

**SELF-ESTEEM IN GIRLS:  
DOES PHYSICAL EDUCATION MAKE A DIFFERENCE?**

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## Abstract

The purpose of this study was to determine whether participation in a girls' physical education class can contribute to the development of self-esteem. At a rural high school in southern Alberta, students enrolled in two grade ten physical education classes for girls in the first semester were selected as participants in the study. During the semester, which ran from September to January, a variety of units were taught involving both individual and teamwork activities. The One-Group Pretest-Posttest Model was used. The girls were asked to complete the Coopersmith Self-Esteem Inventory (CSEI), which provided total and subscale self-esteem scores. The pretest was administered September 17, 2001, and the posttest January 15, 2002. After both tests were completed, the mean scores were compared using a Paired *t*-test. The results revealed no significant difference between the pretest and posttest, in either the subscales or total scores for self-esteem for either class. Consequently, participation in a physical education class over a single semester was not shown to have had an impact on the self-esteem of these girls. Nevertheless, physical education instructors are cautioned to create environments designed to encourage rather than undermine the development of students' positive self-esteem.

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## Introduction

The benefits of participating in physical education classes include the enjoyment and fun of playing a game and, for some, a sense of relief from the other subject areas in school. Activity in the gymnasium is essentially quite different from the activity in a classroom. Many formalities that exist in the classroom are excluded in physical education classes. Movement, some forms of body contact, and vocalizations are permitted in physical education class activities. In fact, the main focus of physical education centres on students being physically active for the majority of class time.

Many physical educators believe that developing the self-esteem of their students during the program is extremely important. Numerous classes are spent on activities that require students to be working with partners, groups, or a team. Many skills are learned through cooperation and teamwork. During these activities, participants demonstrate their abilities to classmates almost daily. When students have positive experiences while being physically active, the intrinsic feedback associated with accomplishment and the extrinsic feedback associated with recognition of success deliver a powerful message of achievement, reinforcing and enhancing their self-worth and self-esteem. However, the opposite can also be true. Students who have negative experiences while being physically active do not obtain a sense of accomplishment, are not rewarded for achievement, and are not likely to gain a sense of self-worth (Martens, 1996). Physical educators can create a healthy environment conducive to learning and the development of self-esteem by providing a safe environment. In such an environment, students can experience physical

success through personal improvement, while learning that it is acceptable to have weaknesses or limitations in their abilities.

It is important that physical education teachers recognize the potential of their program as an opportunity to build students' self-esteem. This project focused on obtaining feedback by administering a pre and post self-esteem inventory to two physical education classes of grade 10 girls. The purpose of this study was to determine whether participating in a physical education class can help develop the self-esteem of the students who are enrolled.

## Literature Review

A review of the literature revealed how little empirical research has been conducted in the area of physical education and self-esteem. Although there is an abundance of research on self-esteem and related concepts, most of the studies have been conducted in settings other than those of physical education classes; empirical studies in this area were difficult to find. The few studies that have investigated some aspects of self-esteem development within physical education will be reviewed below.

Goodwin (1999), Harris (1983), Edwards (1998), and Notte (2000) agree that there is a general consensus that physical education provides a unique opportunity for the development of self-esteem. The literature suggests various methods or activities that physical educators can use to accomplish this goal, such as task-oriented activities, appropriate levels of challenge, encouragement, and individualized instruction. Methods or activities that could potentially impede the development of self-esteem and thus should be avoided are also reviewed. Some examples of activities that may undermine self-esteem include having the students choose teams, using exercise as punishment, and playing elimination games, to name a few.

Several studies suggest that involvement in physical activity programs can increase self-esteem (Feltz & Wiess, 1982; Johns, 1990; Bunker, 1991; Jafee & Manzer, 1992; Claxton, Frendenberg, & Tusa, 1994; Goodwin, 1999; Halliday, 1999; Notte, 2000). However, these studies do not identify how this effect occurs. Sonstroem (1984) states, "At this time it is not known why or in what manner exercise programs affect self-esteem, or which people are responsive" (p. 150). Fox (1988) agrees:

Generally speaking, these self-esteem studies tell us very little about PE and self-esteem. They have ignored contemporary self-esteem theory and have rarely measured physical self-components where most change would be expected. If they have shown an improvement in self-esteem, they have not been able to determine why or how, making interpretations of results difficult. (p. 251)

Gruber (1985) conducted a meta-analysis of interventions exploring the relationship of physical activity to self-esteem in children. Only 27 of a total of 84 studies reviewed provided sufficient data to be used in the meta-analysis. Gruber's general conclusion was that, "Participation in directed play and/or physical education programs contributes to the development of self-esteem in elementary age children" (p. 42). Furthermore, there was evidence that the type of program made a difference in self-esteem gains, with aerobic fitness activities being most effective compared to skill-based programs. Individualized teaching methods were found to be more effective than group methods and teacher-dominated methods.

Samuelson (as cited in Harris, 1973) conducted a physical education class specifically designed to improve the self-esteem of low-esteem tenth-grade girls:

Over a period of seven weeks, she found a positive and significant change in scores on the Self-Esteem Inventory. Further, she observed that several of the subjects continued to show improvement in their regular physical education classes following the experiment. Samuelson concluded that physical education classes could provide an opportunity for experiencing degrees of success and feelings of self worth, resulting in a more positive self-esteem. (p. 171)

In exploring the influence of competitive and non competitive programs of physical education on body image and self-esteem in boys, Read (as cited in Harris, 1973) demonstrated that constant winning and constant losing did influence the boys' concepts of the body and self. Read suggested it is necessary to determine the critical point where losing begins to have a detrimental effect on one's self-esteem. Those individuals who won approximately as frequently as they lost appeared not to have changed significantly in body or self-esteem; those who lost consistently developed less positive self-esteem. Competitive experiences should be structured so that all participants may experience some sense of success and thus be reinforced in a positive manner. This goal may be accomplished by changing partners or teammates as well as by offering a variety of activities throughout the semester. Although Read's study took place almost 30 years ago, Bunker (1991) and Haliday (1999) agree with these results. They suggest that both success and failure are important when one is learning new skills. However there must be an emotionally safe environment in which students feel it is okay to show weakness as well their strengths.

Jafee and Manzer (1992) state that, "Research concerning the relationship between sports and self-esteem in girls is minimal" (p. 14). They reviewed three studies by the Melpomene Institute that examined the relationship between self-esteem and physical activity in female children and adolescents from diverse geographic, economic and racial backgrounds. The findings were similar across both age groups studied (ages 9-12 and 12-17, respectively). Based on data gathered from the questionnaires and focus group discussions reported in the studies, the following conclusions were drawn. First, the primary reason girls engaged in physical activity was to have fun, followed by

positive health benefits. Second, all three studies found a strong positive relationship between physical activity and self-esteem. Girls who felt most confident about themselves and their abilities were more likely to participate in physical activities at higher levels than girls who felt less confident. Younger girls derived positive self-esteem through challenge, achievement in sports, risk-taking experiences and skill development, while older girls cited these sources of self-esteem as well as gaining esteem from the approval of others and through a belief that girls are capable of playing sports well.

The literature suggests that physical education classes can improve the self-esteem of students. However, Allen (as cited in Harris, 1973) expresses several concerns about researchers' attempts to explore cause-effect relationships between physical activity involvement and changes in self-esteem. First, investigators may be somewhat naive in their understanding of the phenomena they claim to investigate. Second, Allen feels that the nature of the instruments used, the assumptions upon which these instruments are based, and the complexity of human behavior create a situation that does not justify stating cause-effect relationships. Finally, according to Allen, some investigators suggest cause-effect relationships out of a desire to support the positive psychological values of physical activity. The lack of research supporting the effect of physical education on self-esteem continues to be a gap in current literature.

Although the relationship of self-esteem and involvement in physical activity has been addressed since the 1960s, certain core issues and themes have proven to be common threads throughout the literature. It is generally agreed that school physical education programs hold tremendous potential for developing self-esteem in children. Goodwin (1999) suggests, "Physical education is unique in that it is the only class where

one's ability is frequently, and obviously, demonstrated to classmates" (p. 211). Marten (1996) states that, "If children initially have positive experiences when being physically active, the internal feedback of accomplishment and the external recognition of success deliver a powerful message of achievement and thus greater worthiness and self-esteem" (p.304). If physical educators recognize this potential and take the appropriate steps, they can create a healthy environment conducive to learning and developing self-esteem.

The physical educator's vital role in establishing self-esteem in children involves allowing students to experience physical success. Fox (1988), Johns (1990), Jafee and Manzer (1992), Whitehead and Corbin (1997) and Notte (2000) suggest that teachers should focus on task-oriented activities that inspire students to achieve personal challenges and to experience learning and personal improvement through meeting the demands of the task. Focusing on task-oriented activities allows students to continue indefinitely, regardless of the abilities of others, to experience success, and at the same time to handle failure better. Task-oriented activities are preferred over ego-oriented activities that focus on a student's ability to win by beating others and demonstrating superior ability through competition and winning. Task-oriented activities are designed so that every group member must successfully complete the task in order for the group to be successful. Such activities allow each student to feel that her contribution to the group is a worthwhile effort. The nature of the effort will contribute to the student's sense of belonging, which in turn builds positive self-esteem.

Fox (1988), Johns (1990), Jafee and Manzer (1992), Whitehead and Corbin (1997), and Notte (2000) agree that many students are not taught a progression of skills, or are expected to perform tasks that are beyond their developmental ability. If the goal is

too high, the chance of attaining it, even with effort, is low. The result is failure or poor performance, which does little for the student's self-esteem. In order to maximize the development of self-esteem, it is important to create learning opportunities that match the difficulty of the task with each student's developmental capabilities. However, Bunker (1991) advises that children love to be challenged. When students succeed at a task that is too easy, they gain little satisfaction. Bunker suggests that making students work just a bit beyond their current skill can produce optimal growth.

Both successes and failures are important in learning new skills. Bunker (1991) and Halliday (1999) assert that success alone does not build good self-esteem. It is also important to build in failure, in order to teach students to take responsibility for what they can control and to learn to put forth more effort when it is needed. Bunker (1991) states, "It is also important to show students that success and failure are not the result only of effort but may be related to other factors, such as ability" (p. 470). Freedom to fail within an emotionally safe environment is one way to help students learn that it is acceptable to have weaknesses and limitations. Halliday (1999) argues, "When students are in an environment in which there is freedom to fail, they are much more likely to try new and challenging activities. This, in turn, increases feelings of competence as they overcome new challenges" (p. 7).

Numerous researchers (Feltz & Weiss, 1982; Johns, 1990; Bunker, 1991; Goodwin, 1999) agree that children begin to form impressions about their own self-worth based on the types of experiences they have and the nature of the feedback they receive about their performance. Although praise should be given more often than criticism, it is important to praise effort and true achievement as it relates to the individual. If the

teacher praises poor performance, the student may conclude that he or she is not very good or is not worthy of the teacher's time and effort. As a result, the student may no longer desire to strive for improvement. Constant praise can eliminate a sense of challenge. Therefore, feedback and reinforcement should be positive and constructive, followed by instructions on how the student can improve.

Although physical education classes provide a great opportunity to enhance participants' self-esteem, they also have the potential to lower self-esteem through negative experiences. Marten (1996) suggests that "Children who have negative experiences when being physically active do not acquire a sense of accomplishment and are not rewarded for achievement, and therefore are more likely not to gain a sense of worthiness through the physical" (p. 304). Traditionally, physical educators have measured competence in students by having them perform ability tests in front of the class. Johns (1990), Martens (1996), Whitehead and Corbin (1997), and Halliday (1999) agree that the practice of publicly testing and comparing student's fitness levels, and offering awards to those who score high, sends a failure message to those who score lower. This type of activity does not enhance self-esteem or develop a fondness for doing physical activity. In fact, it could have the opposite effect and lower self-esteem while decreasing the enjoyment of activity.

Claxton, Fredenburg, and Tusa (1994) note that "exclusion activities" or elimination games can reduce participants' self-esteem. Service (1991), McHugh (1995), and Notte (2000) agree that activities such as choosing teams may lead to feelings of inferiority in those students who are chosen last or not at all. No one learns skills by sitting on the sidelines. Hence, if for some reason elimination games are used and

students are temporarily sitting out, they should be praised for effort and allowed to join the game after a certain time limit. Notte (2000) concurs: “Low-skilled students who are never acknowledged by their teammates run up and down a field, trying to be part of the team effort. This exclusion leads to frustration and eventually if it continues, learned helplessness” (p. 27). Claxton, Fredenburg, and Tusa (1994) add that using exercise as punishment makes it less enjoyable and gives student the message that physical activity must be a bad experience.

Although there is an abundance of research on the topic of self-esteem, the literature reviewed reveals little empirical data to support the claims that self-esteem can be modified through involvement in physical education programs. When studies have shown an improvement in self-esteem, they have not clearly determined why or how the improvement has occurred. Even though most proponents of physical education programs argue that classes can provide opportunities to increase students’ self-esteem, this claim remains unproven. Regardless, until further studies produce more conclusive results, physical educators must act according to their intuitive perceptions. They must continue to provide a safe and disciplined environment and to create challenges at appropriate levels, so that their students can experience a sense of competence about their participation in any given activity. Through positive, constructive, meaningful reinforcement, educators can help students to feel accepted and to realize that their efforts can result in successful outcomes.

This study was undertaken for two reasons. First, it seeks evidence either to support or to reject the nearly universal claim that physical education contributes to increased self-esteem in students. Second, it is intended to provide baseline data for a

teacher's own professional and future use. The findings of this study may encourage teachers to develop activities and make changes in curriculum in order to meet students' needs more effectively. Physical education activities can be structured so that all students may experience a sense of success, thus enhancing their emotional well being and ultimately increasing their positive self-esteem.

## Methodology

### *Research Question*

The purpose of this study was to determine if physical education classes can help increase the self-esteem of the students that participate in them. An experimental research design was used. The first working hypothesis was that participating in physical education classes increases grade ten girls' self-esteem. The independent variable in this study was participation in physical education classes, and the dependent variable was the increase of self-esteem of the students.

The second hypothesis was that girls with positive predispositions towards physical education class are likely to experience greater self-esteem gains than those with negative orientations. The independent variable was the predisposition towards physical education class and the dependent variable was the increase of self-esteem of the girls.

### *Definitions of Terminology*

*Participation.* Each student would be in attendance at the beginning of class and would follow the rules according to the school handbook. The student would be actively involved so as not to require instructor intervention in every activity. The student would be present and actively involved for at least eighty percent of the classes scheduled for the semester. The semester began September 5, 2001, and ended February 1, 2002.

*Physical education class.* A five-credit high school course outlined in the Program of Studies and Curriculum Guide by Alberta Learning.

*Grade 10.* Students ranging in ages 15-16, taking their tenth year of schooling. The grade 10 class was set in a public school, in a rural setting that was controlled by a locally elected school board.

*Self-esteem.* How the student feels about herself, her value, worth and abilities, in relation to others, as measured by the questionnaire based on the Coopersmith Self-Esteem Inventory (see Appendix A).

*Increase.* The increase in student scores on the Coopersmith Self-Esteem Inventory will be statistically significant at the 0.05 level.

### *Research Tradition*

The One-Group Pretest-Posttest Model was used for the study. A control group was not used. The study was based on the grade ten girls' physical education class, which is mandatory for all grade ten students. The grade eleven or twelve class was not used as a control group, because grade 11 and 12 physical education classes are optional and would introduce a selection bias into the study, since primarily girls who feel confident and competent would choose to take physical education as one of their options. Furthermore, the grade eleven or twelve classes involve girls who are older and have already experienced the grade ten physical education program. Hence it was not logical to have the sample from the grade ten compulsory class and a control group from an optional class. Finally, the grade eleven and twelve curriculum is different than that of the grade ten class. Therefore, the activities would be different and the classes would not be comparable.

The experimental design was chosen for three reasons. The first reason was to determine if there was room for the treatment conditions to have an effect. The researcher

wanted to see if, by chance, the students in the experiment already had high levels of self-esteem. If so, there would be little room for the independent variable to have an effect. Pretesting allowed the researcher to determine whether the ceiling effect needed to be taken into consideration when evaluating the effects of the independent variable.

The second reason for administering a pretest was to find out what the students' initial attitudes were towards the physical education class. The treatment may be very successful with students who enjoy physical education but unsuccessful with students who dislike physical education. Students were separated into a positive-attitude and a negative-attitude group in order to determine if the students' initial attitudes affected whether their self-esteem increased. Each student's attitude towards physical education classes was assessed from the question numbered "0" that was added to the questionnaire prior to the self-esteem questions. Question 0 asks whether the student likes physical education.

The third reason for including the pretest was to gain an empirical demonstration of whether the independent variable succeeded in producing a change in the subjects. The most direct way to gain such evidence is to measure the difference obtained before and after a treatment is introduced. Christensen (1994) makes the following argument:

When the pretest involves a learning process such as requiring subjects to recall previously learned materials, the posttest score may very well be affected.

However, the conclusion regarding attitude research is somewhat different. In attitude research, pretest measures, if they have any impact at all, depress the effect being measured; any differences that can be attributed to the experimental treatment probably represent strong treatment effect. (p. 304)

### *Review of Experimental Research*

Experimental research methods provide the best approach to investigating cause-and-effect relationships. The typical experimental design includes the following:

1. A variable or set of variables whose effect the researcher wishes to assess.  
This variable is known as the independent or treatment variable.
2. Some way to measure the effects of the independent variable. This second variable is known as a dependent or outcome variable.
3. Some comparison, from which changes can be inferred and, one hopes, attributed to the treatment. (Palys, 1997, p. 245)

An experimental design serves two functions. First, it establishes the conditions for the comparisons required by the hypotheses of the experiment. Second, it enables the experimenter through statistical analysis of the data to make a meaningful interpretation of the results of the study (Ary, Cheser Jacobs, & Razavieh, 1990). The most important criterion is that the design be appropriate for testing the particular hypotheses of the study. Thus, the first task for the experimenter is to select the design that best arranges the experimental conditions to meet the needs of the particular experimental problem. The experimental design used in this study was the One-Group Pretest-Posttest Design.

The One-Group Pretest-Posttest Design is often used in educational research. This design usually involves three steps: (1) administering a pretest measuring the dependent variable; (2) applying the experimental treatment to the subjects; and (3) administering a posttest, again measuring the dependent variable. Differences attributed to application of the experimental treatment are then determined by comparing the pretest and posttest scores (McMillan, 1996).

### *Limitations*

The major limitation of the One-Group Design is that, because no control group is used, the experimenter cannot assume that a change between the pretest and posttest was brought about by the experimental treatment. There is always the possibility that extraneous variables could account for all or part of any change. Thus, this design limits internal validity. The most serious threats are history, maturation, pretesting, and instrumentation, as explained below (Borg, 1981; Ary, Cheser Jacobs, & Razavieh, 1990).

Internal validity refers to “the extent to which differences observed in the study can be unambiguously attributed to the experimental treatment itself, rather than to other factors” (Palys, 1997, p. 247). As McMillan (1996) explains, “A study is said to be ‘strong’ in internal validity if most plausible extraneous and confounding variables have been controlled, and ‘weak’ if one or more of these variables have differentially affected the dependent variable” (p. 194). In other words, if something other than the treatment as defined could be responsible for the effect, the study has weak internal validity.

Campbell and Stanley (as cited in Palys, 1997) have identified a number of “threats” that one should keep in mind when assessing internal validity. The following threats to internal validity might be considered relevant to this study.

*History.* In this experiment, five months elapsed between the onset of the independent variable and the measurement of the dependent variable. Although this time is necessary for the independent variable to take effect and influence the subjects, it allows for other events to occur that may also affect the dependent variable (McMillan, 1996). Other variables besides the physical education class could affect the students’ self-

esteem. However, the researcher believed that it was important to provide the students with enough time to experience and participate in a variety of different sports and related activities, so that all students would have the opportunity to experience success and possibly increase their self-esteem.

Another concern was that the school was under major construction for the entire year. The year of construction was a very trying time for both teachers and students, but mostly for the students. The students had classes in three separate buildings, among other disruptions. It was a chaotic time for students to be entering the high school. There were no bells, no announcements, limited assemblies, just to name a few challenges. The physical education classes were held in a very old, small, dark building in need of many repairs. The lighting was inadequate, the acoustics were dreadful, the roof leaked, and the gymnasium and change rooms smelled musty.

Students commented throughout the semester about the school, the disarray and the conditions they had to endure. Although some students seemed to handle the situation better than others, it became apparent that many felt bitter about the conditions and commented on the school being a “welfare school.” Therefore, the teacher not only had to deal with the normal daily issues that students have, but also had to try to help them understand that there would be light beyond the tunnel, and that they just had to persevere to see the result. All in all, the students had to endure a lot for the year.

Although this was a frustrating and tiring experience for the students, it probably did not impact their self-esteem scores. The students were disappointed and upset with their unfortunate circumstance concerning where they had to attend class. However,

throughout the semester they seemed to adjust and accept the situation, continuing their daily routines at school.

*Maturation.* People develop in naturally occurring ways that, over a sufficient period of time, can influence the dependent variable independent of a treatment condition. While the experimental treatment is in progress, biological or psychological processes within the student are likely to occur. Maturation also includes relatively short-term changes in people as they become older, stronger, fatigued, elated, or discouraged (McMillan, 1996; Palys, 1997). Given the short time span and the relatively stable nature of fundamental attitudes like self-esteem, maturation was not found to be an issue for the study.

*Testing.* In many educational experiments a pretest is administered, followed by the experimental treatment and then a posttest. If the two tests are similar, students may show an improvement simply as an effect of their experience with the pretest (Borg, 1981). Pretesting can also be a threat to internal validity when students become sensitized to the topic or start to pay more attention to any related material or issues concerning the topic because they took the pretest (Palys, 1997).

Test-retest reliability for the Coopersmith Self-Esteem Inventory is well established. Coopersmith (1989) indicates that test-retest reliability was originally reported as .88 for a sample of 50 children in grade 5 over a five-week interval and .70 for a sample of 56 children over a three-year interval. Fullerton (as cited in Coopersmith, 1989) reported a coefficient of .64 for 104 children in grades 5 and 6 who were tested twelve months apart. Bedeian, Geagud, and Zmud (as cited in Coopersmith, 1989) computed test-retest reliability estimates for 103 college students. Coefficients were .80

for males and .82 for females. Consequently, the instrument is generally considered to have test-retest reliability.

In the current study, students' remembering questions from a pretest and thus influencing the posttest results was not an issue. The questionnaire focused on a change of attitudes, not on achievement or subject content. Therefore the fact that students wrote a pretest was unlikely to influence their scores.

*Instrumentation.* According to Borg (1981), an apparent gain may be observed from pretest to posttest if the nature of the measuring instrument changes. In this study, the same test was administered to the same participants, in the same room. The same teacher was present and followed the identical procedure with each test. Because the students were filling out a questionnaire, the teacher did not have to observe any actions. Consequently, instrumentation was not an issue for this study.

*Experimental mortality.* Experimental mortality occurs when subjects in a study systematically drop out or are lost, and their absence affects the results (McMillan, 1996). During the study, only one student was absent for the posttest, and she was given the opportunity to write the test on her return. The same procedure was followed, and on her return she was taken to another classroom, with another teacher and given the same guarantees as the other students. However, six girls transferred to another school, one opted out of the study, and two resource students were not included in the study. Their absence did not affect the results of the study.

*The "Pygmalion" effect.* The "Pygmalion" effect refers to a tendency for participants in a study, aware that they are being observed, to guess what result is being sought and to modify their behavior accordingly (Ary, Cheser Jacobs, & Razavieh, 1990).

This modification can influence the results of a study. In this study, some subjects may have realized that their participation in a physical education class was hoped to result in higher self-esteem. To minimize the risk of this effect, the study was explained to each class carefully, with no indication that a connection between self-esteem of a particular group of female students and participation in physical education classes was being sought. Very few students asked why they had to take the posttest, and none asked if they were supposed to answer the questions differently than on the pretest. In fact, no student asked why the pretest and posttest were the same.

### *Sample*

The sample was a convenience sample of the grade ten students in the researcher's own physical education classes. The grade ten classes enrolled and attending high school girls' physical education classes in the first semester were asked to fill out the questionnaire based on the Coopersmith Self-Esteem Inventory (See Appendix A). It was made clear, however, that participation in the study was completely voluntary and that any student could withdraw at any time without penalty.

The total sample consisted of 54 participants and was broken down as follows. Class A had 28 students enrolled at the beginning of the semester. Among the 28 girls, three girls transferred before the posttest was administered, which eliminated them from the study. In addition, two resource students were not included in the study. Thus, a total of 23 girls from Class A participated in the study. Class B had 35 students enrolled at the beginning of the semester. Among the 35 girls from Class B, three girls transferred and one student opted out, leaving 31 who participated in the study.

*Instrument*

Self-esteem can fluctuate for a variety of reasons and can therefore be difficult to measure. Realizing this, the researcher decided to use the Coopersmith Self-Esteem Inventory (see Appendix A). The Coopersmith Self-Esteem Inventory has much to recommend it as a measure of self-esteem. Peterson and Austin, (as cited in Buros, 1985) state the following: “It is the best known and one of the most widely used instruments to measure self-esteem. It is reliable and stable, and there exists an impressive amount of information bearing on its construct validity” (p. 396). Fraenkel and Wallen (2000) define reliability as the degree to which scores obtained with an instrument are consistent measures of whatever the instrument measures. Validity is the degree to which correct inferences can be made based on results from an instrument; validity depends not only on the instrument itself, but also on the instrumentation process and the characteristics of the group studied.

The Self-Esteem Inventory consists of fifty questions that can be given as a total self score or broken down into four subscales pertaining to different self-esteem domains. These scales include General Self, Social Self-Peers, Home-Parents, and School-Academic. In addition to the fifty questions there are eight “Lie” questions that attempt to determine whether the subject is being honest in his or her answers. The Inventory is a forced-choice format that is designed for use with males and females, ethnic groups, and special populations. Students respond with either “like me” or “unlike me” to a series of statements. The instrument has been used to study differences in self-esteem according to gender and ethnicity, and to evaluate programs specifically geared to increasing self-esteem using pre and posttest methods (<http://isu.indsate.edu/wbarratt/dragon/ix/sa->

[sei/htm](#)). The item responses “like me” or “unlike me” are allocated a value and simply summed. The Raw Score can then be multiplied by 2, so the maximum score is 100 and the minimum score is 0. Acceptable reliability and validity information exists for the Self-Esteem Inventory and is available at <http://www.macses.ucsf.edu/Reserch/Psychosocial/notebook/selfesteem.html>

The Coopersmith Inventory was chosen for this study for the above reasons, instead of trying to “re-invent the wheel.” For an attempt to explore the relationship between self-esteem and participation in physical education for grade ten girls in one rural community, this questionnaire seemed suitable and appropriate. Moreover, this instrument has been widely used, with well-established validity and reliability. However, the inventory was slightly modified for the purposes of this study. Four questions that referred to the student’s job were re-worded (# 42, 46, 49, & 56) (see Appendix E). The rationale for the change was that many grade ten students may not have a job, so the context of the four questions was changed, relating them either to school classes or to schoolmates rather than referring to the respondent’s job or co-workers. The rewording was intended to enable all students to answer all the questions in the self-esteem inventory, without unduly influencing the usefulness of the instrument. Due to a printing error, question #36 of the original form was not included in this study. This question states, “I can make up my mind and stick to it.” This question is included in the General Self category, the largest subscale within the Self-Esteem Inventory. A number of related questions in this area refer to the same idea, rather than examining some dimension of self-esteem not otherwise covered. As a result, the researcher feels that this question was not crucial to the study, and omitting it would not have altered the results.

### *Approval of Study*

Consent on multiple levels was obtained, since the sample deals with individuals under the age of 18. A written proposal outlining the purpose of the study and the means of gathering data, as well as a copy of the proposed informed consent form for parents and students, were submitted to the Human Subject Committee at the University of Lethbridge for approval to commence the study. The first level of consent after the University was permission from the superintendent, the school principal, and parents to proceed with the study. The superintendent was contacted first to obtain permission from the school board to begin the study. In addition, the principal was asked for authorization to utilize the grade 10 physical education classes for the study. Follow up consisted of written documentation of the Coopersmith Self-Esteem Inventory, the proposal, sample consent letters and official permission forms and approval from the University of Lethbridge. Once district-level and school approval was obtained, the students were apprised of their participation in the study and permission forms were sent home with the students for parental consent (see Appendix B) and student consent (see Appendix C). Once parental consent was established, the researcher was able to determine whether the student wished to participate or not.

### *Procedure*

Once the new semester began and registration for classes was over, each grade ten class was informed that the researcher was working on a Master of Education degree. Students were asked to assist in the study by filling out the questionnaire. An explanation was given to each class that a questionnaire would be administered in September (pretest)

and near the end of the semester in January (posttest). Students were told that participation in the study is voluntary and that they could opt out at any time.

Another teacher administered the pretest at the beginning of the semester, on September 17, 2001, and the posttest on January 15, 2002. An entire semester passed before the students were re-tested, in order to allow the students to experience the physical education program in its entirety. The rationale for waiting was that a variety of different units were covered throughout the course. Some units were teamwork oriented: ice hockey, handball, and volleyball. Others included partner work: badminton, pickleball, and tennis. Other units were completely individual, including gymnastics, fitness, and weight training. Often students who excel at certain activities may require more assistance during other units. The opportunity to participate in and experience numerous activities ensures that the girls experience success in one or more areas throughout the semester.

In addition, the researcher's experience in teaching physical education suggests that even the most reserved or physically non-athletic student can become self-confident as a result of facing and overcoming the challenges associated with trying something new. Allowing enough time so that each student can achieve success through a variety of activities provides the students with more opportunities to develop self-esteem. Administering the posttest too soon might not have allowed enough time for some students to experience the full course. In addition, if only one unit was chosen for the study before administering the posttest, that unit could be one that only certain students enjoyed. As a result, their chances of developing self-esteem through the physical education class might decrease. Since it was not realistic to wait until the semester was

over and final exams become the focus, the posttest was administered shortly before the end of the semester.

The students wrote the pretest and posttest in a classroom, rather than the gymnasium. One concern was that the students would not have privacy in a group-administered questionnaire and that their responses might be tainted by worries about what others might think of them. To eliminate this concern, a classroom was assigned specifically for the pretest and posttest. Students sat at separate desks so no one could see their choices. This arrangement created a comfortable atmosphere that was conducive to students' taking the questionnaire seriously.

The questionnaire based on the Coopersmith Self-Esteem Inventory was presented to the students during their scheduled physical education class time. Another teacher escorted the class to the classroom. The students were asked to bring homework or a free reading book to the class. Any students who did not participate in the study could read or work, as long as they were quiet. When the participants finished the questionnaire they were also asked to read or work on homework, until the entire class was finished. At that time, they were brought back to the gymnasium and participated in an activity until class time was over.

One problem that could have arisen was that the students would feel they had to participate in the study. Since the researcher was also their teacher, the students may have felt they would be penalized if they did not participate in the study. This problem was alleviated by having another teacher administer the questionnaire to the students at the beginning of the class, for both pre and posttest. Another teacher would reassure the students so they would not feel pressured to respond to the questionnaire because the

researcher was their teacher. As the semester progressed, the researcher developed a very good relationship with both grade ten physical education classes, and the students got to know the teacher very well. The students came to trust the researcher, realizing that failure to participate in the study would not penalize them in any way. The students appeared to want to help the researcher and did not seem to feel pressured in any way. Many of the girls asked the researcher questions regarding the Master of Education program, and they were intrigued that their teacher was also “in school,” working on assignments as they were.

An attendance sheet was given to the teacher beforehand, with codes assigned to each name. The questionnaire was distributed to the students according to the codes for both the pre and posttest. All students were given questionnaires, even if they opted out of the research project, so as not to draw attention to them. However, they were not expected to answer the questionnaire. Once in the room, the students were asked to sit alphabetically in the same attendance rows as they are assigned in the gymnasium. The teacher read through the attendance sheet and made sure the students were sitting in alphabetical order. In the event of an absence, the teacher asked the students to leave the desk empty to represent the student. The teacher found the students to be very cooperative and felt there should be no discrepancy between the names and codes.

The other teacher read a prepared introductory statement (see Appendix D) to each class, explaining that the purpose of the study was research for the researcher’s Master of Education program. Participation was strictly voluntary. The students were told of their right to refuse to participate, given a guarantee of confidentiality, and assured that all results would be reported as aggregate data only. Confidentiality was ensured as all

response forms were numbered and placed in an unmarked envelope by the teacher once the pretest was completed. Enough time was provided for the students to finish the questionnaire without the pressure of a time constraint. They were allowed to ask questions only to the teacher, not to classmates. It was important for the subjects to understand fully what is meant by anonymity in their responses. After the teacher reassured them about absolute anonymity, they seemed to understand and to have a sense of ease when they saw their completed questionnaires were retrieved face down and placed directly into a large envelope, unseen by the teacher. When all the questionnaires were completed, the teacher had a student volunteer seal the envelope.

When the students completed the questionnaire, the teacher returned the sealed envelope to the researcher. The envelope with the completed questionnaires and the coded attendance sheet was locked in a file cabinet in the researcher's office. The questionnaires from the pretest were secured until after the posttest scores had been collected.

The students participated in their specified physical education classes throughout the semester. When the semester came close to completion, the students who participated in the pretest were asked to complete the posttest. The same procedure was followed for the posttest. The same coded attendance sheet was used as with the pretest, to ensure the participants were given the same code for both pre and post tests. Again the teacher secured the completed tests in a sealed envelope. After completion of the study and approval of the researcher's Master of Education degree, the completed questionnaires will be destroyed. Only the coded data is used in the data analysis.

## Data Analysis and Results

### *Data Collection*

If a student were absent from school on the specific day of the pretest or the posttest, she was given the opportunity to write the questionnaire on the day of her return to school. If the student did not write the questionnaire on her return, she was eliminated from the study in order to minimize opportunity for students who had previously completed the questionnaire to talk to absent students about the questionnaire and thus to contaminate the data. The sample group was readily available, due to required attendance in the physical education class. On the day of the pretest every student was in attendance. On the day of the posttest, only one student was absent. On her return she agreed to write the questionnaire, allowing her test to be added to the data. However, six students participated in the pretest and then transferred to another school at a later date, before the posttest was administered. The data collected for the pretest for these six students were not included in the results, eliminating them from the research.

Although literacy is needed to complete the questionnaire, the Coopersmith Inventory is written on a very basic level without “talking down” to the subjects. Any students who needed assistance with terminology or clarification concerning questions were encouraged to raise their hand and direct their questions to the teacher in charge. Having the same teacher administer the questionnaire to both the classes ensured that the same definitions were used to clarify misunderstood terms. However, the teacher had no questions regarding the questionnaire from either class.

Two students were not included in the sample. These students were resource room students that were added to one of the classes to learn social skills through interaction with the other students. The resource room students cannot read on their own and might not have understood the questions being asked.

Another problem was that the data was limited by the structure of the Coopersmith Inventory. The questions are forced choice, dichotomous closed questions. The research was not designed in such a way that observations and open comments from the subjects could be gathered. In a few instances, this became a problem. A number of students wrote on the sheet “sometimes” rather than choosing an answer between “like me” or “unlike me” to some questions. Other participants circled both answers. Another problem was that a few students did not answer some of the questions and drew a line through them instead. Any questionnaires that had “write-in” responses or where respondents failed to choose one of the forced-choice options were scored invalid and removed from the analysis.

### *Analysis and Findings*

The Statistical Package for the Social Sciences (SPSS) was used to calculate the scores for the *t*-Test and the Paired *t*-Test. A code was entered for each student (to ensure anonymity) starting at 01. Each individual answer for each student was recorded into the program so that the researcher could separate the answers into each subscale within the inventory. The question whether the individual liked physical education or disliked physical education was also coded.

The instrument was administered to two classes of physical education students. The null hypothesis — that there will be no significant difference due to the experimental

treatment — was tested using the Paired *t*-Test. In a One-Group-Pretest-Posttest Design, the students are given a pretest on the dependent variable, then exposed to the experimental treatment, and then retested on the dependent variable. The pre-and posttest scores are compared to determine if a significant change has taken place (Borg, 1987).

The data were analyzed using a Paired *t* -Test. This test compares the mean scores of the same students on the same measure given before and after treatment to determine if a significant gain occurred (McMillan, 1996). By definition, the level of significance is the probability that a discrepancy between a sample statistic and a specified population parameter is due to sampling error or to chance. A significance level of 0.05 was used in accordance with research convention (Fraenkel & Wallen, 2000).

A *t*-Test was used to determine if there was a difference between the mean of the two grade ten physical education classes. A *t* -Test is a statistical test designed to determine if the mean scores of two groups are significantly different. The test produces a value for *t*, which is then checked in a table to determine the level of significance (Borg, 1981). The null hypothesis states that there will be no significant difference between the two physical education classes. When the *t*-Test was conducted to see if Class A and Class B could be considered a homogenous group, it was found that the two classes had significantly different pretest means; therefore they could not be considered to belong to the same group (see Table 1). The *t*-Test for equality of means also showed that there was a significant difference between the two classes ( $t = -2.112$ ;  $df = 52$ ;  $p = 0.04$ ). Therefore, for the rest of this study, the two classes will be considered separate samples and referred to as Class A and Class B.

One dimension on which the two classes differed was ethnicity. Whatever criteria the administration used to assign students to the two classes resulted in different ethnic profiles, a factor not anticipated in the study design. Although the relationship between ethnicity, physical education and self-esteem was beyond the scope of the current study, it could be one of the factors that made the samples not equivalent.

Table 1

*Descriptive Statistics for t-Test for Class A and Class B Pretests*

	Class	N	Pretest Means	SD
Total	A	23	74.04	6.92
Total	B	31	77.19	3.97

A Paired *t*-Test was conducted to evaluate the impact of physical education class on the students' self-esteem. The Paired *t*-Test compared the pretest and posttest self-esteem scores of students in both Class A and Class B.

Testing of Hypothesis #1

Hypothesis 1: Participating in physical education classes increases grade ten girls' self-esteem. The null hypothesis states that no significant difference will be found.

Participating in Physical education classes does not increase grade ten girls' self-esteem.

Table 2 provides a summary of Class A's means and standard deviations. These were calculated for the total score as well as for each self-esteem subscale of the Coopersmith Self-Esteem Inventory: general self (GenSelf), social self-peers (Social), home-parents (Home), and school-academics (School).

Table 2

*Class A Descriptive Statistics from Paired t-Test*

	Domain	Mean	N	SD
Pretest	Total	74.04	23	6.92
Posttest	PTotal	74.87	23	5.81
Pretest	Genself	39.09	23	3.85
Posttest	PGenself	39.48	23	2.78
Pretest	Social	11.57	23	1.28
Posttest	PSocial	11.26	23	1.29
Pretest	Home	11.61	23	1.62
Posttest	PHome	11.91	23	1.76
Pretest	School	11.78	23	1.68
Posttest	PSchool	12.22	23	1.51

Table 3 shows that there was no significant difference in Class A between the pre- and posttest either in the total or in any of the subscales. The null hypothesis is accepted.

Table 3

*Class A t-Test for Level of Significance*

	<i>t</i>	df	p
Total - PTotal	-1.18	22	0.25
Genself - PGenself	-0.89	22	0.38
Social - PSocial	1.27	22	0.22
Home - PHome	-1.07	22	0.30
School - PSchool	-1.15	22	0.23

Table 4 summarizes Class B's means and standard deviations. These were calculated for the total score as well as for each self-esteem subscale.

Table 4

*Class B Descriptive Statistics from Paired t-Test*

	Domain	Mean	N	SD
Pretest	Total	77.19	31	3.97
Posttest	PTotal	77.58	31	3.86
Pretest	Genself	40.55	31	2.57
Posttest	PGenself	40.88	31	2.51
Pretest	Social	11.68	31	1.05
Posttest	PSocial	11.65	31	0.95
Pretest	Home	12.29	31	1.07
Posttest	PHome	12.45	31	1.21
Pretest	School	12.68	31	1.11
Posttest	PSchool	12.61	31	1.31

Table 5 shows that there was no significant difference in Class B between the pre- and posttest either in the total or in any of the subscales. The null hypothesis is accepted.

Table 5

*Class B t-Test for Level of Significance*

	<i>t</i>	df	p
Total - PTotal	-0.63	30	0.53
Genself - PGenself	-0.71	30	0.49
Social - PSocial	0.14	30	0.89
Home - PHome	-0.67	30	0.51
School - PSchool	0.44	30	0.66

Testing of Hypothesis #2

Hypothesis #2: Girls with positive predispositions towards physical education class experience greater self-esteem gains than those with negative orientations. Null

hypothesis: There is no difference in self-esteem gains between girls with a positive predisposition towards physical education and those with a negative predisposition towards physical education.

Table 6 provides a summary of Class A's means and standard deviations. These were calculated for the students who like and dislike physical education classes.

Table 6

*Class A Descriptive Statistics from Paired t-Test (PE)*

	PE (0)	N	Mean	SD
TOTAL	Dislike PE	7	75.86	5.34
	Like PE	12	73.33	6.58
PTOTAL	Dislike PE	7	76.14	5.21
	Like PE	12	74.17	6.24

Table 7 shows that no significant differences were found between the students who like physical education and those who do not. The null hypothesis is accepted.

Table 7

*Class A t-Test for Level of Significance (PE)*

	<i>t</i>	df	p
TOTAL	0.86	17	0.40
PTOTAL	0.71	17	0.49

Table 8 provides a summary of class B's means and standard deviations. These were calculated for the students who like and dislike physical education classes.

Table 8

*Class B Descriptive Statistics from Paired t-Test (PE)*

	PE (0)	N	Mean	SD
TOTAL	Dislike PE	2	71.00	5.65
	Like PE	24	77.21	3.67
PTOTAL	Dislike PE	2	73.00	1.41
	Like PE	24	77.67	3.92

Table 9 shows that no significant difference was found between the students who like physical education and those who do not like physical education, for the posttest. The null hypothesis is rejected. A statistically significant difference is identified on the pretest; however, due to the small number of negative responses to this question as well as the unexamined extraneous events and response biases acting upon the participants, we must interpret this finding of significance with caution.

Table 9

*Class B t-Test for Level of Significance (PE)*

	<i>t</i>	df	<i>p</i>
TOTAL	-2.23	24	0.04
PTOTAL	-1.65	24	0.11

## Discussion and Recommendations

The purpose of this research was to determine whether participating in a physical education class increases girls' self-esteem. The results of this study do not support this conclusion: self-esteem scores following an experimental treatment of participation in physical education class did not reveal any significant findings. This study confirms the literature. Although there is an abundance of research on the topic of self-esteem itself, there is very little empirical data to support the claims that self-esteem can be increased through participating in physical education programs. The study suggests that there is no easily demonstrable impact over a single semester, and that Fox (1988), Sonstroem (1984), and Jafee and Manzer (1992) are therefore correct in questioning the assumption of a positive relationship.

All the same, subtle changes may have occurred that the empirical study was unable to pick up, but which nevertheless validate physical education as a self-esteem enhancer for girls. Alternatively, it could be argued that although a single term of physical education is insufficient to produce significant increases in the self-esteem of grade 10 girls, a longer program might. This study does contradict Samuelson's (as cited in Harris, 1973) seven-week study discussed in the literature review. Samuelson's study was designed specifically to improve the self-esteem of already low self-esteem girls. That study differs from the present one, which involved two separate classes that did not strictly include low self-esteem girls. Furthermore, although throughout the semester the researcher tried to teach activities that would build self-esteem, the mandatory curriculum

set out in the program of studies may have included some units or activities that certain students did not enjoy or in which they felt inadequate. Samuelson's study did not have to follow a particular curriculum but was designed specifically to improve the self-esteem of the participants during the short time span of the study.

It is, possible, however, that the researcher's teaching did not encourage development of self-esteem in her students. The researcher did take into account when teaching that participating in physical education class puts every student's ability on display to her classmates (Goodwin, 1999). Therefore, planning throughout the semester focused on task-orientated activities rather than ego-oriented ones. The activities were challenging but also attainable. Elimination games were used minimally; when they were used, students were always allowed to return to the activity after a certain time limit. The main focus was to make each student feel that her contribution to activities and team sports was valuable. Feedback and reinforcement provided throughout the class were positive, but also constructive. Although these activities focused on enhancing the self-esteem of the students, in retrospect, the self-esteem of the students might have been inhibited by the tournaments that were developed with certain sports. Tournaments could be considered an ego-oriented activity that focuses on a student's ability to win, in competition with other students. Such activities may have lowered the self-esteem of the students who did not perform as well as the others.

Based on the relationship between the researcher and the students in the two classes, however, this does not seem to have been the case. Although qualitative data was not included in the formal study, many students from both classes came to the researcher after the semester was over and said that they missed the class and missed the teacher

most of all. Furthermore, many of the students in the study enrolled in the optional physical education class (PE 20) the following year. The researcher believes that changes occurred which were too small for the instrument to detect, and therefore significance was not found, and that one semester may not be long enough to allow for measurable improvement. One recommendation is that further research should expand on this study over a longer period of time, to provide a more comprehensive study that might demonstrate a significant relationship between self-esteem and physical education.

As the literature suggests, there can be problems with the instrument used in some studies. In retrospect, there was a concern with the chosen instrument. Although the Coopersmith Self-Esteem Inventory appeared appropriate at the outset, a number of problems emerged during the study to suggest it may not have been the best choice. First, a few students rejected the forced choice format, either circling both alternatives or writing "sometimes" instead of choosing one answer. This response suggests that the instrument was not capturing their lived experience. The CSEI's forced choice format may not allow respondents to record small changes in self-esteem because there is no way to record movement towards the opposite value until that movement is sufficiently advanced to flip the response. In contrast, a Likert Scale is much better at capturing movement along a continuum, and may therefore be more suited to capturing the small-scale changes anticipated in this study.

Second, the CSEI includes subscales, such as "Home-Parents," which measure variables over which the study had no control and which therefore may have had only indirect relevance to the study. A better choice may have been the Tennessee Self-

Concept scale, which includes a measure pertaining to physical self, a dimension perhaps more relevant to a study of physical education classes.

Third, the current study provides only limited snapshots of respondents' self-esteem at two points in time. When the study was initiated, this appeared as an entirely adequate basis for comparison of self-esteem levels before and after a semester of physical education classes. As the study progressed, however, the researcher became increasingly frustrated by the lack of qualitative data with which to document the small victories (or failures) through which self-esteem is developed (or undermined). The inclusion of interviews, journals or other qualitative strategies might have allowed for a more direct demonstration of the impact of physical education classes on self-esteem, in terms of both the process and the extent of the changes (if any). For example, positive experiences in physical education classes may have increased the girls' initial levels of self-esteem, despite various negative pressures elsewhere in their lives. The role of outside pressures affecting the girls' self-esteem may have been a factor in the lack of measurable effect, as recorded by the quantitative instrument. It is therefore recommended that qualitative measures be included in any future study of the impact of physical education on girls' self-esteem.

## Conclusion

Although this study did not demonstrate any positive increase in self-esteem among these students, I remain hopeful that future research will confirm what I intuitively recognize as physical education's positive role in student's self-esteem. In the meantime, educators should continue to structure classes so as to maximize the benefits and minimize the potential dangers of physical activities for girls' self-esteem, according to the recommendations in the literature. Physical educators can have a positive impact on students' self-esteem by providing a safe and disciplined environment where students can have fun through challenging but level-appropriate activities; positive, constructive reinforcement; and well considered structure and organization (Jafee & Manzer, 1992; Whitehead & Corbin, 1997; Notte, 2000).

It is vital that physical educators allow students to experience physical success in order to enhance their self-esteem. Goodwin (1999), Harris (1983), Edwards (1998), and Notte (2000) suggest that teachers should be encouraged to use task-oriented activities in which students focus on personal challenges, as opposed to ego-oriented activities that emphasize competition and winning through superior ability. An emphasis on sport as a merely competitive exercise for students disregards the vital role that physical activities can have in providing a positive and healthy outlet for student development. It is important for every student to feel that her contribution to the activity is worthwhile, not only those students who are considered high in ability. This change in emphasis and

approach would encourage students to develop a sense of belonging and tend to support the development of positive self-esteem.

Until further studies produce more conclusive results, physical educators should continue to provide a learning environment that promotes physical activities as a healthy and positive outlet. In such an environment, each student's efforts can produce successful outcomes that will, in turn, have a positive influence on the development of self-esteem.

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## Appendices

## Appendix A

## Questionnaire Based on the Coopersmith Self-Esteem Inventory (CSEI)

## Instructions:

Please mark each statement in the following way. If the statement describes how you usually feel, please circle “Like Me” on your answer sheet. If the statement does not describe how you usually feel, please circle “Unlike Me” on your answer sheet.

There are no right or wrong answers. Just be honest with yourself. Please circle only one answer per question.

- |  |         |           |
|--|---------|-----------|
| 0. I like physical education                                   | Like Me | Unlike Me |
| 1. I spend a lot of time daydreaming                           | Like Me | Unlike Me |
| 2. I'm pretty sure of myself                                   | Like Me | Unlike Me |
| 3. I often wish I were someone else                            | Like Me | Unlike Me |
| 4. I'm easy to like  | Like Me | Unlike Me |
| 5. My family and I have lots of fun together                   | Like Me | Unlike Me |
| 6. I never worry about anything                                | Like Me | Unlike Me |
| 7. I find it very hard to talk in front of a group             | Like Me | Unlike Me |
| 8. I wish I were younger                                       | Like Me | Unlike Me |
| 9. There are lots of things about myself I'd change if I could | Like Me | Unlike Me |
| 10. I can make up my mind without too much trouble             | Like Me | Unlike Me |
| 11. I'm a lot of fun to be with                                | Like Me | Unlike Me |
| 12. I get upset easily at home                                 | Like Me | Unlike Me |
| 13. I always do the right thing                                | Like Me | Unlike Me |

- |  |         |           |
|--|---------|-----------|
| 14. I'm generally proud of the work I have done              | Like Me | Unlike Me |
| 15. Someone always has to tell me what to do                 | Like Me | Unlike Me |
| 16. It takes me a long time to get used to anything new      | Like Me | Unlike Me |
| 17. I'm often sorry for things I do                          | Like Me | Unlike Me |
| 18. I have several friends around my own age                 | Like Me | Unlike Me |
| 19. My (wife, husband, parents) usually consider my feelings | Like Me | Unlike Me |
| 20. I'm never unhappy  | Like Me | Unlike Me |
| 21. I usually do the best work I can                         | Like Me | Unlike Me |
| 22. I give in very easily                                    | Like Me | Unlike Me |
| 23. I can usually take care of myself                        | Like Me | Unlike Me |
| 24. I'm pretty happy   | Like Me | Unlike Me |
| 25. I would rather associate with people younger than me     | Like Me | Unlike Me |
| 26. My family expects too much of me                         | Like Me | Unlike Me |
| 27. I like everyone I know                                   | Like Me | Unlike Me |
| 28. I like to be called on to give advice or information     | Like Me | Unlike Me |
| 29. I understand myself                                      | Like Me | Unlike Me |
| 30. It's pretty tough to be me                               | Like Me | Unlike Me |
| 31. Things are all mixed up in my life                       | Like Me | Unlike Me |
| 32. People usually follow my ideas                           | Like Me | Unlike Me |
| 33. No one pays much attention to me at home                 | Like Me | Unlike Me |
| 34. I never get criticized                                   | Like Me | Unlike Me |
| 35. I'm not doing as well in the world as I'd like to        | Like Me | Unlike Me |
| 37. I really don't like being a woman                        | Like Me | Unlike Me |

- |  |         |           |
|--|---------|-----------|
| 38. I have a low opinion of myself                                   | Like Me | Unlike Me |
| 39. I don't like to be with other people                             | Like Me | Unlike Me |
| 40. Many times I'd like to get out of my responsibilities            | Like Me | Unlike Me |
| 41. I'm never shy  | Like Me | Unlike Me |
| 42. I often feel upset when working on a new course or subject       | Like Me | Unlike Me |
| 43. I often feel ashamed of myself                                   | Like Me | Unlike Me |
| 44. I'm not as nice looking as most people                           | Like Me | Unlike Me |
| 45. If I have something to say I usually say it                      | Like Me | Unlike Me |
| 46. Other students and acquaintances pick on me very often           | Like Me | Unlike Me |
| 47. My (family, parents) understand me                               | Like Me | Unlike Me |
| 48. I always tell the truth  | Like Me | Unlike Me |
| 49. My (friends, teachers, parents) make me feel I'm not good enough | Like Me | Unlike Me |
| 50. I don't care what happens to me                                  | Like Me | Unlike Me |
| 51. I'm a failure  | Like Me | Unlike Me |
| 52. I get upset easily when I'm corrected or reprimanded             | Like Me | Unlike Me |
| 53. Most people are better liked than I am                           | Like Me | Unlike Me |
| 54. I usually feel as if my (family, parents) are pushing me         | Like Me | Unlike Me |
| 55. I always know what to say to people                              | Like Me | Unlike Me |
| 56. I often get discouraged on a new course                          | Like Me | Unlike Me |
| 57. Things usually don't bother me                                   | Like Me | Unlike Me |
| 58. I can't be depended upon   | Like Me | Unlike Me |

Thank you for your participation!

## Appendix B

### Parent/Legal Guardian Consent Letter and Form

Dear Parent/Guardian:

I am conducting a study on girls' self-esteem and Physical Education. The purpose of this study is to determine the effect of participation in Physical Education classes on the self-esteem of the girls in grade 10. I would like your permission for your daughter to participate in this study.

As part of this research your daughter will be asked to complete the Coopersmith Self-Esteem Inventory. The questionnaire will be given on September 17 during class time, and then the same questionnaire will be given near the end of the semester on January 15. Please note that all information will be handled in a confidential and professional manner. When responses are released, they will be reported in summary form only. Further, all names, locations and any other identifying information will **NOT** be included in any discussions of the results. After the data is recorded, all questionnaires will be destroyed. You also have the right to withdraw your daughter from the study without penalty at any time.

If you choose to do so, please indicate your willingness to allow your daughter to participate by signing the consent form on the next page, and return the consent form to the school with your daughter.

I very much appreciate your assistance in this study. If you have any questions please feel free to call me: Work: 653-4951, Home: 327-3934, or email:

[lori.howe@westwind.ab.ca](mailto:lori.howe@westwind.ab.ca)

Also please feel free to contact the Supervisor of my study at the University of Lethbridge, Dr. Robert Runte at (403) 329-2260 and/or any member of the Faculty of Education Human Subject Research Committee, if you wish additional information. The chairperson of the committee is Dr. Keith Roscoe (403) 329-2446.

Sincerely,

Lori Howe  
Cardston High School PE Teacher  
Master of Education Student  
University of Lethbridge  
327-3934  
[lori.howe@westwind.ab.ca](mailto:lori.howe@westwind.ab.ca)

#### Consent Form

Name of Research Project: Self-Esteem in Girls: Does Physical Education Make a Difference?

Name of Investigator: Ms. Lori Howe

I agree to allow my daughter, \_\_\_\_\_, to participate in this study.

Name of Parent/Guardian \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Appendix C  
Student Permission Form

The purpose of this questionnaire is to measure the self-esteem of students. There are no right or wrong answers, just what you feel. Your answers will be completely confidential. Your name will never be used in the research findings.

I am collecting this data for a project that I am doing as part of my Master of Education degree. After I am finished, the questionnaires will be destroyed. At any time during this questionnaire you have the right to refuse to participate.

You do not have to do the questionnaire if you don't want to. You will not be penalized in any way if you do not participate. However, the more people who fill in the form honestly, the better my research will be. The data will help me become a better teacher so I can help other students in the future.

Thank you.

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Student's signature

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Date

At this time I would like to thank you for your time in agreeing to participate in the study.

Your time is greatly appreciated!

Ms. Lori Howe  
Cardston High School PE Teacher  
Master of Education Student  
University of Lethbridge

## Appendix D

### Preliminary Instructions for Teacher and Students

Instructions for the teacher: The following instructions are to be read to participants before they begin answering the questionnaire.

Instruction for students:

Please sit alphabetically in your rows, as you do in your physical education class. If anyone is absent, please leave that desk empty to represent that student.

This is an important survey for Ms. Howe's Master of Education Program. We hope you will help by filling out this questionnaire. There are no right or wrong answers or hidden meaning in any of the questions. Just be honest with yourself. Your name will not be used in the data, and your responses will be kept strictly confidential. No one will see the questionnaire with the exception of Ms. Howe and her supervisor. It is important that you answer the questions honestly. This will assist Ms. Howe with her research findings and enable her to better help the students in her class.

If you have any questions concerning the questionnaire, please feel free to ask the teacher. We want your own answers, not those of a friend or classmate. Please understand that your participation is strictly voluntary.

When finished, please hand in your questionnaire face down to the teacher and read or do homework quietly until everyone is finished the questionnaire.

Thank you for participating in this study. Your efforts are appreciated!

## Appendix E

## Original and Reworded Coopersmith Self-Esteem Inventory Questions

*Original Coopersmith Self-Esteem Inventory Questions*

- |   |         |           |
|---|---------|-----------|
| 42. I often feel upset when I am working on a job                 | Like Me | Unlike Me |
| 46. Fellow workers and acquaintances pick on me very often        | Like Me | Unlike Me |
| 49. My (boss, foreman, manager) makes me feel I'm not good enough |         |           |
|   | Like Me | Unlike Me |
| 56. I often get discouraged on a new job                          | Like Me | Unlike Me |

*Reworded Coopersmith Self-Esteem Inventory Questions*

- |  |         |           |
|--|---------|-----------|
| 42. I often feel upset when working on a new course or subject       | Like Me | Unlike Me |
| 46. Other students and acquaintances pick on me very often           | Like Me | Unlike Me |
| 49. My (friends, teachers, parents) make me feel I'm not good enough |         |           |
|  | Like Me | Unlike Me |
| 56. I often get discouraged on a new course                          | Like Me | Unlike Me |