SA A D SD |
| 43. Exercise improves the way my body looks. | SA A D SD |

APPENDIX D

The Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle **SA**. If you agree with the statement, circle **A**. If you disagree, circle **D**. If you strongly disagree, circle **SD**.

- | | |
|--|-----------|
| 1. On the whole, I am satisfied with myself. | SA A D SD |
| 2. At times, I think I am no good at all. | SA A D SD |
| 3. I feel that I have a number of good qualities. | SA A D SD |
| 4. I am able to do things as well as most other people. | SA A D SD |
| 5. I feel I do not have much to be proud of. | SA A D SD |
| 6. I certainly feel useless at times. | SA A D SD |
| 7. I feel that I'm a person of worth, at least on an equal plane
with others. | SA A D SD |
| 8. I wish I could have more respect for myself. | SA A D SD |
| 9. All in all, I am inclined to feel that I am a failure | SA A D SD |
| 10. I take a positive attitude toward myself. | SA A D SD |

APPENDIX E

The Exercise Questionnaire

APPENDIX F

Middle School and High School Physical Education Survey

Middle School and High School Physical Education Survey

1. Please rank these classes in order. 1=favorite class in middle school and high school; 8=least favorite class in middle school and high school.
 Reading/Language Arts ____
 Art ____
 Algebra ____
 Physical education ____
 Writing ____
 Social Studies ____
 Music ____
 Science ____
2. What electives did you choose to take in high school?

Please answer True or False to the following statements:

3. I enjoyed physical education class in middle school and high school. T/F
4. I often felt embarrassed while changing in the locker room before/after physical education class. T/F
5. I had a negative experience in physical education class during middle school or high school. T/F
6. The other students were better than me at the activities we did during physical education classes. T/F
7. I dreaded physical education class in middle school and high school. T/F
8. I was embarrassed during physical education class in middle school or high school. T/F
9. I was bullied or witnessed bullying during physical education classes. T/F

10. I felt self-conscious while participating in physical education classes. T/F
11. Physical Education class taught me to make healthy choices. T/F
12. I compared myself to my peers during Physical Education classes. T/F
13. Physical Education class made me feel good about myself. T/F
14. I worried about what my classmates thought of me during Physical Education class. T/F
15. I enjoyed the activities we did during Physical Education classes in middle school and high school. T/F

APPENDIX G

Institutional Review Board Approval



FORT HAYS STATE UNIVERSITY

Forward thinking. World ready.

OFFICE OF SCHOLARSHIP AND SPONSORED PROJECTS

DATE: December 9, 2013

TO: Daphne Brown

FROM: Fort Hays State University IRB

STUDY TITLE: [542232-1] Negative Experiences in Physical Education Class and Exercise Avoidance

IRB REFERENCE #: 14-038

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: December 9, 2013

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of New Project materials for this research study. The departmental human subjects research committee and the Fort Hays State University IRB/IRB Administrator have determined that this project is EXEMPT FROM IRB REVIEW according to federal regulations.

Please note that any changes to this study may result in a change in exempt status. Any changes must be submitted to the IRB for review prior to implementation. In the event of a change, please follow the Instructions for Revisions at <http://www.fhsu.edu/academic/gradschl/irb/>.

The IRB administrator should be notified of adverse events or circumstances that meet the definition of unanticipated problems involving risks to subjects. See <http://www.hhs.gov/ohrp/policy/AdvEvtGuid.htm>.

We will put a copy of this correspondence on file in our office. Exempt studies are not subject to continuing review.

If you have any questions, please contact Leslie Paige at lp Paige@fhsu.edu or 785-628-4349. Please include your study title and reference number in all correspondence with this office.