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Factors Influence High School Students' Enrollment in Elective Physical Education: A Mixed Method Study

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FACTORS INFLUNCE HIGH SCHOOL STUDENTS' ENROLLMENT IN ELECTIVE PHYSICAL EDUCATION: A MIXED METHOD STUDY

by

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ABSTRACT

FACTORS INFLUNCE HIGH SCHOOL STUDENTS' ENROLLMENT IN ELECTIVE PHYSICAL EDUCATION: A MIXED METHOD STUDY

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The purpose of this study was to examine the factors influencing high school students' enrollment in elective physical education (PE). Three groups of students emerged based on enrollment choice: those enrolling in elective PE (CPE, 26%), those not enrolling (NPE, 38%), and those who were uncertain about their enrollment in elective PE (UPE, 36%). Participants (n=69) completed the Expectancy-Value and Sport Motivation questionnaires to measure their motivation in PE, and a subsection of students (n=47) wore accelerometers for approximately four days to measure their habitual weekday physical activity (PA). Qualitative data were collected using open-ended questions and semi-structured focus group interviews, then analyzed using open and selective coding. The motivational surveys and PA data were summarized and analyzed quantitatively using descriptive and inferential statistics. Significant differences were seen in expectancy beliefs (η_p^2=.19) and extrinsic motivation (η_p^2=.10, p=.04) between the students in the CPE and NPE groups; as well as significant differences (p<.01) in step count (η_p^2=.33), moderate to vigorous PA (η_p^2=.39), and energy expenditure (η_p^2=.31), between the CPE and NPE groups, and between the CPE and UPE groups. Students reported what they disliked about their current PE in open-ended questions; across all three enrollment groups, 61.33% of participants expressed negative feelings toward

curriculum content. Specific factors that influenced students' enrollment choice were revealed during interviews. Students in the CPE group were motivated by enjoyment, being active during the day, and a less stressful environment in PE. Students in the NPE group reported they did not have room in their course schedules, or felt that PE was not a necessity. Those in the UPE group also reported scheduling issues, in addition to the physical discomfort of being sweaty all day if the elective PE course was in the morning. The results suggested that the CPE group had significantly higher weekday PA and enjoyed PE more than other groups. To make elective PE more desirable for students, future PE courses should offer advanced PE topics, include less fitness testing, incorporate more common sports, and allow elective PE courses to count towards credits for graduation.

Keywords: expectancy beliefs, intrinsic motivation, extrinsic motivation, physical activity, self-determination, task values, adolescent

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CHAPTER I

Introduction

Physical education (PE) plays an important role in the lives of youth. The primary goal of PE is to develop physically literate individuals with the knowledge, skills, and confidence necessary to enjoy a lifetime of healthful physical activity (PA; Society of Health and Physical Educators [SHAPE], 2013). Through PE, youth have the opportunity to develop the skills needed to participate in sports and activities of daily living, acquire the knowledge needed to make healthy choices throughout their lives, and be physically active (National Association for Sport and Physical Education [NASPE], 2012). PE can also help students develop cognitive skills (Burgeson, 2004), and provide students with opportunities to learn important life skills (Le Masurier & Corbin, 2006).

The opportunity for students to be physically active is an important benefit of PE. Whether PA comes from an organized setting (e.g. PE, sport teams) or from recreational play (e.g. recess), it is vital in achieving and maintaining good health (Hobin, Leatherdale, Manske, Burkhalter, & Woodruff, 2010). Because of the importance of PA, it is recommended that children and adolescents, ages six to seventeen years old, be moderately (e.g. brisk walking) to vigorously (e.g. jumping, running) physically active for a total of 60 minutes every day (United States Department of Health and Human Services [HHS], 2008). When children participate in PE, they are engaging in part of their recommended daily total of PA that they may not get outside of the school environment.

There are numerous benefits to engaging in regular PA (HHS, 2008; Centers for Disease Control and Prevention [CDC], 2013). Research demonstrates that there is a positive correlation between regular PA and overall health among children and youth (HHS, 2008). Specifically,

children who are physically active have healthier cardiorespiratory systems (i.e., strong hearts and lungs), stronger bones and muscles, and also have less body fat (CDC, 2013). Engaging in regular PA can also decrease the likelihood of developing risk factors for many chronic diseases including obesity, heart disease, high blood pressure, type II diabetes and osteoporosis (HHS, 2008). Aside from the health benefits, PA can also impact academic performance through direct and indirect physiological, cognitive, emotional and learning mechanisms (CDC, 2010).

Even though the importance and benefits of PA are clear, the majority of children and youth in the United States (U.S.) tend to live primarily sedentary lifestyles (CDC, 2014). Most school-aged children spend a large part of their day sitting in a classroom and the majority of their free time is spent on the internet, watching television, playing video games or utilizing some other form of technology (CDC, 2014). Specifically in adolescents, the level of moderate to vigorous physical activity (MVPA) declines as they transition from childhood into adulthood (Corbin, Pangrazi, & Le Masurier, 2004; World Health Organization, 2008). According to the 2013 Youth Risk Behavior Surveillance Survey (YRBSS), only 47% of high school students were active for 60 minutes per day in a five day period, and 15% of students had not participated in at least 60 minutes of any kind of PA that increased their heart rate (CDC, 2014). The issue of physical inactivity, especially in adolescents, is not localized to the U.S. The World Health Organization (2008) reported that 60% of individuals internationally would fail to meet the recommendations for PA, with adolescents accounting for one third of that population.

Mandatory PE courses provide the opportunity for students to participate in a portion of the daily recommended PA (Le Masurier & Corbin, 2006). In the U.S. 44 states mandate PE at the high school level (NASPE, 2012). Even with a vast majority of the states mandating high school PE, the number of students who enroll in PE steadily decreases from ninth to twelfth

grade (CDC, 2014). The 2013 YRBSS reported that about 68% of ninth grade students, 55% of tenth grade students, 47% of eleventh grade students, and only 41% of twelfth grade students take PE class (CDC, 2014).

Similar trends in declining PE enrollment are also seen internationally. For example, in Canada, ninth grade student enrollment in PE classes decreased from 70.3% in 1999 to 60.4% in 2005 (Faulkner, Goodman, Adlaf, Irving, & Dwyer, 2007). An additional 50% decrease in enrollment rates among tenth grade students was seen, which is when PE becomes an optional elective class for students (Dwyer et al., 2006). The decline continues into eleventh and twelfth grade with median enrollment rates of 43% and 36% respectively (Dwyer et al., 2006). Similar to Canada, most states in the U.S. only mandate PE for one or two years in high school, then it becomes an elective course (NASPE, 2012). Whether internationally or in the U.S., there is an evident decline in the number of students taking PE, particularly in eleventh and twelfth grade (CDC, 2014).

A key component emerging from previous research is the importance of an individual's motivation to perform or take part in activities. To better understand the decline in high school PE enrollment, previous research (e.g. Gao, Lee & Harrison, 2008, Zhu & Chen, 2013a) has utilized various theories related to motivation (e.g., Self Determination Theory [SDT], Expectancy-Value Theory) as the research foundation. The SDT examines an individual's underlying motivation for certain behaviors and participation in activities (Deci & Ryan, 1985). In the case of this study, participation in PE is the activity of interest. It is theorized that an individual can have three types of motivation forming a continuum: intrinsic motivation, extrinsic motivation, and amotivation (How, Whipp, Dimmock, & Jackson, 2013).

Motivation can be influenced by expectancy beliefs (EB) and task values (TV), the two major components of the Expectancy-Value Theory (Eccles & Wigfield, 1995). EB are an individual's perception of their success in an upcoming activity, and TV are the specific reasons an individual has for doing or not doing something, which include attainment value, interest value, utility value, and cost (Eccles & Wigfield, 1995). Using the expectancy-value theory and SDT-based motivation not only provides a motivational continuum, but student values and beliefs about PE, providing insightful findings into high school students' motivation behind their elective PE enrollment choice.

In addition to motivation, research focusing on factors such as demographics (e.g. gender, age) has also been conducted (e.g. Lenhart et al., 2012, Lodewyk & Pybus, 2013). A few findings that developed from Hobin and colleagues (2010) study were that females, students in tenth, eleventh and twelfth grade, as well as those with more sedentary behaviors tend to not enroll in PE. Females who reported being highly active, were more likely to be enrolled in PA than females who are not taking PE (Lenhart et al., 2012, Pate, Ward, O'Niell & Dowda, 2007). Part of Portman's (2003) study was to determine whether or not students would participate in PE in the future. Portman (2003) conducted qualitative research to pursue a more in-depth approach to this issue, and found that future participation in PE was dependent on skill level, and more high skilled students planned on taking a PE course in the future than did the low skilled students. Based on the previous empirical research, both quantitative and qualitative data were used to examine high school students' motivation from a self-determined and expectancy-value perspective in order to further explore reasons behind the decline in high school PE enrollment.

Dishman (1994) identified adolescence as a crucial time for habit formation, refinement, and adapting healthy behaviors. This places even more importance on the role of PE in the lives

of high school students. However, it is difficult for students to reap the benefits of PE if they are not enrolled in the course. In order to increase the number of high school students enrolled in PE, the potential factors influencing their decision have to be understood. The purpose of this study was to examine the factors influencing high school students' enrollment in elective PE by (a) identifying the differences between students who enroll and do not enroll in elective PE in terms of week day PA levels and motivation, (b) exploring why they decide to, or not to, enroll in elective PE, and (c) identifying what factors would make elective PE more desirable. The following research questions are asked:

1. Is there a difference in student's PA levels and motivation between those who decide to enroll and those who decide not to enroll in elective PE?
2. What factors motivate students who choose to enroll in elective PE, and discourage students who do not enroll?
3. What changes would students like to see in elective PE to make it more desirable?

To answer these questions, 69 students were given a questionnaire to gather demographic data, and to examine their sources of motivation. The questionnaire was a compilation of the Expectancy-Value Questionnaire (EVQ) and the Sport Motivation Scale (SMS). Next, habitual weekday PA levels of 47 students were monitored. Students wore an accelerometer for approximately four consecutive week days to measure their habitual week day PA levels from approximately 7:00 am-10:00 pm. Simultaneously, the researcher was observing students during their PE classes to become more familiar with the students and the research context. After the researcher became acquainted with the students, and the questionnaires were examined, students were asked to participate in small focus group interviews. Three enrollment groups were formed based on results of the questionnaire: students who were certainly enrolling in elective PE

(CPE=18) in the upcoming school year, students who were certainly not enrolling in PE (NPE=26), and students who were uncertain if they will be taking an elective PE (UPE=25). Students from each enrollment group volunteered for the interviews. Two to four students were interviewed at a time. The quantitative data was analyzed using primarily descriptive and inferential statistics. The qualitative data was analyzed using open and selective coding.

The results indicated there were significant differences in EB and EX between the students in the CPE and NPE groups. There were also significant differences in step count, MVPA, and energy expenditure between the CPE and NPE groups and between the CPE and UPE groups. Qualitative data were collected through two open-ended questions and semi-structured focus group interviews also revealed differences between enrollment groups. Students reported what they disliked about their current PE in the open-ended questions. Across all three enrollment groups, a majority of participants expressed negative feelings toward curriculum content. Students in only the NPE and UPE groups, expressed issues of physical discomfort in terms of being sweaty for the remainder of the day after PE is over.

Specific influences that affected the enrollment choice of students in each group were revealed during interviews. Students in the CPE group were motivated by enjoyment, being active during the day, and a less stressful environment in PE. Students in the NPE group did not have room in their course schedules, or felt that PE is not a necessity. Those in the UPE group also reported issues with scheduling, in addition to the physical discomfort of being sweaty all day if the elective PE course is in the morning. Differences in qualitative responses, and quantitative results suggested that CPE group had significantly higher weekday PA and enjoyed PE more than other groups. Students also made suggestions that they felt would improve elective PE. To make elective PE more desirable for students, future PE courses should offer advanced

PE topics, include less fitness testing, incorporate more common sports, and allow elective PE courses to count towards credits for graduation.

The findings of this study have multiple implications in the PE field. The emergent motivational and external factors can be used to target efforts toward increasing enrollment in PE. With the major factors influencing students' decision to enroll or not enroll in PE can being understood, parents, PE teachers and other professionals have better idea of which areas to focus on. Also, it is important to consider what changes the students wish to see in elective PE to make it more desirable. The suggested changes should be taken into consideration if they could effectively increase the number of students enrolled in PE. PE is key in the development of children and adolescents, and creates a foundation of life skills that influence healthier choices and behaviors (NSAPE, 2013). Understanding and targeting the factors that influence students' decision to take PE, potentially increasing enrollment, could have a positive effect in the lives of adolescents and youth.

Definition of Key Terms

Certainly enrolling in elective PE (CPE): Students who were certainly enrolling in an elective PE course in the upcoming school year.

Elective physical education: A physical education course offered to eleventh and twelfth grade students that is not mandatory, but students can enroll in the course if they so desire.

Expectancy beliefs (EB): An individual's perception of their success in an upcoming activity or task (Eccles & Wigfield, 1995).

Moderate to vigorous physical activity (MVPA): Any activity that requires $\geq$3 METs (Freedson, Pober, & Janz, 2005).

Motivation: Refers to the process in which goal-oriented human behaviors are initiated and sustained (Pintrich & Schunk, 2002).

Not enrolling in elective PE (NPE): Students who were certainly not enrolling in an elective PE course in the upcoming school year.

Physical activity*:* Any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a basal level (CDC, 2013).

Self-determination: An individual's underlying motivation for behaviors and participation in certain activities (Deci & Ryan, 1985).

Task values (TV): Specific reasons an individual has for doing or not doing something (Eccles & Wigfield, 1995).

Uncertain about enrolling in elective PE (UPE): Students who were uncertain about the decision to enroll in an elective PE course in the upcoming school year.

Youth/adolescent: Individuals ages 12-17.

CHAPTER II

LITERATURE REVIEW

There is an abundance of research dedicated to the issues of sedentary behaviors and the decline in PE enrollment (CDC, 2014). Specifically in reference to the decline in enrollment of elective PE, researchers (Carroll & Hostetter, 1996; Grasten, Watt, Hagger, Jaakkola, & Liukkonen, 2015; Lodewyk & Pybus, 2013) have provided a wealth of knowledge, potential explanations, and supporting theoretical foundations to better understand this phenomenon. The decision to enroll in elective PE is multifaceted and potentially associated with demographics (Couturier, Chepko & Coughlin, 2005), attitudes (Bibik et al., 2007), and motivation (Shen, 2014). The purpose of this chapter is to provide a review of the literature relevant to PE enrollment, PE participation, and PA.

Demographic Factors

Demographic factors such as gender, race/ethnicity, age, and grade level in school can influence student choices to participate in PE and PA (Couturier et al., 2005; Hobin et al., 2010). A cross-sectional study conducted by Hobin and colleagues (2010) examined students' demographic, behavioral, and psychosocial variables that were linked to the school environment in relationship to rates of PE enrollment. Data were collected from 73 high schools in Ontario, Canada through self-reported surveys as part of the School Health, Action, Planning, and Evaluation System (SHAPES; Hobin et al., 2010). Hobin and colleagues found that males (odds ration [OR] = 1.36, 95% confidence interval [CI]: 1.28, 1.45), students whose parents encourage PA (OR=1.27, 95% CI: 1.18, 1.37), students with higher PA levels (OR=1.06, 95% CI: 1.05, 1.06), and students who had two or more friends that were physically active (OR=1.38, 95% CI: 1.25, 1.53), were more likely to enroll in PE. However, students in tenth grade (OR=0.69, 95%

CI: 0.63, 0.75), eleventh grade (OR=0.59, 95% CI: 0.54, 0.64), twelfth grade (OR=0.44, 95% CI: 0.41, 0.48), with higher BMI (OR=0.98, 95% CI: 0.95, 1.01), who smoked (OR=0.88, 95% CI: 0.82, 0.96), and with more sedentary behaviors (OR=0.97, 95% CI: 0.95, 0.98), were consistently predicted to not enroll in PE. Of the 24,303 students who responded, approximately 62% were enrolled in PE, but varied widely across schools (Hobin et al., 2012). Overall, there were significantly more ninth grade males enrolled in PE than females or students from any other grade level. Numerous other studies found similar gender trends within PE enrollment as well as PA levels (Lenhart et al., 2012; Pate et al., 2007; Carroll & Hostetter, 1996; Grasten et al., 2015).

Research has shown that males are significantly more likely to be physically active than females (Lenhart et al., 2012; Grasten et al., 2015). Lenhart and associates (2012) used data collected from the 2009 Philadelphia YRBSS to examine the differences between male and female enrollment in PE, sports teams, and overall levels of PA. The YRBS was completed by 591 students in grades 9-12. It was found that 44% of males and 27% of females reported being highly active (Lenhart et al., 2012). In addition, the females who reported being highly active were seven times more likely to report participating in PE class every day than sedentary females (Lenhart et al., 2012). In another study, a total of 5,423 eighth, ninth, and twelfth grade females were surveyed; those who were enrolled in PE reported more MVPA, and higher levels of overall PA than females who were not taking PE (Pate et al., 2007).

Gender differences were also found in a study by Carroll and Hostetter (1996) that included 37 high school throughout Newfoundland, Canada. Gender has been found to be the best predictor of leisure time PA (Carroll & Hostetter, 1996), and as shown by research (e.g. Lenhart et al., 2012; Grasten et al., 2015), males were overall more active than females. PA levels also vary between different ethnic and racial groups (Carroll & Hostetter, 1996). Chung

and Phillips (2002) found significant differences in leisure-time PA between American and Taiwanese high school students with the American students reporting more leisure-time PA. Results from Lenhart et al. revealed that highest number of sedentary days were reported by African American students.

Other studies have revealed that playing on sports teams and participation in PE class contributed differently to overall levels of PA for males and females (Lenhart et al., 2012; Pate et al., 2007; Grasten et al., 2015). Female's overall PA levels were strongly related to participation in PE (Pate et al., 2007; Lenhart et al., 2012). Whereas, adolescent males' participation in PE was not related to their overall activity levels because they were shown to achieve higher levels of PA during unstructured periods of the day outside of PE (Lenhart et al., 2012). However, contradictory results were seen in a separate study, where females actually reported more out-of-school PA across a seven day period than males (Grasten et al., 2015). Grasten and associates (2015) found that only two 45 minute weekly PE classes accounted for 26.2% of females', and 33.6% of males' MVPA time.

Age and grade level in school can affect the type activities that students desire to participate in while in PE class. A study conducted by Couturier and colleagues (2005) examined 5,308 students in sixth through twelfth grades, and results indicated that middle school students were found to be more inclined to participate in new activities in PE, such as learning new games and sports. In contrast, high school students preferred to participate in activities/games they were already familiar with. This finding can be supported with research that revealed adolescents tend to participate in certain physical activities if they have the skills needed to participate (Le Masurier & Corbin, 2006). In summary, demographic factors can affect participation in PE and PA; but it's important to also consider the underlying reasons that might contribute to such

variation in participation between groups. Considering students' attitudes toward PE and PA may provide insight into reasons behind the choice to participate in PE and PA (Chung & Phillips, 2002; Lazarevic, Orlic, Lazarevic, & Janic, 2015).

Attitudes toward Physical Education

An attitude is someone's positive or negative evaluation of, or feelings toward something (Eagly & Chaiken, 1993). Attitudes can be formed directly through observations or through experiences (Eagly & Chaiken, 1993). When conducting research, attitude is important because it can influence cognitive processes, such as social inference, reasoning, perception, and interpretation; which can therefore influence behavior (Eagly & Chaiken, 1993). Bibik and associates (2007) said that to maximize the benefits and success of PE, students must perceive it in a positive way and learn to enjoy being physically active.

Zeng, Hipscher, and Leung (2011) studied the attitudes toward PE and PA (ATPEA) of 1,317 high school students in New York City, and found that overall the attitudes of the students were positive. Generally, the students believed PE was beneficial to those who already regularly participate in it, and that high school students should take PE seriously (Zeng et al., 2011). Differences seen in ATPEA were in relation to participants' gender, ethnic group, and socio-economic status (SES; Zeng et al., 2011; Chung & Phillips, 2002). Females reported that they felt PE was important in high school, and was just as important as other subjects, but was only beneficial for individuals already in shape (Zeng et al., 2011). Students with middle SES also felt that PE was only beneficial for people who were already in shape (Zeng et al., 2011). However, Chung and Phillips (2002) and Lazarevic et al. (2015) found that male students had more positive attitudes overall toward PE than females. Students involved in certain behaviors (e.g. smoking, drinking) were less likely to enjoy PE. (Bibik et al., 2007; Hobin et al., 2010). A

majority of those students who indicated they did enjoy PE, also enjoyed school as a whole (Hobin et al., 2010).

In a study by Woodson-Smith, Dorwart, and Linder (2015), attitudes toward PE among female students in coeducation and single-gender settings were examined. Significant differences in attitudes toward PE, the importance of PE in their lives, and the preference for single-gender versus coeducational setting were found. Within the coeducational PE class, only 14.5% of the female students preferred to be taught in a single-gender PE class, whereas 24.4% of the female students in the single-gender PE class preferred a coeducational PE setting (Woodson-Smith et al., 2015). Seventy-four percent of the 223 high school students surveyed by Bibik and colleagues (2007) said they preferred coeducational PE classes, which was not the case in Portman's (2003) research.

Portman (2003) conducted a qualitative research study to understand ninth grade students' perspectives about their PE experiences, whether they were encouraged to be physically active, and if they would participate in PE in the future. Portman (2003) interviewed 26 high skilled students and 20 low skilled students. Overall, the students preferred being separated by gender and skill level. Another finding was that all students agreed that if they were not successful with an activity or it was not fun, it should be dropped from the teachers' plans. All the students also enjoyed PE better when they were friends. Participation in current and future PE varied by skill level. Nineteen of 26 high skilled students played sports outside of school and also planned on taking a PE class every year until they graduated. The other seven high skilled students, and all of the low skilled students did not plan to enroll in another PE class. The final emergent theme from Portman's (2003) interviews was in relation to whether the students believed they could improve or not. The high skilled students worked on skills until they

felt successful. However, the low skilled students felt that if they were successful, it was because of luck or teacher support (Portman, 2003).

Stewart, Green, and Huelskamp (1991) also investigated the general attitudes of 2,130 students toward PE. Students in grades 7-12 indicated the primary purpose of PE was in relation the fitness domain, followed by social, skill, affective, and cognitive domains. Senior boys ranked fitness as the number one priority of PE (Stewart et al., 1991). Similarly, Couturier et al. (2005) reported that high school students were more likely to enroll in PE because of health benefits. Junior high boys and senior girls valued fitness and social domains equally as number one, and junior high girls identified the social domain as being most important (Stewart et al., 1991). According to Stewart et al. (1991), the top three domains of primary purpose of PE across all grade levels and gender were fitness, skill and social domains.

Stewart and colleagues (1991) also reported that 82% of the students surveyed felt that PE should be part of the curriculum and 64% felt it should be required at every grade level. Approximately 45% of the students who participated in Bibik and associates' (2007) study preferred having more sports games in their PE curriculum, and consistent with Portman's (2003) findings, 64% of students preferred working with students of similar abilities. Fifty-four percent of high school students said they would be interested in taking academic PE in a classroom setting and learn about athletic training/injury care, nutrition, sport psychology, stress management, and exercise physiology (Strand & Scantling, 1994). Surprisingly, 79% of the students indicated that if PE were only offered as an elective, they would select to enroll even if it is not required (Strand & Scantling, 1994); which is contradictory to the trend of declining student enrollment in PE as grade level increases, as seen in a similar study done around the same time (Stewart et al., 1991). Likewise, positive attitudes toward PE declined with age

(Lazarevic et al., 2015). It was also observed that students who had more positive attitudes toward PE were more often engaged in PA outside of school (Lazarevic et al., 2015).

Attitudes toward Physical Activity

Timo, Yli-Piipari, Anthony, and Jarmo (in press) suggest that an underlying purpose of PE is to provide positive PA experiences in order to promote future PA engagement. Chung and Phillips (2002) also state that attitude is considered to be a key factor that influences PA participation and suggest the decline in students electing to take PE might be attributed to a negative attitudes toward PA. Moderate correlations have been found between attitude and PA (Chung & Phillips, 2002). Furthermore, students tend to report generally positive attitudes toward PA (Zeng at al., 2011). Students overall tend to believe exercise or PA is the best way to keep a young looking and healthy body (Zeng et al., 2011). However, in the study conducted by Zeng et al. (2011), some students indicated that maintaining good physical condition takes more effort than it is worth, and thought most students get adequate exercise just from daily activities or activities outside PE.

There is evidence that shows students are being physically active outside of PE classes. Reports of PA outside of school were fairly consistent across studies (Bassett, John, Conger, Fitzhugh, & Coe, 2015; Bibik et al., 2007; Strand & Scantling, 1994). Bassett and colleagues (2015) stated that high school boys' team sport participation has remained relatively constant at about 50% from 1970 to 2012. Bibik et al. (2007) reported that 56% of high school students participated in outside sport activities, and 45% participated in sports or exercised at least three to four days per week. Strand and Scantling (1994) found that 41% of high school students participated in extracurricular sports.

Expectancy-Value Theory

The Expectancy-Value Theory is a theoretical framework that has been applied in the PE field to examine a variety of achievement-related influences that can impact an individual's expectancies and values (Gao et al., 2008). The Expectancy-Value Theory contains two major components: EB and TV (Eccles & Wigfield, 1995). Eccles and Wigfield (1995) define EB as an individual's perception of their success in an upcoming activity or task. It is hypothesized that EB may directly influence decisions individuals make about whether or not they will choose to participate in an activity or continue to participate after failure (Gao et al., 2008). TV are the specific reasons an individual has for doing or not doing something. Four distinct constructs of TV have emerged from previous research across academic areas and PE: Attainment value, interest value, utility value, and cost (Eccles & Wigfield, 1995). Attainment value is the perceived importance of doing well in learning. Interest value refers to how enjoyable or interesting a learning experience is. Chen and Chen (2012) noted that enjoyable experience is one of the most significant motivators in PE. Utility value is the perceived usefulness of a learning experience. Cost refers to the negative consequences one might experience when participating in an activity. In PE for instance, cost perceptions may come from many different factors such as perceived incompetence, boredom, irrelevant material, or physical discomfort (Chen & Liu, 2009; Xiang, McBride & Bruene, 2006).

Using the Expectancy-Value Theory as a foundation, Zhu and Chen (2013a) examined the relationship between adolescent motivation, achievement in PE, and after-school PA. The aim of the study was to determine whether success in PE could merge adolescent expectancy-value motivation and participation in after-school PA. The results revealed that adolescent psychomotor success was significantly predicted by EB, and that psychomotor achievement was

the only direct significant predictor for PA (r^2 = .139; Zhu & Chen, 2013a). EB and TV were not directly associated with adolescent PA participation. The data suggested that the relationship between adolescent expectancy-value motivation and participation in PA is most influenced by an individual's psychomotor achievement (Zhu & Chen, 2013a).

In another study conducted by Zhu and Chen (2013b), middle school students' motivational cost aspects of attending PE in relation to EB was examined. The students' reported cost aspects via responses to open ended questions asking what they did not like about PE and why, and would they choose to attend PE if they were given an opportunity to choose not to, and why. The researchers found that about 70% of the 593 middle-school students reported negative aspects of attending PE as cost, or the perceived negative perspectives associated with participating in activities (Eccles, 1983). The main areas of perceived motivational cost came from PE content (e.g. running the mile), instructional conditions/elements (e.g. taking tests), and social support (e.g. embarrassment; Zhu & Chen, 2013b).

Grasten and colleagues (2015) found that overall EB were not strong factors for moderate-to-vigorous participation in PE, but, perceived importance predicted PA involvement for females, and for males, attainment value predicted out-of-school PA. Whereas, Chen and Chen (2012) reported that ninth-grade students with stronger EB and higher perceptions of intrinsic value tended to be more physically active in class, and although the cost perception was overall low and did not impact in-class PA, it actually significantly de-motivated them to participate in leisure-time PA after school. None of the other expectancy-value constructs showed significant impact on after-school PA levels (Chen & Chen, 2012).

EB, or a learner's expectation for success, has been found to be a strong predictor of achievement and performance (Eccles & Wigfield, 1995; Gao, Lee, & Harrison, 2008). A meta-

analysis in PE revealed that expectancy value and situational interest are the most prevalent motivational sources for learners in kindergarten through twelfth grade (Chen, Chen & Zhu, 2012). These motivational factors as well as the competence gained through various learning experiences (e.g., fitness knowledge) may collectively predict students' after-school PA participation (Chen et al., 2014). Having studied ninth-grade students, Chen and Chen (2012) identified that cost or negative perceptions/experiences perceived in PE appeared to have a negative impact on students' afterschool PA participation.

Utilizing the expectancy-value and interest motivation theories, Chen, Sun, Zhu, and Chen (2014) sought to identify the relationship between students' motivation and health-related fitness knowledge and after-school PA participation in third, fourth, and fifth grade students. Despite having high motivation, only EB and exploration intention showed statistical significance in regards to predictions for students' after-school participation in PA. The data gathered from this study visibly indicated a positive association between EB in PE and after-school PA, which therefore demonstrates that EB in PE is an important source of motivation for voluntary PA participation (Chen et al., 2014).

Self-Determination Theory

Motivation plays an intricate role in the SDT which has grown in popularity in the PE field over the last decade (Shen, 2014). Motivation is an important determinant of sustained participation in PA. The SDT allows for examination of an individual's underlying motivation for behaviors and participation in certain activities (Deci & Ryan, 1985). Motivation can be present in various forms, ranging from amotivation, a complete absence of motivation, to intrinsic motivation, participating in activities for the pure pleasure and interest (How et al., 2013).

Within the SDT, it is suggested that there is a motivational continuum comprised of three ways an individual can be motivated; intrinsic, extrinsic, and amotivation (How et al., 2013). Intrinsic motivation is engaging in an activity out of sheer interest and for the enjoyment that it provides. Second is extrinsic motivation, which would be performing an activity to gain some separate external outcome. Third is amotivation or complete lack of motivation, usually characterized by the belief that success is not attainable and that the activity is not valuable. Another important component of the SDT is autonomy. Deci and Ryan (2000) state that individuals are more likely to continually engage in behaviors or activities that they initiate of their own volition rather than feeling forced to do so. There are three basic psychological needs that need to be satisfied in order to attain autonomous motivation: (a) autonomy; (b) competence; and (c) relatedness (Deci & Ryan, 2000). Autonomy simply refers to the opportunity to make decisions with a sense of feeling free from pressures (Guay, Vallerand, & Blanchard, 2000). Competence refers to the ability to effectively carry out a specific planned behavior, and relatedness refers to an individual's need for internal security and connectedness (How et al., 2013).

Van den Berghe, Vansteenkisteb, Cardona, Kirk, & Haerens (2014) conducted a review of 74 SDT based peer-reviewed studies focused on PE. As the SDT applies to PE, in order for students to be motivated, it is imperative to satisfy their basic needs for autonomy, competence, and relatedness (Deci & Ryan, 2000; Van den Berghe et al., 2014). This is accomplished by structuring the environment to be autonomy-supportive, and by forming a positive relationship with the students. The literature review confirmed the motivational sequence proposed within the SDT (Van den Berghe et al., 2014). It was determined that future research should (a) address combinations of the three dimensions of need-supportive practices, (b) be more intervention and

experimental based, (c) provide better insight into the motives behind teachers' behaviors, (d) examine a greater variety of learning outcomes, and (e) consider more relevant physical education-related contextual factors (Van den Berghe et al., 2014).

As confirmed by Van den berghe's (2014) literature review, understanding students' motivation is vital to providing effective PE programs. In a study conducted by Wallhead, Garn, and Vidoni (2014), a sport education model was compared to a multiactivity PE model in terms of their effect on students' motivation in PE and leisure-time PA. Results showed that the students in the sport education program reported larger increases in perceived effort and enjoyment of the program, compared to the students being taught the multiactivity model (Wallhead et al., 2014). It was determined that the development of a more autonomous form of motivation facilitated the positive outcomes. However, there was limited data to support a relationship between motivation from the sport education program, and direct increases in leisure-time PA (Wallhead et al., 2014). The sport education model allowed for more internalized forms of student motivation than the multiactivity program, but the model lacks an adequate outlet for extracurricular activities, decreasing the potential for motivation to transfer to leisure-time PA (Wallhead et al., 2014). The transfer of motivation from PE to PA is possible though, since the motivation would be formed within a related educational context (Vallerand & Ratelle, 2002; Cox, Smith, & Williams, 2008).

Granero-Gallegos, Baena-Extremera, Pérez-Quero, Ortiz-Camacho, & Bracho-Amador, (2012) identified motivational profiles of the importance of PE in high school students and the relationship with gender and participation in sport. The first profile identified was moderate motivation which was associated with males who were physically active for less than three hours per week. The second profile identified was low motivation which was associated mainly with

females who were physically active for less than three hours per week. Finally, the third profile identified was high motivation, which was seen in males who were physically active for more than three hours a week (Granero-Gallegos et al., 2012). Students in the third profile reported having high intrinsic and extrinsic motivation, understood the importance of PE and was motivated by satisfaction or having fun in PE. Overall, Granero-Gallegos and colleagues (2012) found that high school students were intrinsically motivated, and highly motivated by satisfaction or enjoyment.

Approximately 47% of students were said to have high motivation by Granero-Gallegos and colleagues (2012) and participated in PA for more than three hours a week. Similarly, Shen (2014) reported that students who participated in organized PA programs outside of school displayed an overall higher motivation than students who do not. Using the SDT to guide the research, Shen (2014) found dynamic relationships between participation in PA programs outside of school and the self-determination process in PE. However, there was a stronger association among the pathways for factors of perceived autonomy support to relatedness, from autonomy to competence, and from self-determined motivation to in-class PA engagement, among the students who did not participate in programs (Shen, 2014). Interestingly, there was no significant relationship confirmed between participation status and perceived teachers' autonomy support (Shen, 2014), which is vital for predicting enrollment in elective PE (Shen, 2010).

Shen (2010) examined if ninth grade students' perceived teacher autonomy support in mandatory PE influenced their decision to enroll in elective PE. Shen found that ninth grade students reported strong perceived behavioral control of elective PE but demonstrated neutral attitudes and weak perceived social pressure on the decision to enroll or not enroll in elective PE. A weak-to-moderate correlation between elective PE enrollment and perceived autonomy

support was found (Shen, 2010). Students' intention to enroll in elective PE was low, and the actual enrollment rate of the 545 participating students the next school year was only 25%. Specific reasons for low enrollment were not provided, but it was noted that unfavorable attitudes toward elective PE and lack of social support may be influential factors.

How and colleagues (2013) sought to determine if choice in PE, when compared to a regular PE control group, heightened students' autonomous motivation, perceived autonomy support, and PA levels. Students in the intervention group were able to choose their role and level of involvement within a unit in PE class while students in the control group received a regular PE unit and participated as instructed (How et al., 2013). The data from the control groups revealed that lack of choice in PE was associated with more negative perceptions of autonomy support (How et al., 2013). Additionally, some of the students who had more choices in PE, presented significantly higher PA levels than students who had regular PE. These findings demonstrate that perceptions of autonomy support and levels of in-class PA can be positively influenced by the presence of choice in high school PE (How et al., 2013). In order for PE to provide an effective avenue for PA participation among children and adolescents, educational practices that incorporate choice is an important consideration (How et al., 2013).

Social Cognitive Theory

To better understand the decline in enrollment in PE, it is important to consider internal factors that influence decision-making, choice and behavior in addition to demographic factors and attitudes. The Social Cognitive Theory (SCT; Bandura, 1977) stresses the importance of the dynamic interaction between behavioral, environmental, and personal factors within an individual as they make decisions about actions and behaviors. The SCT outlines a number of

factors including self-efficacy and outcome expectancies, which can influence an individual's behavior affecting their participation in PE and PE (Luszczynska & Schwarzer, 2005).

Self-efficacy is defined as one's beliefs about their own ability to learn or perform tasks (Bandura, 1986, 1997). Self-efficacy theory suggests that an individual's success can be explained and predicted by self-efficacy and outcome expectancy (Bandura, 1986, 1997). According to the SCT, behavior change is made possible by a personal sense of control (Bandura, 1977; 1986; 1997). If people believe that they have the ability to solve a problem, they are more likely to do so and feel more committed to the decision. Self-efficacy reflects the belief of being able to accomplish difficult tasks by means of adaptive action, and has been linked to learners' effort level, engagement, willingness to actively participate, and perseverance in the PE setting and with PA in general (Lodewyk & Pybus, 2013; Gao et al., 2008).

Outcome expectancies are another core construct of SCT. Outcome expectancy refers to a person's beliefs related to the potential consequences of a behavior or activity (Bandura, 1986, 1997). Rodgers and Brawley (1996) suggest that outcome expectancy is created by the interaction of two factors: (a) outcome likelihood, which is the probability that a particular action will lead to a certain outcome, and (b) outcome values, which refer to the individual meaning associated with the potential outcomes of the behavior. Researchers such as Lodewyk, Gammage, and Sullivan (2009) and Lodewyk and Pybus (2013) have utilized constructs of the SCT in addition to other theories to offer explanations for participation in PE.

Trans-contextual Model

The trans-contextual model outlines the processes in which motivation for a particular educational activity in one context is transferred into motivation toward related activities in a similar setting (Hagger & Chatzisarantis, 2012). Particularly in PE field, the trans-contextual

model has enabled researchers to make connections and predictions revealing that motivation in PE does indeed predict motivation and intentions for leisure-time PA (Cox et al., 2008; Hagger, Chatzisarantis, Barkoukis, Wang, & Baranowski, 2005). Wallhead, Hagger, and Smith (2010) conducted a study where they taught a 12-week sport education program in PE to students aged nine to 16 years. They found that the students' autonomous motivation increased, which in turn transferred to leisure time and facilitated more PA during lunch and recess (Wallhead et al., 2010).

Direct trans-contextual effects can also be seen in Jackson, Whipp, Chua, Dimmock, & Hagger's (2013) study of the motivational pathways between students' relational and self-efficacy beliefs in PE and leisure-time PA. Jackson et al. (2013) examined students' tripartite efficacy beliefs to predict PA. Tripartite efficacy consists of (a) self-efficacy or confidence in oneself, (b) other-efficacy which is the students' confidence in their teachers' abilities, and (c) relation-inferred self-efficacy (RISE) which is the extent to which a student believes the teacher is confident in the student's ability (Jackson et al., 2013). Results determined that other-efficacy and RISE in relation to PA, and students' autonomous motivation indirectly supported a series of effects between the tripartite constructs and PA. When the teacher created a highly relatedness-supportive environment, the students reported stronger other-efficacy and RISE beliefs (Jackson et al., 2013). Additionally, their relational efficacy beliefs (a) increased their confidence in their own ability, (b) directly and indirectly predicted more autonomous motives for participation in PE, and (c) exhibited potential trans-contextual effects in relationship to leisure-time factors (Jackson et al., 2013). An important finding still to note, is that neither self-efficacy nor autonomous motivation for PE had a direct connection to leisure-time PA (Jackson et al., 2013).

Multi-Theoretical Approaches

Many researchers integrate multiple theories and models to offer detailed explanations for an individual's choice to participate in PE and PA (e.g. Standage, Gillison, Ntoumanis, & Treasure, 2012; Lodewyk et al., 2009). Standage and associates (2012) encompassed the SDT and the trans-contextual model in proposed motivational model to predict the usefulness of autonomous motivation toward exercise in relation to health-related quality of life (HRQoL), and physical self-concept (PSC). HRQoL, PSC, and a four day step count were the outcome variables examined in this study. The hypothesized model yielded valuable results: Perceptions of autonomy support from a PE teacher positively predicted PE-related need satisfaction; competence predicted PSC, and relatedness predicted HRQoL; autonomy and competence positively predicted autonomous motivation toward PE, which in turn positively predicted autonomous motivation toward exercise (Standage et al., 2012). Therefore, autonomous motivation toward exercise positively predicted step count ($\beta=.03$, $p=.05$), HRQoL ($\beta=.06$, $p<.05$), and PSC ($\beta=.08$, $p<.05$) (Standage et al., 2012). The overall results demonstrated that participation in organized PA had direct positive, but small relationships with both in-class PA and intentions towards future PE enrollment (Standage et al., 2012).

Timo and associates (in press) examined perceived physical competence towards PA, the role of autonomous motivation, and enjoyment in PE as predicting factors of future PA. This six year longitudinal study by Timo et al. (in press), found that incorporating self-efficacy from the SCT, and the SDT significantly predicted total metabolic equivalents ($\beta=.28$) and vigorous intensity PA ($\beta=.29$) of a group of seventh grade Finnish students. Autonomous motivation and enjoyment in PE in seventh grade were not significant predictors of later PA. However, the

students' self-perception of their abilities that were derived from interactions with a physically active environment, did influence later PA participation (Timo et al., in press).

Another theory that has been used in conjunction with other supporting theories to identify relationships between variables that influence participation in PE is Body Image Theory (BIT; Lodewyk et al., 2009; Lodewyk & Pybus, 2013). The main construct of the BIT is body size discrepancy (BSD), which occurs when someone is dissatisfied with their body or when they negatively evaluate it. Lodewyk et al. (2009) investigated relationships between BSD, self-efficacy, test anxiety, and achievement in PE. Gender differences were found in BSD (d=.92) specifically in females, body size discrepancy predicted test anxiety, which in turn predicted self-efficacy. Moreover, self-efficacy predicted achievement in both males (β=.55, $p<.05$) and females (β=.34, $p<.05$). The results show that gender-specific relationships among these constructs should be considered in the achievement scores of high school students in PE (Lodewyk et al., 2009).

Including constructs from the SDT, SCT, and BSD, Lodewyk & Pybus, (2013) surveyed 236 students to explore which factors related to retaining students in elective high school PE. About 70% of the students were either in elective PE or had intentions to enroll in a high school PE class in the future. Approximately 16% of the students reported not wanting to enroll in PE, and 14% were not enrolling, but for non-PE related reasons such as scheduling issues, not needing any more PE credits to meet future goals, and participating in PA from other activities (Lodewyk & Pybus, 2013). PE related reasons for students not wanting to enroll included content dislikes (e.g., participating in undesired activities, fitness training and testing), health content (e.g., being in a classroom setting, tests), social factors (e.g., showering and changing), and domain value (e.g., not necessary, a waste of a credit). Students who were enrolled had

statistically higher motivation (d= 1.16), PE grades (d=.46) and weekly levels of PA aside from PE (d=.54; Lodewyk & Pybus, 2013). Similar to the findings in Lodewyk et al. (2006), females also reported a statistically higher BSD (d=-.79) and qualitatively expressed more domain value and concern about the social setting and the type of activities offered while in PE (Lodewyk & Pybus, 2013).

Summary

Examining factors related to participation in PE and PA may provide insight to help explain the decrease in high-school youth who enroll or participate in daily PE (CDC, 2013). Overall, males, students whose parents encourage PA, students with higher PA levels, and students who had two or more friends that were physically active, and students who were more motivated were more likely to enroll in PE (Hobin et al., 2013; Lodewyk & Pybus, 2013). Motivation plays a role in the both participation in PE and PA, and research surrounding motivation suggests that students who are motivated in PE are also motivated to be physically active (e.g., Cox et al., 2008; Hagger et al., 2003; 2005). Students who chose to not enroll in PE typically were less motivated, didn't value the heath and PE concepts, and disliked certain PE related activities like fitness training, health content, and competition (Hobin et al., 2010; Lodewyk & Pybus, 2013). Social factors such a bullying, negative peer interactions and other factors not related to PE (e.g., scheduling, time), also play a role in students' decision to not enroll in PE (Lodewyk & Pybus, 2013; Portman, 2003).

Limitations

Even though the literature provided an abundance of relevant findings there are still limitations present within the individual studies. One limitation is the use of self-report data. Many of the studies included in this review utilized a self-reported survey to collect data on

motivation, attitudes, and values surrounding PE and PA (e.g. Bibik et al., 2007; Chen & Chen, 2012; How et al., 2013) as well as PA levels (e.g. Shen, 2014; Timo et al., in press). Lodewyk and Pybus (2013) noted that the group sizes of students who were choosing to enroll in PE and those who were not enrolling, were unequal, which was also the case in the study conducted by Hobin et al. (2010). Unequal group size creates a lack of information from the group that contains less students.

In addition to lack of objective measures of PA, many previous studies (e.g. Dwyer et al., 2006; Shen, 2010) failed to provide details as to why certain students chose to, or not to enroll in PE. In order to better comprehend students' decision to enroll or not enroll, factors that influenced their choice should be examined. It could also be beneficial to investigate what possible changes students would like to see in PE to make taking it more desirable. Interviewing the students may help reveal what influences their decision to enroll or not enroll, and also discover what changes they would like to see in PE in order to increase retention and enrollment rates.

Objectives

Given the limitations of existing studies, there are some areas in which future research is warranted. Very few of the studies included in this review included qualitative data to explain student's attitudes toward PE (Lodewyk & Pybus, 2013; Portman, 2003). Ample information can be gathered from surveys, however, providing students with the opportunity to freely express their opinions can yield interesting and valuable results. Moreover, research pertaining specifically to high school students' choice to enroll in an elective PE course, and specific retention factors is limited (Lodewky & Pybus, 2013; Shen, 2012).

Therefore, the purpose of this study was to examine the factors influencing high school students' enrollment in elective physical education by (a) identifying the significant differences between students who enroll and do not enroll in elective PE in terms of week day PA levels and motivation, (b) exploring why they decided to, or not to, enroll in elective PE, and (c) identifying what factors would make elective PE more desirable. To determine and examine the differences that may exist between students who do and do not enroll in PE, the following research questions were posed:

1. Is there a difference in student's physical activity levels and motivation between those who decide to enroll and those who decide not to enroll in elective PE?
2. What factors motivate students who choose to enroll in elective PE and discourage students who do not enroll?
3. What changes would students like to see in elective PE to make it more desirable?

This study utilized a multi-theoretical approach encompassing components of the Expectancy-Value Theory and the SDT. Additionally, both quantitative and qualitative data were collected to answer the above research questions, which subsequently provided a better understanding of students' decision to enroll or not enroll in elective PE.

CHAPTER III

METHODOLOGY

Participants and Research Context

In order to participate in this study, students had to be currently enrolled in PE, and had the opportunity to enroll in an elective PE class in the upcoming school year. Participants were completing their last year of mandatory PE, and had decided whether they were going to enroll in elective PE for the following year. In the region this study took place, only two PE credits are required to graduate. However, students had the option to enroll in PE as an elective once the two required credits are completed, which is a vital component of the study context. Students who participated in this study were all under the age of 18, therefore parental/guardian permission was obtained before the student was able to participate. Student assent was also obtained prior to beginning research.

The participants for this study were 69 students recruited from two local high schools (School A and School B) located in Southeastern Virginia. Both of the schools had similar characteristics in terms of their PE course requirements and offerings. The total participant sample consisted of 24 males (35%) and 45 females (65%) aged 14 to 17 years (M = 15.9, SD = .69) in tenth (n = 58) and eleventh (n = 11) grade. Participants identified themselves as Caucasian (73%), African American (12%), Hispanic/Latino (6%), or Asian (10%). Thirty four students were from School A, and 35 students were from School B. From School A, 31 students wore accelerometers, and 27 volunteered to participate in a small group interview. School B had 16 students who wore accelerometers, and none who volunteered to be interviewed. There were less students wearing accelerometers from School B because some of the students felt uncomfortable having to wear the device for an extended period of time.

Research Design

For this study, a mixed method approach was used to collect quantitative and qualitative data to examine student motivation and other factors affecting their choice to enroll or not to enroll in elective PE. A mixed method design is also seen in several previous research studies (e.g., Lodewyk et al., 2009; Lodewyk & Pybus, 2013; Standage et al., 2012) which have provided insightful findings surrounding participation in PE. For quantitative data, this study incorporated PA measures, EVQ and the SMS to measure constructs from the Expectancy-Value Theory and SDT. Additionally, qualitative data were collected through interviews. This mixed method approach allowed for a comprehensive understating of the various factors that influenced students' choice to enroll or not enroll in elective PE. Once the study protocols were approved by the university institutional review board and school district research office, the researcher contacted the physical educators and school principals to start data collection.

Variables and Measures

Physical activity. ActiGraph GT3X tri-axial accelerometers (Actigraph, Pensacola, FL) were used to measure participants' PA levels for approximately four consecutive week days (1 min epoch). Accelerometers are widely used in PA research, and are valid and reliable measures for generating activity counts, step counts, and calorie expenditure among adolescents (Sasaki, John, & Freedson, 2011). In order for the accelerometers to function properly, the students' height and weight information was needed. This information was collected by the researcher before the accelerometers were assigned using an eye level beam physical scale provided by the PE teachers. Data were collected over two weeks, with a different group of students wearing the accelerometers each week which was determined by the order in which permission slips were returned.

Demographics. The first section of the questionnaire collected demographic information. The students were asked about their gender, age, and race/ethnicity. Additionally, there was a question asking if they were planning to take PE as an elective in the upcoming school year. The full questionnaire can be found in Appendix A.

Motivation. Student motivation was profiled from two perspectives: expectancy-value and self-determined. The expectancy-value perspective examines student EB and TV about physical education. The self-determined motivation indicates the intrinsic, extrinsic, and amotivation levels.

Expectancy-value. The EVQ was used to measure students' EB and TV in PE. Five items measure EB and six items measure TV with two items for each construct: attainment value (AV), interest value (IV), and utility value (UV; Eccles & Wigfield, 1995). Students responded using a five-point Likert scale. One example of an EB question was, "How good are you in PE?" (1 = not good, 5 = very good). A question for AV is "Compared to math, reading, and science, how important is it for you to learn PE?" (1 = not very important, 5 = very important). There were also two open-ended questions to measure cost: "What don't you like about PE? Why?" and "If you had a choice, would you rather not come to PE? Why?" The EVQ has demonstrated high construct validity and test-retest reliability in many previous research studies (Xiang, McBride, Guan, & Solmon, 2003; Zhu & Chen, 2013b; Zhu, Sun, Chen, & Ennis, 2012). In a study conducted by Zhu and Chen (2013b), Cronbach's alpha values for EB, AV, IV, and UV, were found to be .83, .75, .88, and .84, respectively.

Self-determined motivation. To measure whether students' were intrinsically, extrinsically, or not motivated at all in PE, an adapted version of the SMS instrument was used. Pelletier and colleagues (1995) found the SMS is a valid and reliable tool for measuring

motivation. How and associates (2013) made minor modifications to the wording in the instrument—changing the word "sport(s)" to "PE"—so it could be better used and understood in the PE setting rather than just for sports. The original meaning of the questions was unchanged (How et al., 2013). The adapted version is referred to as the SMSPE and measures students' motivational orientations toward PE (How et al., 2013). For this study a shortened version of the SMSPE was used (Guay, Mageau, & Vallerand, 2003). Internal consistencies of the shortened version were found by Guay et al. (2003), with Cronbach's alpha ranging from .75 to .91. The questionnaire consists of 16 responses to the question "Why do you participate in PE?". Responses fall equally under seven domains which include: (a) Intrinsic motivation (IM), (b) extrinsic motivation (EX), and (e) amotivation (AM; Pelletier et al., 1995). Students responded on a seven-point Likert-like scale (1 = does not describe me, 7 = describes me exactly).

Interviews/focus groups. The purpose of the interview was to get a detailed account from the students as to why they were or were not electing to take PE for the upcoming school year, and what changes would they like to see for elective PE. Semi-structured interviews were conducted in small (2-4 participants) focus groups. Focus groups facilitate discussions and allow for interactions among participants which enhances the quality of data (Patton, 2002). A semi-structured interview was used to facilitate a more conversational tone and to allow for discussions and follow-up questions. The script acted as a guide to ensure that all focus groups were asked the same questions (Patton, 2002). The interview contained questions inquiring about rationales for students' PE enrollment decision, familial and friend influences, personal values pertaining to PE and fitness, and what changes they would like to see in elective PE. The scripted questions, which were developed by the researcher, can be found in Appendix B. Questions 1-7

were designed to elicit responses to answer RQ2 and questions 8-10 are to provide information to answer RQ3.

After the surveys were completed, three groups of students developed: CPE, NPE and UPE. Based on the observations and input from the PE teachers, small groups were strategically created for the interview. The groups of students were created so that they felt comfortable with each other, had a positive atmosphere and also did not contain too many overly dominate personalities.

Procedure

The participants (n=69) answered the questionnaire during their PE block. It took students approximately 10 to 15 minutes total to respond to the questionnaires. Once the students completed the questionnaires, and their height and weight information was collected, they were assigned an accelerometer. All of the students who completed the questionnaire at School A (n=34) were assigned an accelerometer to collect PA data. At School B, even though 35 students completed the survey, only 16 students wished to participate in the PA data collection portion of the study. The participants wore the accelerometer for approximately four consecutive week days. The accelerometer was worn around the students' waist for the most accurate data collection.

Data collection took approximately two weeks. During week one, 17 students from School A wore accelerometers. During week 2, another 17 students from School A, and 16 students from School B wore a device. The accelerometers were worn for approximately four days. Wear times varied based on when the accelerometer was assigned to the student, and when they returned it. Some students were absent or unavailable on the initial day of accelerometer assignment, so those students were given one the next day. There were also students who knew

they were going to be absent on the day they were to return the device, so they turned theirs in at the end of their last full day present.

The researcher observed the students' participation in PE class throughout the data collection process. This helped the researcher understand the research context and current PE program. The observations also acted as a prescreening process for the interview by aiding the researcher in knowing which students would be the most open and cooperative. The observations also allowed the researcher to become acquainted with the students so they did not feel as if they were being interviewed by a stranger and helped establish trustworthiness. The observations helped inform the questions and enabled the researcher to ask appropriate follow up questions based on knowledge of the participants.

The completed questionnaires were examined and students were then separated into three enrollment groups: CPE (n=18), NPE (n=26), and UPE (n=25). Twenty seven students from School A volunteered to participate in the interviews. Students from each of the three enrollment groups were interviewed (CPE=10, NPE=11, UPE=6). Interview groups were created based on enrollment group, observations, and teacher input. The researcher separated interviewees first by enrollment choice and personal observations of students who might work well together. Then, the teachers' advice was solicited to aid in grouping students with peers they would feel comfortable with.

Once the students volunteered to be interviewed, a time for the interview was arranged with them during week two of data collection. The students were interviewed during their PE block and an available classroom or office within the school was used for the interviews. Students were interviewed as a small group (2-4 students). Pseudonyms were used to protect the identity of the students and any other identifying information that may come up during the

interview was omitted from the reported results. The interviews ranged from approximately nine to 29 minutes. Some groups were larger and went into more detail than other groups. The interviews were recorded using a voice recorder and transcribed for data analysis.

Data Analysis

Quantitative analysis. Data analyses procedures were performed to assess the data using the Statistical Package for the Social Sciences (SPSS Version 22.0). Descriptive statistics were examined to review the distribution and characterization of the demographic variables. The students' average daily step count, MVPA, light PA, and sedentary time was determined using Actilife™ software. The composite average for EB, AV, IV, UV, IM, EM, and AM was also calculated for each student. Bivariate (Pearson) correlations were analyzed between each variable listed above, and a multivariate analysis of variance (MANOVA) was performed to determine motivational and PA differences between enrollment groups and Box's M was computed to examine the normality of the data distribution.

Qualitative analysis. An inductive open coding approach was used to analyze a sentence from the EVQ responses (Strauss & Corbin, 1998). The "yes" and "no" responses were counted first. Then, the researcher read over the student's response and determined a major theme or idea. A shortened name (code) was assigned to that response creating a new variable. Once all the responses were coded into new variables, they were categorized into larger groups so that meanings and relationships surfaced (Glaser & Strauss, 1967). Descriptive information was obtained from the interviews and observations. As described by Patton (2002), the information was thematically analyzed in three stages: production of raw data, cross-case analysis, and description and explanation of themes. The interview was recorded on a voice recorder and transcribed into raw data first. Only information relevant to the study was transcribed. Once the

interviews were transcribed, an open coding technique (Strauss & Corbin, 1998) was used for data reduction to allow for cross-case analysis which typically aligns with a case study tradition, but is effective for coding of qualitative data. During cross-case analysis, responses to questions from different students were grouped together based on similar ideas (Patton, 2002).

Trustworthiness is established so that the reader can feel confident in the findings and interpretations from the data (Patton, 2002). The researcher took time for observations and interaction with participants to become familiar with them. Peer debriefing, the process of exposing oneself to a knowledgeable peer with the purpose of exploring ideas that may otherwise remain in the inquirer's mind (Patton, 2002), was utilized throughout the data analysis. A peer unrelated to the current study provided feedback on the analysis and interpretations of the data. During data collection, communicative validity was established by the researcher (a) beginning each interview with a description of the purpose of the interview, (b) conducting each interview in a dialogue form using open-ended questions to clarify information, and (c) rephrasing and asking for clarification on unclear responses (Sandberg, 2005).

CHAPTER IV

RESULTS

Quantitative Results

Participants (N = 69) completed expectancy-value and sport motivation questionnaires. Expectancy-value scores for EB, AV, IV, and UV, ranged from 1 to 5, and self-determined motivation scores for IM, EX, and AM ranged from 1 to 7. Composite means for each construct were computed for each group of students as displayed in Table 1. Overall, participants reported having relatively high ($M > 4.0$) EB and IV, but only moderate scores ($3 < M < 4$) for AV and UV were reported. Moderate ($3 < M < 5$) levels of IM and EX were reported by participants, while low AM was reported ($M < 3$). Students in the CPE group had the highest mean scores for EB (M = 4.58), AV (M = 3.78), IV (M = 4.56), UV (M = 3.94), IM (M = 5.03), and EX (M = 4.42). The students with the highest AM score were those in NPE group (M = 2.40).

Table 1. *Means and Standard Deviations for Motivation Variables*

Construct	Group (n=69)	CPE (n=18)	NPE (n=26)	UPE (n=25)
Expectancy Beliefs	4.21 ± .61	4.58 ± .46	3.91 ± .64	4.25 ± .54
Attainment Value	3.41 ± 1.12	3.78 ± 1.26	3.00 ± 1.13	3.56 ± .89
Interest Value	4.18 ± .95	4.56 ± .84	3.87 ± 1.07	4.24 ± .81
Utility Value	3.70 ± 1.08	3.94 ± .91	3.50 ± 1.22	3.74 ± 1.05
Intrinsic Motivation	4.72 ± 1.52	5.03 ± 1.33	4.38 ± 1.79	4.86 ± 1.32
Extrinsic Motivation	3.78 ± 1.20	4.42 ± 1.09	3.53 ± 1.34	3.58 ± .96
Amotivation	2.16 ± 1.03	1.86 ± .95	2.40 ± 1.08	2.11 ± 1.00

Note: CPE= Certainly taking PE, NPE=Certainly not taking PE, UPE=Uncertain about taking PE

Forty seven students also wore accelerometers for 3 to 4 consecutive weekdays to collect their habitual weekday PA levels. Table 2 summarizes group means and standard deviations of daily averages for step count, MVPA (min.), light PA (min.), sedentary time (min.), and energy expenditure (kcal). In general, all students had moderate to high levels of PA with all group averages meeting the national recommended 60 minutes of MVPA a day. Participants in the CPE group had the highest averages for step count (M = 10,824.99), MVPA (M = 203.75), light PA (M = 107.65), and energy expenditure (M = 529.01). Individuals in the NPE group had the highest average for sedentary time (M=871.30).

Table 2. *Participant Weekday Physical Activity (M ± SD).*

PA	Total (n=47)	CPE (n=13)	NPE (n=19)	UPE (n=15)
Step count	7558.95 ± 3584.21	10824.99 ± 4237.83	6491.46 ± 2263.72	6080.55 ± 2536.66
MVPA (min.)	141.33 ± 62.48	203.75 ± 61.24	118.78 ± 42.15	115.80 ± 48.15
Light PA (min.)	89.30 ± 39.40	107.65 ± 39.62	83.83 ± 36.69	80.34 ± 39.83
Sedentary (min.)	820.28 ± 184.45	730.12 ± 197.48	871.30 ± 178.76	833.80 ± 161.21
Energy Expenditure (kcal)	334.79 ± 218.26	529.01 ± 254.43	271.32 ± 151.42	246.86 ± 150.90

Note: CPE= Certainly taking PE, NPE=Certainly not taking PE, UPE=Uncertain about taking PE

Construct relationships. Bivariate Pearson product-moment correlation coefficients were computed for PA variables and motivation constructs as shown in Table 3. Of the possible 62 correlations tested, 26 (42%) held significance at a $p < .001$ level and another six (10%) held

Table 3. *Correlations of PA Factors and Motivation Constructs*

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Step Count	-	.94**	.57**	-.52**	.84**	.05	.34*	-.12	.13	.004	.13	.25
2. MVPA		-	.69**	-.67**	.86**	.09	.38**	-.07	.16	.08	.164	.27
3. Light PA			-	-.77**	.49**	.05	.24	-.08	-.04	.09	.16	.13
4. Sedentary Time				-	-.45**	-.19	-.30*	.11	-.10	-.21	-.26	-.28
5. Kcal					-	-.01	.21	-.03	.19	-.12	.06	.14
6. Intrinsic Motivation						-	.61**	-.27*	.42**	.65**	.47**	.61**
7. Extrinsic Motivation							-	-.26*	.27*	.47**	.53**	.47**
8. Amotivation								-	-.34**	-.21	-.47**	-.15
9. Expectancy Beliefs									-	.35**	.39**	.28*
10. Attainment Value										-	.52**	.57**
11. Interest Value											-	.53**
12. Utility Value												-

* $p < .05$ ** $p < .01$

significance at the $p < .05$ level. Participant step count had high positive correlations with MVPA, and kcal ($.70 \leq r \leq 1.00$). MVPA was also highly correlated with kcal. Light PA had a high, but negative correlation with sedentary time ($r = -.77$). Participant step count had positive moderate correlations with light PA, and EX ($.30 \leq r \leq .69$). IM was moderately correlated (positive) with EX, EB, AV, IV, and UV. Similarly, EX was moderately correlated with AV, IV, and UV. Other variables that had positive moderate correlations include MVPA and light PA, light PA and kcal, EB and AT, EB and IV, AV and IV, AT and UV and finally IV and UV. Moderate negative correlations ($-.30 \leq r \leq -.69$) were seen between steps and sedentary time, MVPA and sedentary time, sedentary time and kcal, sedentary time and EX, AM and EX, and AM and IV.

Group differences. Box's *M* test results for multivariate normality was not significant, Box's $M = 179.85$, $F = 1.23$, $p = .07$, supporting the assumption of multivariate normality and equivalence. Considering the relatively low correlation coefficients between motivation and PA variables, and moderate to high correlation coefficients within the variable groups, reported in Table 4, the researcher conducted two separate multivariate analyses of variance (MANOVA) to examine differences in PA levels and motivation among the different enrollment groups. Results of the first MANOVA showed a significant main effect on motivation based on enrollment choice F (14, 120) = 1.78, $p = .05$, Wilk's $\Lambda = 0.68$, $\eta_p^2 = .17$. Significant differences were seen in EB ($\eta_p^2 = .19$) and EX ($\eta_p^2 = .10$). The post hoc analysis (Bonferroni) illustrated the significant mean differences in EB ($p = .00$) and EX ($p = .04$) were between the CPE and NPE groups, with students in the CPE group having higher scores.

Table 4. *Univariate Test Result of Motivation Constructs among Enrollment Groups.*

Construct	$F_{2,44}$	*Mean Square*	*p*	η_p^2
Expectancy Beliefs	7.74	2.42	.001	.19
Attainment Value	3.12	3.68	.051	.09
Interest Value	3.05	2.60	.054	.09
Utility Value	.92	1.08	.405	.03
Intrinsic Motivation	1.15	2.65	.323	.03
Extrinsic Motivation	3.78	5.02	.028	.10
Amotivation	1.54	1.61	.222	.05

The second MANOVA revealed significant differences in PA between enrollment groups $F(10, 80) = 2.97$, $p = .00$, Wilk's $\Lambda = 0.53$, $\eta_p^2 = .27$. As presented in Table 5, between subject test results showed statistically significant differences in step count ($\eta_p^2 = .33$), MVPA ($\eta_p^2 = .39$), and energy expenditure (kcal; $\eta_p^2 = .31$). The follow-up post hoc analyses (Bonferroni) illustrated that the significant mean differences ($p < .01$) in step count, MVPA, and kcal were seen between the CPE and NPE groups and between the CPE and UPE groups as shown in Figure 1. For all significant differences, students in the CPE group had higher scores.

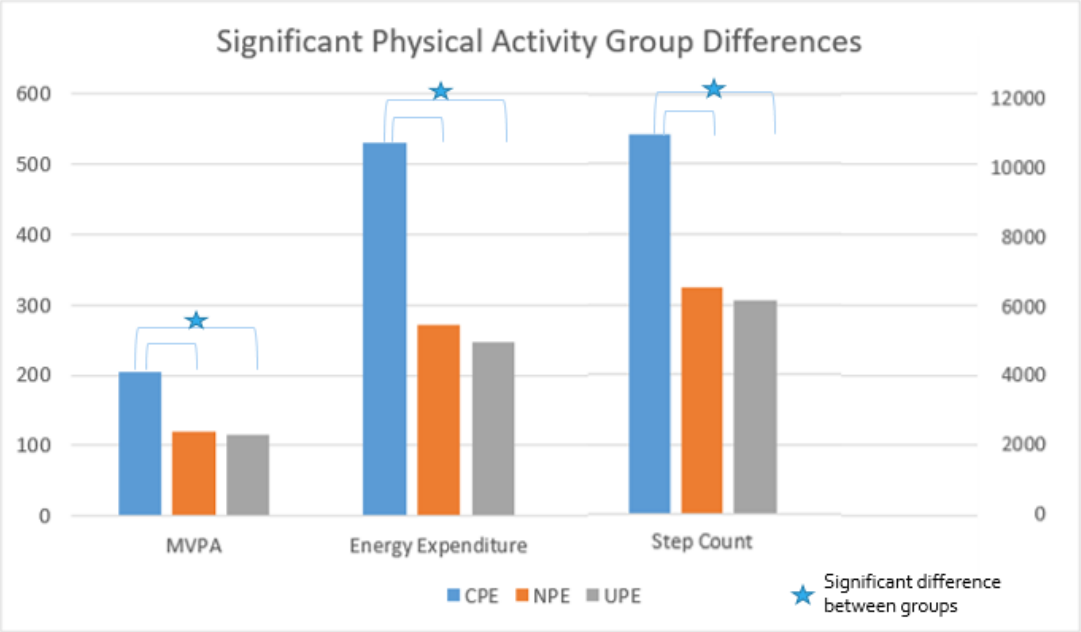
Table 5. *Univariate Test Result for Physical Activity Variables among Enrollment Groups.*

PA	$F_{2,44}$	*Mean Square*	*p*	η_p^2
Step count	10.68	96553429.61	.000	.33
MVPA	14.09	35047.52	.000	.39
Light PA	2.07	3074.02	.138	.09
Sedentary	2.47	78945.14	.096	.10

Table 5 Continued.

PA	$F_{2,44}$	*Mean Square*	*p*	η_p^2
Kcal	9.96	341500.20	.000	.31

Figure 1. *Significant Physical Activity Differences among Enrollment Groups.*



η_p^2 = .27

Qualitative Results

EVQ short answers. Students responded to two open-ended short answer questions as part of the EVQ. The first question being, "What don't you like about PE?" and the second, "If you had the choice, would you rather not come to PE and why?" These questions elicited responses about their current PE class and a hypothetical choice about attending current PE. Based on the existing literature (Zhu & Chen, 2012) and the current data, student responses for the first question were categorized into five categories of dislikes: Curriculum content (n=46),

social factors (n=4), physical discomfort (n=5), attitudes (n=12) and nothing (n=8). Four students' responses contained statements that fell into two or more categories and were included in each of the category totals. Dislikes pertaining to curriculum content included items such as fitness testing, health content (often lectured in the classroom), and certain activities/sports. Social factors refer to issues with the locker rooms/dressing out. Physical discomfort refers to the discomfort experienced during activities, including being sweaty. Student responses that contained comments about peers being apathetic during team activities or teacher bias were categorized as attitudes. Sample student responses and their corresponding category are shown in Table 6 and frequency of response categories across enrollment groups are displayed in Table 7.

Table 6. *Student Responses to Open-ended Question: "What don't you like about PE?"*

Category	Student Response	Group
Curriculum content	Fitness testing is consistently the same activity and it gets boring	3
	The fitness test like the pacer because it takes up from enjoying class	3
	Having to do an activity I do not enjoy because it is part of the curriculum	2
	Health. I hate paper work.	1
	Running because it takes up most of the time and it isn't fun	1
	Running, I don't like the pacer	1
Attitudes	When people don't participate it ruins the activity	3
	Not everyone gives effort	3
	I don't like when you get put on a team with people who don't want to participate or try.	2
Physical Discomfort	Doing gym during the day and then after being sweaty for the rest of the day.	3
	Getting sweaty	3

Table 6 Continued.

Category	Student Response	Group
Social	Sometimes in the locker room people make fun of each other's body.	2
	Having to change clothes	2
Curriculum Content Social Attitudes	I hate jogging/warm-ups, the dress code, dressing out, if someone isn't participating the whole class is let down, and activities we do.	2
Curriculum Content Physical Discomfort	Kickball, baseball, etc. where you have a team or any running test. Too much pressure on my lungs.	2

Note: 1= Certainly Take PE, 2= Certainly Not Take PE, 3= Uncertain about taking PE

As shown in Table 7, participants mostly disliked some of the current curriculum content (61.33%). The most commonly reported topic disliked in curriculum content was fitness testing (n=15). The Progressive Assessment of Cardiorespiratory Endurance Run (PACER) and push-ups were two specific fitness tests mentioned by students. Social factors were reported by 5.33% of the students. Dressing out and issues related to the locker room, such a bullying, were reported as social factors that were unfavorable. About 16% of the participants reported attitude issues about participation, primarily disliking others' attitude. Peers who were apathetic when it came to participating in class (n=10) was the problem most frequently reported for attitude. Students described feeling let down by their peers, or that the whole class suffers when someone does not participate. For physical discomfort (6.67%), most students did not like getting sweaty then having to go about their normal day afterwards. Only 10.67% of the participants reported no dislikes about their current PE course.

Table 7. *Frequency of PE Dislikes Among Enrollment Groups.*

Category	CPE	NPE	UPE	Subtotal
Curriculum Content	12 (16.00%)	18 (24.00%)	16 (21.33%)	46 (61.33%)
Social Factors		1 (1.33%)	3 (4.00%)	4 (5.33%)
Attitudes	2 (2.67%)	6 (8.00%)	4 (5.33%)	12 (16.00%)
Physical Discomfort		2 (2.67%)	3 (4.00%)	5 (6.67%)
Nothing	8 (10.67%)			8 (10.67%)

Note: CPE= Certainly taking PE, NPE=Certainly not taking PE, UPE=Uncertain about taking PE

Sixty-six students responded to the second short answer question which asked students if they would rather not come to PE and why. Students responded to this question based on their feelings toward their current PE class, not an elective PE course, which differs from the question that categorized students into the CPE, UPE or NPE groups did. A total of 12 students reported yes, they would rather not come to PE (2 CPE, 4 UPE, 6 NPE). Fifty-two students said no, they would still come to PE (15 CPE, 18 UPE, 19 NPE). Only two students, both in the UPE groups, said it depends. Specific reasons why students would or would not come were provided by 53 students. The reasons were grouped into five categories: Exercise/PA, enjoyment, social factors, no stress, and utility. Table 8 displays the frequencies and percentages of responses in their respective categories.

Table 8. *Frequency of Explanations for Hypothetically Coming or not Coming to Current PE.*

Category	Yes, rather not come	No, still come	Depends
Exercise/PA	4 (7.55%)	12 (18.18%)	
Enjoyment	2 (3.77%)	18 (27.27%)	
Social Factors	3 (5.66%)	3 (5.66%)	2 (3.77%)

Table 8 Continued.

Category	Yes, rather not come	No, still come	Depends
No stress		6 (9.09%)	
Utility	3 (5.66%)		
No specific reason		13 (24.53%)	
Subtotal	12 (18.18%)	52 (78.79%)	

Students (7.55%) reported that they would rather not come to PE because they felt they got enough exercise/PA outside of school, so PE was not necessary for them. On the other hand, students (18.18%) would also still come to PE because they know it's important to exercise and be physically active. PE was described by some students as being stress relief from the school day or not creating additional stress. A few students (5.66%) also stated that PE itself, or the content they learned, is not useful to them. Sample student responses can be seen in Table 9.

Table 9. *Student Responses for "If you had the choice would you rather not come to PE and why?"*

Code	Student Response	Category
2	PE is a great class that helps me exercise	PA/Exercise
1	I feel like I'm the type of person who gets enough exercise doing sports and stuff.	
2	Daily exercise is important.	
2	It helps me to be active throughout the day when I usually don't have time before or after school.	
1	I'm already an athlete	
1	I haven't learned anything new/useful this semester	Utility
1	PE is not challenging to me and the actives we do are not useful to me in helping me improve my athletic skills	

Table 9 Continued.

Code	Student Response	Category
2	It's fun.	Enjoyment
2	PE is fun and I get to do cool activities	
1	Rather do something I enjoy.	
2	I enjoy being with friends.	Social
2	Relieves the stress from school	No stress
2	Nice break to wind down during the day	
2	Good time to have no worries	
2	Keeps me active and it is fun	PA/Exercise Enjoyment
1	I have a gym membership and think school PE is dumb and not important. I would rather work out in my gym rather than in school because it's boring and nothing we do is helping me.	PA/Exercise Utility
2	PE is fun and I like playing with my friends. PE also helps me stay in shape and I get my daily exercise. I find it important to stay healthy.	Enjoyment Social PA/Exercise
3	If it was always fitness testing and my friends weren't there I wouldn't come	Social

Note: 1= Yes, rather not come; 2= No, would still come; 3= Depends

Interview Results

Four themes emerged between and within groups in response to the interview questions focusing on their decision to enroll in elective PE in the upcoming school year as well as their rationales for their decisions. Questions eliciting student conception and belief about PE and physical activity were also asked to provide additional information and explanation as to why student rendered such decisions regarding their elective PE.

"Fun, active and stress free—reasons to take elective PE." The most common reasons stated by students in the CPE group for wanting to take PE were because it would be fun, and it gives them the opportunity to be active during the school day. Mark stated, "Well, I think it will be a lot of fun because you get to work out and play games and be active. It's good to be active

and not lazy. It's good for your health to stay active." Students in the CPE group also expressed their enjoyment of topics related to sports, games, and competition. Joe said, "I like the sports we play or when we play games because we get competitive and that makes it more fun."

Additionally, students felt that PE gave them a break from the stresses of the regular school day. With little to no homework, and only a few quizzes, PE offers an outlet for many students, especially those taking multiple advanced classes. Adam said,

> It's also nice to not have to worry about homework or classwork every day, or a bunch of quizzes. Like I know we have a few, but in my advanced placement (AP) history class we have a quiz every week and homework every day and a lot of in class assignments. So PE is kind of like a free block where I don't have to worry about actual school stuff.

James also stated, "One of my favorite things to do when I'm irritated or stressed out is run or just go to the gym. So at school, PE is kind of like that break in your day to release some built up energy or stress that you could have." To better understand the value students placed on PE, they were asked, "What does PE mean to you or what comes to mind when you think about PE?" All of the students in the CPE group said that PE meant being active/exercising or playing sport related games. Brandon said, "I think about learning sports and playing games. PE gives us time to run around and just be active and exercise."

"PE not needed." Students in the NPE group reported that they did not need another PE credit, and those who are athletes feel they get enough PA playing a sport, so PE is not needed. For example, Michelle said, "For me, it's because I don't necessarily need it because I play sports year round so I feel I get exercise that way so having PE is not a necessity." In a separate interview, Joe expressed similar reasoning for not enrolling in PE by saying, "I swim about 20 hours a week and do really intense workouts to stay in shape, so I don't really need PE." This

group of students seemed to understand the importance and value of PA, but felt they did not need to enroll elective PE as a necessary means to be physically active, because of their athletic involvements.

Students in the NPE group equally reported that there was not enough room in their class schedules to take an elective PE course, and they prioritized other academic disciplines over PE. In one interview, Becca stated, "I know for me personally I want to take advanced core classes for college, so PE doesn't fit in my schedule." Jackie and Stacey both said they simply would not have room in their schedules for an elective course after they signed up for their core academic classes. Additionally, Michelle said, "I am going to be a senior next year, so I really need to focus on classes that will help prepare me for college." Tammy actually mentioned that she would rather not even be in her current PE class. Tammy said, "I would prefer to just have a study hall period so I could work on homework and stuff instead of hitting golf balls in PE. How is that even going to help me in the long run?" For these students, the pressure to succeed academically and prepare for college entrance seemed to dominate their lives. These students valued and focused on the academic tested areas in school, causing PE to come in second place. When their schedules are tight, PE was not seen as a necessity, or possibly even a distraction.

"Certainly uncertain." Having a tight class schedule was also a factor that influenced those who were not quite sure if they could take elective PE. Tanner, who was in the UPE group said, "I want to take the lifetime course because it looks like a lot of fun, but I don't know if I will have room in my schedule once I add all my core classes." Being sweaty for the rest of the day was an undesirable factor commonly stated by the females in the UPE group. Alexandra expressed concerns about her schedule and being sweaty.

> I don't really like being sweaty all day. I don't really prefer that. That's my main reason (for not being sure if I want to take an elective PE). If I could have PE at the end of the day, then sure. The other thing I noticed and don't really like, is that to graduate you only need two PE credits but the only classes you can take you get those credits is PE 1 and PE 2. I would like to take weight lifting, but if it's not going to count toward graduation there is not really room in my schedule to take it.

Shannon was also not sure if she would take an elective PE. She said, "I'm thinking about it, but I just don't know… I just feel like it's for the advanced team people. Like guys who play football, baseball and stuff. Plus you would have to take a shower and stuff after being all sweaty. I don't have time for that." Shannon's perception of the elective PE courses was that they were only for athletes, and she did not consider herself one. Therefore, she felt intimidated and that she would not fit in with other students if she enrolled. A common element of PE that many students in the UPE group said they really enjoyed is the social aspect of PE and being able to spend time and talk with friends in their class. Even though students in this group expressed interest in taking an elective PE class, issues with class schedules, being sweaty, and feelings of intimidation have caused them to be uncertain, and unable to make a clear decision as to whether they would enroll in an elective PE.

"More Physical, More Education." The last two questions of the interview were included to allow the students to express what they feel they should have learned in PE, and what they would do to improve PE. A majority (n=18) of the students interviewed, felt that over the course of two years, the required PE classes covered a wide range of topics, and if students wanted to further their knowledge, they could take one of the elective PE classes. However, there were some subjects students felt should be covered in PE including: common sports (e.g. soccer,

basketball), health related fitness, how to prevent/treat sport related injuries, how to balance PA/exercise with life, and steps to take outside of school to grow into a healthy adult. Abby, a student in the NPE group stated that:

> It [PE] kind of promotes it [a healthy lifestyle] a little, like maybe I shouldn't binge watch these episodes today. I should do something. But they don't exactly tell you what you can do outside of school and what you can do for the rest of your life. [PE] It's about different sports and things. With health we learn not about personal health and what you can do for your life, but more about alcohol, and smoking, which are important. But we have been learning the same things since middle school. I still remember doing those smoking lessons in middle school. So it's really good but I feel like we could focus a little less on it because I feel like we all know the basics of those things. So we could focus more on our fitness and doing more outside of school.

Jamie, who was also not taking elective PE, stated, "I feel like they [teachers] only teach us techniques for playing sports, while they could go more into the health related benefits of PE and physical activity and everything. We sort of touch on that in health but it's more on mental illnesses." For these students, a more in-depth PE class focusing on health related fitness and physically active lifestyle promotion appears to be more attractive than those on sports or repetitive health concepts.

Another suggestion for improving PE included removing some of the undesirable elements such as fitness testing (n=6). Fitness testing was the most commonly reported element of PE disliked by students in both the CPE and NPE groups (n=10) James, who is planning to take an elective PE said, "It's not even the fitness test themselves sometimes, but how many times you have to do the same test. It's very repetitive." Within the NPE group, some of the

other suggestions were to make elective PE classes count as credits toward graduation, include some exercise physiology, and to better relate topics to how it will be beneficial in the future. Students in the CPE group would like to spend an entire class on only one activity, or at least be able to choose the activity they participate in. From the UPE group, one student suggested that elements from popular fitness classes offered in public gyms should be incorporated in PE. Another student stated that she wished the elective PE courses weren't geared so much toward athletic individuals. Shannon stated, "Yeah a class for people who maybe aren't so athletic and are intimidated by the athletes already in the class, but still want to learn more." For these students, the college PA class or private club class format is more desirable than the current elective physical education.

CHAPTER V

DISCUSSION

The purpose of this study was to examine the factors that influence high school students' enrollment in elective PE by (a) identifying the differences between students who enroll and do not enroll in elective PE in terms of week day PA levels, motivation, and values, (b) exploring why they decide to, or not to, enroll in elective PE, and (c) identifying what factors would make elective PE more desirable. Previous research has shown there is a significant decrease in PE enrollment at the high school level (Carroll & Hostetter, 1996; Grasten et al., 2015; Lodewyk & Pybus, 2013). The quantitative and qualitative data provide useful insights that will help unravel the enrollment decrease from a student perspective.

Construct Relationships

Low to moderate correlations between PA variables and motivation were seen. As stated in the literature (Chen, Chen & Zhu, 2012), expectancy value and interest are said to be the most prevalent motivational sources for school-aged learners. In this study, IM did have low to moderate correlations with EB, AV, IV and UV. Additionally, EX had low to moderate correlations with AV, IV, and UV. These findings further demonstrate that individuals who find value and interest in PE, are also strongly intrinsically and extrinsically motivated. The relationship between EB, TV, and PA levels is still an area that merits further examination. As seen in some previous research (e.g. Grasten et al., 2015), as well as the current study, EB and TV were not directly associated with adolescent PA levels, with very low to no correlations emerging from the data. However, this finding is inconsistent with other existing studies (e.g. Chen & Chen, 2012).

The PA variables within themselves had the strongest correlations among all the constructs, specifically step count, MVPA, light PA and sedentary time. These relationships can be expected. For instance, an individual with a high step count, must have been engaged in either MVPA or light PA in order to get those steps. Being engaged in MVPA or light PA would cause an individual to expend more energy, thus burning more calories.

Motivation and PA Differences

A primary objective of this study was to examine differences in PA and motivation between students who decide to enroll in elective PE (CPE), those who are not enrolling in elective PE (NPE), and those who are unsure if they will enroll in elective PE (UPE). As seen in previous studies (e.g., Shen, 2010), students in the current study had relatively low intentions to enroll in elective PE, with only 26% of participates indicating they were going to take elective PE in the upcoming school year. Thirty eight percent said they were not going to enroll and the remaining 36% were uncertain if they were going to enroll in elective PE. The results of this study demonstrated distinct differences between groups in terms of PA and motivation.

The students in the CPE and NPE groups had significantly different average scores for EB and EX, with individuals in the CPE groups reporting higher scores for both variables. It is hypothesized that EB directly influence decisions individuals make about choosing to participate in an activity, or continue to participate after failure (Gao et al., 2008), so it is no surprise that among the CPE group, EB was the highest score. They are choosing to continue participating in PE even after it is no longer mandatory. These students believe that they will be successful in PE, which contributes to their decision to enroll in elective PE. On the contrary, students in the NPE group reported the lowest scores for EB and were not planning to enroll in elective PE. IV

was the next highest score in the CPE groups, and as supported by Chen and Chen (2012), enjoyable experiences are one of the most significant motivators in PE.

Granero-Gallegos and colleagues (2012) found that high school students who were intrinsically motivated, were highly motivated by satisfaction or enjoyment, and these students were also more physically active than their peers. Chen and Chen (2012) also reported that students with stronger EB, and higher intrinsic values tended to be more physically active. The results from this study align with these previous findings (Chen & Chen, 2012, Granero-Gallegos et al., 2012). Students who are enrolling in elective PE had the highest scores for IM, EB, and were also the most physically active.

According to the calculations for daily minutes of MVPA, the participants as a whole were fairly physically active, and only six individuals (12%) did not meet the daily recommended 60 minutes of MVPA, which contradicts previous findings (CDC, 2014). However, the American College of Sports Medicine (ACSM; 2016) suggests children's daily PA should also be measured in step count, with the minimum recommendation being 12,000 steps per day. Using ACSM standard for PA, a substantially higher percentage of students (89%) would not meet the recommended amount of daily PA.

Nonetheless, the HHS (2008) recommendation of 60 minutes of MVPA is widely accepted and used. Using the HHS standard, 88% of the participants reached the minimum amount of MVPA. There a several possible explanations as to why so many students reached the MVPA minimum threshold. The schools in which participants were from had block scheduling, meaning the students only have four classes per day, each lasting approximately 80 minutes. Students attended PE daily, and even if they were only active during their PE block, 60 minutes of PA would be achieved from their PE class alone. The schools were also located in rather

affluent neighborhoods, which would have a positive effect on the students PA levels outside of school. Research has demonstrated that neighborhoods with lower SES are not ideal for PA, and have fewer PA facilities (gyms) compared to more affluent areas (McNeill, Kreuter, & Subramanian, 2006). Since participants were from neighborhood with higher SES, it is not surprising that they had rather high levels of PA. The results may have been different if the research context was in another location.

Why PE?

An important component to better understanding students' decision to enroll or not enroll in elective PE is identifying the elements of PE students find undesirable or dislikes. The Expectancy Value Theory refers to theses undesirable elements, or negative consequences one might experience when participating in an activity, as cost. In PE for instance, cost perceptions may come from many different factors such as perceived incompetence, boredom, irrelevant material, or physical discomfort (Chen & Liu, 2009; Xiang, McBride & Bruene, 2006). In the CPE group, about 11% *(n*=8) of the responses were no perceived cost. This is the only group that contained students who said there is nothing about PE they don't like. Yet, there were still responses (*n*=14) from students in the CPE group who reported perceived cost related to PE. Overall, students in the NPE group reported more cost associated with PE than the other enrollment groups. About 36% (*n*=27) of the total dislikes reported came from the NPE group. Similarly, the UPE group was not far behind, with students reporting 35% (*n*=26) of the total perceived costs.

As seen in this study, as well as previous research (Zhu & Chen, 2013b), the main area of perceived cost came from PE curriculum content. About 61% of the total responses for cost among all enrollment groups were categorized as curriculum content. Fitness testing was the

most reported content area disliked by students across all enrollment groups. Previous research has revealed that student attitude toward fitness testing is important because it has the ability to affect student participation in PA (Silverman, Keating, & Phillips, 2008). Physical educators should target efforts to help alleviate the negative stigma towards fitness testing. Negative attitudes toward testing, is not just limited to PE. Research has shown that high stakes standardized testing for core subjects such as math and reading has a negative impact on student learning (Nichols & Berliner, 2007). Primarily referring to more academic courses (e.g. English, Mathematics), Nichols and Berliner (2007) imply that the over testing of students is corrupting education; however, as shown by this study, over testing is also seen in PE and should be considered by educators.

Current findings also coincide with results from Portman's (2003) research, indicating that a majority (64%) of students preferred working with students of similar abilities. Although, students in this study did not directly mention ability levels, about 16% of the responses regarding cost, were that students did not enjoy being on teams or in groups with peers who did not give effort or fully participate in the activity. More than half (67%) of these peer related comments were from the NPE group. These students felt as if the whole class or team suffers when one or two people do not put forth full effort. This is a problem that cannot be easily addressed. PE teachers cannot force students to participate even if participation is part of the grading content. A student who lacks the motivation and desire to partake in a particular activity will most likely not be affected by the loss of a few participation points. Investigation into the source of these students' lack of motivation could be key to alleviating this issue.

In addition to asking students to provide their dislikes about PE, the EVQ also asked students if they had the choice, would they rather not come to PE and why. This question on the

EVQ is in regards to the students' current PE course, which was mandatory. Interestingly, about 79% of students said no, they would still come to PE. The most commonly reported reason for wanting to come to PE was because it was fun. As a whole, students did have fairly high scores for IV (*M*=4.18), which is directly linked to enjoyment With such a high percentage of students reporting they enjoy PE, and that they would continue to come to their current class, one would expect a larger number of students to be interested in taking an elective PE class, rather than the mere 26% who indicated that they were enrolling.

The primary reasons reported by students wish to take an elective PE were that it would be fun, stress free and kept them active during the school day. This finding is consistent with previous studies where students reported their expectations about PE: be active and have fun (Zhu, 2013). Stress free PE is an unfortunate new dimension for high school students. High school can be stressful for today's youth, especially if they are taking multiple AP classes, which was the case for many participants in this study. These academic classes involve large amounts of homework, projects and tests and quizzes. PE is seen by some students as a relief from the stresses brought on by other classes. While it is beneficial that participating in PE could help reduce academic stress, this suggests that PE lacks academic rigor as a discipline. By nature, school is predominantly sedentary for high school students. Students in the CPE group reported the need for movement and activity during the school day, which is provided through participation in PE.

For students not enrolling in an elective PE class, the main contributing factors were issues with scheduling and students feeling as though they simply did not need additional PE. High school students' class schedules are becoming more and more difficult to plan. Between graduation requirements, prerequisites for classes needed as an upper classmen, and AP courses

for college preparations, time for elective courses is hard to come by. Many of the students in the NPE group placed more value on their academic courses rather than an elective PE course. There were also students who had not yet made a decision to enroll or not enroll in elective PE. Similar to students in the NPE group, these students reported being unsure if they would have room in their schedules for an elective class.

Re-conceptualizing Elective PE

Students' also provided comments and suggestions in regards to improving PE which could have many implications in planning and curriculum development. The removal or at least a decrease in fitness testing was mentioned the most. Students recognized the importance of the tests, but felt the frequency of them create a very redundant environment. The inclusion of common sports such as soccer and basketball was a common theme among students, and in previous research (Bibik et al., 2007). The students interviewed engaged in lifetime fitness activities (e.g. golf, badminton) as part of the PE curriculum. Even though students did not collectively report disliking those activities, as a group they disliked the exclusion of "typical" sports. More importantly, students would seem to prefer a PE class that focuses on one sport or fitness activity that they could select, similar to college PA courses or private club sessions.

Also widely suggested, was the incorporation of more health related fitness content applicable to daily life. Rather than just going through the motions, some student would like to better understand the "why" behind the action. In other words, students believed teachers should focus on explaining the short and long term health benefits of the PE content being taught. These high school students were concerned with their futures, and have the desire to really understand why what they are learning is important to them, and how it will be beneficial in the future. This notion of preparing students with knowledge and skills for a lifetime has been advocated by PE

scholars (e.g., Ennis, 2010), but as shown by this study, is unfortunately not implemented in practice. Learning health related concepts and skills are one of the least expected items for middle school students (Zhu, 2013), and it is encouraging that high school students recognize the need to further their PE based knowledge. Couturier et al. (2005) similarly reported that high school students were more likely to enroll in PE because of health benefits. However, if students are not made fully aware of the positive health outcomes associated with PE and being physically active, then this lack of knowledge may contribute to lower enrollment rates in PE.

Another student recommendation was to re-evaluate the value of PE credits toward graduation. Currently in the state of Virginia, only two PE credits are required to graduate. The two PE credits must come from specific courses that are typically offered to 9th and 10th grade students. Students reported that would like to take one of the elective PE courses offered, but since it would not count toward graduation, there was no point. Allowing students to choose which PE courses they could take for credit could impact participation rates. It could be to even require students to take one basic PE course, then give them the option to take any of the other PE course offered as their other credit. If a change in the way PE credits are earned was implemented, large increases in the number of high school students enrolled in PE may be seen.

Delimitations

There were certain delimitations present in this study. Participants were recruited from two schools in two different districts. Both school districts require students to obtain two PE credits to graduate, but also offer PE as an elective once the mandatory credits are completed. Within these two schools, only three physical educators' classes, seven classes total, were selected to participate. This study also monitored habitual weekday PA levels. Generalizations cannot be made about the students' weekend PA levels since they are not being examined.

Limitations

This study had a number of limitations. A small sample size contributes to a lack of generalizability and difficulty analyzing the data. In this case, a small sample size lead to uneven group sizes, and further analysis of possible differences among participants in terms of gender race, and grade level was not conducted. When observing the participants, it was possible that the observer may have somehow affected the situations being observed, participants may have behaved a certain way because they were being observed, and the observer's perception may also affect the data (Patton, 2002). Also, even though most data were collected through the use of established, reliable and valid measures, the combined approach of the instruments and variables chosen can limit the generalizability. The variables were not taken from one specific established theory, but were incorporated together, from multiple theories and research areas. Therefore, application back to the variables' original theoretical base should be carefully considered.

The use of self-reported data is an established practice and has been validated in many previous studies also examining PA and PE (e.g. Bibik, Goodwin, & Orsega-Smith, 2007; Chen & Chen, 2012; How, Whipp, Dimmock, & Jackson, 2013). However, self-reported data should be carefully interpreted. Students may not have fully understood the questions or possibly, may not have taken the questionnaire seriously, since there was no penalty for inaccurate completion. The interviews were conducted in small groups which shortened time for individual responses and created the possibility of distorted responses due to bias, anger, anxiety or presence of peers (Patton, 2002).

Future Research

Future research in the area of enrollment in elective PE might consider utilizing other multi-faceted approaches to the research questions posed in this study. No single theory has

successfully accounted for all of the potential influences or enrolment factors present in high school students' decision. Incorporating different ideas, theories, and methodologies could help to provide a wider, comprehensive explanation of student choices. There are other variables and constructs in addition to the ones used in this study that have been shown to be influential in understanding participation in PE and enjoyment. For example, autonomy is an intricate part of the SDT (Deci & Ryan, 2000), and has been shown to influence an individual's sustained participation in PA (Wallhead et al., 2014), which in turn can influence an individual's decision to take PE classes.

While the participants on average had over 60 minutes of daily MVPA, it should be recognized that this included their time spent in PE which was approximately 80 minutes per day. It would be important to continue to monitor and track students PA once PE is not a requirement to evaluate whether this level of MVPA is maintained, particularly for those who decide not to enroll. If it is found that student PA levels significantly decrease once participation in PE is not required, then the implications for PE and PA policies should be considered. In order for adolescents to participate in 60 minutes of daily MVPA, PE may need to be mandated for all four years of high school, and not just two, or even one in some regions.

It is also of interest to identify which students consider themselves athletes. Shen (2014) utilized constructs from the SDT to determine that students who participated in organized PA programs outside of school displayed an overall higher motivation than students who do not. Studies have also revealed that playing on sports teams and participation in PE class contributed to overall levels of PA (Lenhart et al., 2012; Pate et al., 2007; Grasten et al., 2015). These variables should be studied in conjunction with the identified influential variables that emerged from this study, to understand the factors and their relationships more thoroughly. Prediction,

which was also not part of this study, holds merit as well (Standage et al., 2012, Timo et al., in press). Determining which variables can predict participation in PE better than others could be another piece to the puzzle.

As previously mentioned, there was a lack of demographic diversity in this study's sample, particularly with gender and race. Future studies should be conducted with a larger sample size, allowing for an increased likelihood of a more diverse demographic scale. Teachers and practitioners would gain greater insights into what factors could be influencing their multi-cultural students. Continued investigations into other states and country's PE enrollments would also be interesting. Required PE credits vary by state as do credentials for PE teachers. These differences could illicit other responses and information from high school students and what influences their decisions and feelings about their PE classes. There are still areas left to explored, and the influence of different demographic factors still unclear. Continued research in this area would provide a more comprehensive perspective on students' decision to enroll or not enroll in an elective PE course.

In conclusion, this study highlights the significant differences that exist between students who are enrolling in an elective PE class, those who are not enrolling, and those who are uncertain about their decision to enroll in an elective PE course. Multiple factors were examined and significant differences were seen in EB, IM, daily average step count, MVPA, and energy expenditure. Students who were enrolling in an elective PE course had higher scores than students not enrolling, or who were uncertain about enrolling. Perceived cost and dislikes related to PE were reported by all groups. Students across all three enrollment groups reported apprehension toward fitness testing, and uncooperative peers during team or group activities.

Students in only the NPE and UPE groups expressed issues of physical discomfort in terms of being sweaty for the remainder of the day after PE is over.

Interviews with students revealed specific influences affecting their enrollment choice. Those enrolling in an elective PE course were motivated by the enjoyment, being active during the day, and a less stressful environment. The primary factors that caused students to not enroll in an elective PE course were related to a lack of space in course schedules, and students feeling that PE is not a necessity. Those who were uncertain about their enrollment choice also reported issues with scheduling, as well as the physical discomfort of being sweaty all day if the PE course is in the morning.

Curriculum developers, administrators, and educators should consider some of the suggestions made by students. Included in these recommendations were less fitness testing, incorporation of more common sports, and allowing elective PE courses to count towards credits for graduation. By utilizing a multi-theoretical mixed method approach, valuable information was gathered from this study. The results of this study contribute to the gap in current research which lacks a comprehensive examination into the factors that influence high school students' decision to enroll in elective PE courses. If a student centered approach is taken to address the issues revealed in this study, enrollment in high school PE courses could increase, potentially impacting the overall health and lives of adolescents and youth.

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APPENDIX A

Physical Education Questionnaire

Demographic Information

Fill in the blanks, and circle ONE answer that best describes you.

1. I am a: Male Female

2. I am _____ years old

3. I am: African American Caucasian Hispanic/Latino

Asian Other _____

4. I am_____ to enroll in PE as an elective next school year?

determined not certain certainly not

5. My name (PRINT): _____

Physical Education Questions

The following section of questions contains items that are related to your beliefs about yourself in Physical Education (PE) and the value you place on PE. Please Read each question then circle a response from 1-5.

1. How good are you in physical education?

Not good 1 2 3 4 5 Very good

2. If you give 5 to the best student in PE and 1 to the worst, what you give to yourself?

Worst 1 2 3 4 5 Better

3. Some kids are better in one subject than in another. For example, you might be better in math than in reading. Compared to most of your other school subjects, how are you doing in PE?

A lot worse 1 2 3 4 5 A lot better

4. How well do you think you are doing in learning in PE?

Very poorly 1 2 3 4 5 Very well

5. How well are you keeping yourself physically active in PE?

Very poorly 1 2 3 4 5 Very well

6. How important do you think PE is for you?

Not very important 1 2 3 4 5 Very important

7. Compared to math, reading, and science, how important is it for you to learn PE content?

Not very important 1 2 3 4 5 Very important

8. In general, how fun do you think your PE classes are?

Very boring 1 2 3 4 5 Very fun

9. How much do you like your PE classes?

Don't like it at all 1 2 3 4 5 Like it very much

10. Some things that you learn in school help you do things better outside of school. We call this being useful. For example, learning about plants at school might help you grow a garden at home. How useful do you think the concepts you learned in PE are?

Not useful at all 1 2 3 4 5 Very useful

11. Compared to your other school subjects, how useful are the skills learned in PE?

Not useful at all 1 2 3 4 5 Very useful

For the next two questions please write your response in the space provided.

12. If there is anything that you don't like in PE, what would that be? Why?

13. If you had a choice, would you rather not come to PE? Why?

Why do you participate in physical education?

The following statements are responses to the above question. You will use the scale under each statement to indicate how well the statement describes how you feel.

1=Does not describe me at all 7=Describes me exactly

1. For the pleasure it gives me to know more about exercise and being healthy.

   1 2 3 4 5 6 7

2. I used to have good reasons for going to P.E., but now I am asking myself if I should continue doing it.

   1 2 3 4 5 6 7

3. For the pleasure of discovering new training techniques.

   1 2 3 4 5 6 7

4. I don't know anymore; I have the impression that I can't succeed in P.E.

   1 2 3 4 5 6 7

5. Because it makes me look good in front of other people I know.

   1 2 3 4 5 6 7

6. Because in my opinion, it is one of the best ways to hang out with people.

   1 2 3 4 5 6 7

7. For the prestige of being good in P.E.

   1 2 3 4 5 6 7

8. Because it is one of the best one of the best ways to develop other parts of myself.

   1 2 3 4 5 6 7

9. Because people around me think it is important to be in shape.

   1 2 3 4 5 6 7

10. Because P.E. is a good way to learn lots of things which could be useful to me in other areas of my life.

1 2 3 4 5 6 7

11. It is not clear to me anymore; I don't really think I find success in P.E.

1 2 3 4 5 6 7

12. To show others how good I am at the P.E. activities.

1 2 3 4 5 6 7

13. For the pleasure I feel while learning new exercises and skills in P.E.

1 2 3 4 5 6 7

14. Because it is a good way to maintain good relationships with my friends.

1 2 3 4 5 6 7

15. For the pleasure of discovering new performance strategies.

1 2 3 4 5 6 7

16. I often ask myself; I can't seem to achieve the goals that I set for myself in P.E.

1 2 3 4 5 6 7

Thank you for participating!!

APPENDIX B

Scripted Interview Questions

1. You said you (were/were not) going to take PE as an elective next year. What makes you to decide enroll/not enroll?
2. What does physical education mean to you?
3. What is fitness to you and do you think it is important to be fit?
4. How physically active are you outside of school?
5. How physically active are your friends? How often do you exercise with them?
6. What about your parents/adults you live with?
7. What don't you like about PE?
8. What are the things you like about PE?
9. Is there anything you think you should learn in PE that you have not or things you don't think you need to learn that you have?
10. What would you change about PE to make it better for you or make you want to take it next year?

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EDUCATION

2012 **B.S.**, James Madison University
Health Sciences, Concentration in Public Health Education

PROFESSIONAL EXPERIENCE

- **Graduate Assistant**- Old Dominion University: Human Movement Sciences, Norfolk, VA
  August 2015- May 2016
  - Assisted the Physical Education department
  - Graded papers for professors within the department
  - Taught undergraduate classes when needed
  - Created brochures promoting the various post baccalaureate programs offered
  - Utilized Qualtrics Survey Software to create online questionnaires
  - Input data from questionnaires into Excel for analysis
  - Revised and edited manuscripts for publication
  - Transcribed research interviews into qualitative data for coding
  - Provided support in research projects when deemed necessary
- **Office on Children and Youth Intern-**Teen Pregnancy Prevention Program, Harrisonburg, VA March 2012 – May 2012
  - Assisted in preparation and teaching of lessons centered around promoting healthy lifestyle decisions in 7th and 8th graders
  - Coordinated the Teen Pregnancy Prevention booth for the Teen Health Fair of Rockingham County
  - Organized and promoted county wide efforts for the National Day to Prevent Teen Pregnancy
  - Performed office duties such as preparing memorandums, photocopying, mail handling, etc.

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