



**Increasing Enjoyment in Physical Education through
Gender Segregated Classes**

Des classes unisexuées pour accroître le plaisir en éducation physique

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Abstract

Physical inactivity is a growing concern for adolescents across Canada (CCHS, 2010). Regularly scheduled physical education periods during school time can act as a platform to counteract the rising physical inactivity levels. However, junior high students sometimes have reservations about physically exerting themselves in the presence of opposite gendered peers (Maihan, Murrie, Gonzalez, & Jobe, 2006). In this project gender segregated physical education was explored as an alternate setting to alleviate these pressures. Sixty-six junior high students (thirty-eight boys and twenty-eight girls) participated in a five-class unit of gender-segregated physical education. Data was collected via the Intrinsic Motivation Inventory (Deci & Ryan, 1985), focus group sessions, as well as observational notes. The results provide evidence for the positive impact of gender segregated physical education classes at the grade eight and nine level. Grade seven students however reported less interest in the gender-segregated environment.

Résumé

Le fléau de l'inactivité physique prend de plus en plus d'ampleur chez les ados canadiens (ESCC, 2010). Des périodes d'éducation physique régulières peuvent contribuer à contrer le taux croissant d'inactivité physique chez les jeunes. Cependant, les élèves du premier cycle du secondaire avaient souvent des réserves à s'adonner à des activités physiques intenses en présence d'élèves du sexe opposé (Maihan, Murrie, Gonzalez et Jobe, 2006). Dans le cadre de ce projet, l'utilité d'offrir des périodes d'éducation physique à des classes unisexuées pour calmer ces réticences a été étudiée. C'est ainsi que 66 élèves du premier cycle du secondaire (38 garçons et 28 filles) ont participé à une unité de cinq cours d'éducation physique offerts séparément aux filles et aux garçons. Les données ont été recueillies à l'aide du Intrinsic

Motivation Inventory (Deci et Ryan, 1985), de discussions en groupes de consultation et de notes d'observation. Les résultats démontrent clairement l'impact positif de cours d'éducation physique enseignés séparément aux filles et aux garçons de 8^e année et de 9^e année. Par contre, l'idée d'une ségrégation selon le sexe présentait moins d'intérêt yeux des élèves de 7^e année.

Introduction

There is a vast quantity of research readily available on the importance of physical education (PE) for the masses, the rise of physical inactivity and obesity among adolescents, and the influences of gender on the development of social attitudes and actions (Biddle, Fox, & Boutcher, 2000; Boutcher, 2000; Canadian Community Health Survey, 2010; Fox, 1999; Gray, 2009; McHugh, 1995; Physical and Health Education Canada, 2009). Hellison and Walsh (2002) outlined the goals that a physical activity based program, such as PE in the school system, should aim to reach in terms of personal and social responsibility of youth. Individuals should learn to respect the rights and feelings of others. Individuals should develop a value for effort and teamwork through self-motivation, exploring, and being persistent with new tasks, as well as cooperating with peers (Hellison & Walsh, 2002). Physical education offers many social benefits to students including learning to depend on others, enhancing self-esteem and self-confidence, building a sense of responsibility, and instilling good sportsmanship. Given these qualities, and a generally favourable informal atmosphere, PE classes seem to be an ideal environment to develop social competencies (McHugh, 1995).

Throughout history, PE students have been divided by gender (Zeigler, 1979). When PE was first introduced in Canadian school in the early 1900's classes were segregated by gender with unique curriculum. Boys participated in military drill activities while girls performed calisthenics (Martens, 1990). More recently, developments in gender neutral curricular programs and reconsiderations to arrange educational environments to meet the needs of all students are prevalent (National Coalition for Women and Girls in Education, 2012). Today, school districts often mandate that all classes, including PE, integrate genders to ensure equal access and quality curriculum (Newfoundland and Labrador, 2012). Inclusive PE practice provides a more equitable learning environment for all students (Pelletier, 2006).

Maihan et al. (2006) addressed the issue of social discrimination that occurs between genders in PE. Boys often stigmatize physically active girls by labeling them as 'tomboys'. Girls report that boys are influential barriers in shaping their beliefs about physical activity. The reciprocal however, does not apply; boys generally do not feel negatively influenced by girls during PE classes. Humbert (2006) identified that feeling comfortable in a supportive environment, free from harassment is essential for participation in PE. Receiving negative comments from other students is labeled as major sources of discomfort for females, who report feelings of inadequacy relating to the "ideal" female body image (Humbert, 2006). Remarks regarding their physical appearance, criticisms of their athletic abilities, and well as sexual harassment, which may also be physical in nature are often directed towards girls. (Humbert 2006; Singleton, 2006). For these reasons, girls report preferring gender segregated PE classes, where they feel safer, more comfortable, and more willing to participate (Ryan, Fleming, & Maina, 2003; Treanor, Graber, Housner, & Weingand, 1998).

Further reason for non-participation for girls in PE is due to the level of competition created mainly by the boys during PE classes (Singleton, 2006). The Canadian junior high PE curriculum has a deep root in sports (Singleton, 2006), making competition inevitable.

Competition can be an issue during mixed gendered PE classes since males and females interpret competition differently; specifically, girls are generally less competitive than boys (Singleton 2006). Additionally, when male and female students interact together during PE classes, the level of intensity at which performance takes place has a tendency to be mediated by the girls, which can affect adolescent boys' PE experiences (Derry, 2003; Griffin, 1984). By adolescence, noticeable physical advances in terms of physical prowess occur for boys (Derry, 2003) often preventing girl's from achieving similar physical activity performance levels. This, along with the safety concerns, is a major criticism of gender mixed physical education (Derry, 2003).

In attempt to further explore gender segregated PE, this exploratory, descriptive investigation aims to better understand current students' perceptions of physical education, levels of interest / enjoyment, perceived competence, and felt pressure / tension. The impact of gender on students' perceptions and enjoyment of PE classes is evaluated using a mixed methods approach. This methodology was chosen to provide both quantitative and descriptive information about student's perceptions of physical education.

Methods

Participants

This mixed methods research study focused on junior high school students (grades seven, eight, and nine) at one school in central Newfoundland. The school serves five surrounding isolated communities with a total of 120 students from grade seven to grade twelve. The grade seven class consisted of twelve boys and ten girls; the grade eights had fifteen boys and ten girls; and the grade nines had eleven boys and eight girls. In total there were sixty-six students available to participate in this project. The male principal researcher held the role as the PE teacher responsible for delivering the PE curriculum to students in grade 7 -12.

Physical Education Curriculum

The Newfoundland and Labrador Department of Education Curriculum for grades seven through nine encompasses six themes for the Physical Activity Program. Five out of the six themes were incorporated in this study; outdoor activities were not included. Specifically, students participated in a badminton tournament to satisfy the *court and field activities* theme, an instructional Tae Bo video covered the *rhythmic activities* theme, an extensive list of team building cooperative activities suited the *cooperative games* theme, circuit training for *fitness activities*, and stations of bowling, bean bag tic-tac-toe, and table tennis were utilized for *alternative activities*. Students participated in a total of five consecutive lessons, with each lesson representing one of the above themes.

Data Collection Tools

Intrinsic Motivation Inventory (Deci & Ryan, 1985). Motivation has been identified as being of primary importance to a student deciding to participate in PE, and a student remaining active in PE (Gibbons, Humbert, & Temple, 2010). The Intrinsic Motivation Inventory (IMI) (Deci & Ryan, 1985) is a multidimensional measurement device intended to assess participants' subjective experience and motivation related to a selected activity. The instrument assesses participants' interest/enjoyment, perceived competence, effort, value/usefulness, and felt pressure and tension, while performing a given activity, providing an insight as to students'

perceptions of the novel class structure – gender segregation. Completion of the IMI afforded feedback on the participant’s PE experience.

Focus Group Interviews. Focus group interviews provided a unique opportunity to explore student perceptions of physical education. Given the limited number of students in each grade level, focus groups were formed by means of convenience sampling. Focus groups were gender segregated and divided by grade level. In total, nine focus groups were held, with either four or five participants in each group. During the focus group sessions, open-ended questions were asked in an interview type manner to encourage students to provide more personal and descriptive information in responses. Sessions were audio taped. As it was noted that focus groups might increase anxiety, these sessions were held in a relaxing, comfortable manner to encourage participants to disclose ideas and feelings regarding PE and increase participant comfort.

Field Notes. During each of the five gender segregated classes field notes were kept. These notes highlighted the enjoyment of the students and their overall behavior. Additionally, the notes provided a summary of any questions from the students and observations by the researcher about the student’s performance.

Procedures

Ethics approval was given by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) at Memorial University of Newfoundland, as well as by the school board in which this project took place. Students who participated in the study did so by means of passive consent. Parents and guardians were informed that the project would be taking place during regularly scheduled PE classes via three forms of media; an automated telephone call from the principal, the school monthly newsletter, as well as a letter sent home only to parents and/or guardians of junior high students. If for any reason a parent or guardian did not wish their child included in the study, he/she had to contact the researcher.

Given the dual role of PE instructor and researcher for each PE class, the classes were designed to minimize teacher involvement. Specifically, prior to dividing each class by gender, the class structure, organization, and expectations were highlighted for the students. Students were encouraged to ask questions during this time so both gender groups received consistent instructions. Once students separated into their gender segregated groups as little time as possible was spent giving instructions. However, if one group asked a question specific to the tasks at hand, questions and answers were addressed with both groups. The intent here was to ensure that both groups received similar/consistent information during the class itself while minimizing the teacher involvement.

Across all three grades, groups based on gender and grade level participated in a series of five PE classes, each based on a separate theme from the Newfoundland & Labrador Department of Education Curriculum (Newfoundland & Labrador Department of Education, 2004). During each of five sequential PE classes, field notes and observations were recorded, focusing on student behaviour and enjoyment levels. These field notes were then analyzed in search of any common themes or ideas across grade level and gender. After each of the five of the classes, students independently completed the IMI (Deci & Ryan, 1985). Scale utility for repeated measures designs for the IMI has been previously demonstrated (see Goudas, Biddle, Fox & Underwood 1994).

Following the fifth gender segregated PE class students from each grade level who had the ability to stay at the school during lunch hour, or after school, became part of a focus group

interview. In total, nine focus groups were held. Specifically, there were two groups of grade seven boys (n=4 in each), one group of grade seven girls (n=5), two groups of grade eight boys (n=4 in each), one group of grade eight girls (n=5), one group of grade 9 boys (n=5) and two groups of grade nine girls (n=4 in each). These sessions were not necessarily held on the day of the last session of gender segregated physical activity. Questions used the guide the focus groups included “what do you enjoy about physical education class?”, “what kinds of changes would you make to physical education to make it better?”, “how do you feel when girls/boys are present or watching you, during physical education class?”, “how do you feel when there are only boys/girls present during physical education class?”, “are you ever uncomfortable trying new things in physical education class?”, and “was there anything about gender segregated physical education that you really disliked?” Probes were also used to explore responses when students answered (for example) “different activities” to the question “is there anything you would like to change physical education class?” Recorded audiotapes were subsequently transcribed and content analyzed for emerging patterns and/or themes.

The principal researcher/PE teacher conducted the focus groups, presenting a concern about the potential power imbalance between the researcher and the participating students. Potentially the students may have feared upsetting their teacher with comments about the PE environment. To minimize this concern the researcher was very clear that participation in the group was voluntary and that any information shared during the session would have no impact on grades or future relationships within the physical education/school environment. These concerns may have been mute as the rapport between the teacher and students was strong and may in fact have provided richer focus group information compared to a “stranger” conducting the sessions.

Data Analysis

Intrinsic Motivation Inventory

Three sub-categories from the IMI (Deci & Ryan, 1985) were used: interest/enjoyment, perceived competence, and pressure/tension. The mean score for each sub-category was calculated for each group. These overall results were then entered into a two-way analysis of variance using SPSS 17.0 to determine if there were any significant differences between grades, genders, or groups (Tsigilis & Theodosiou, 2003). The Geisser-Greenhouse correction was used to account for the repeated measurements.

Focus Group Interviews

Focus group interviews were aimed at developing an understanding of the student current perceptions of PE, their ideas on how to improve PE, as well as their perceptions on how gender segregation influenced their PE experiences. Once all sessions were completed, the data were reviewed in search of any common themes or ideas across grade levels and genders. These themes were then cross validated through an independent reviewer to ensure that content and interpretations were appropriately represented.

Field Notes

During each of the gender segregated PE classes, field notes were compiled based on the attitudes, behaviours, and perceived enjoyment levels of students. These field notes were then analyzed in search of any common themes or ideas across grade levels and genders.

Results

In attempt to understand student's perceptions of gender segregated PE, levels of interest/enjoyment, perceived competence and felt pressure/tension were explored. Results are presented sequentially for the IMI, focus group interviews and field observations. Similarities and differences between methods are noted throughout the following three sections.

Intrinsic Motivation Inventory (IMI)

Interest/Enjoyment

The overall interest / enjoyment mean score for the grades seven, eight, and nine boys was 4.85 out of a possibly score of 7.00. The overall mean value for the girls was 6.12, statistically greater than the boys' score; $F_{(1, 24)} = 46.05$, $p < 0.01$.

A main effect of grade level was found for interest/enjoyment, $F_{(2, 24)} = 12.8$, $p < 0.01$ (see Table 1). Based on the post hoc statistical analysis, the grade eights and nines scored significantly higher than the grade sevens, but were not statistically different from one another. No significant differences were seen for interest/enjoyment between gender and grade level.

Perceived Competence

The girls (5.69) also scored higher in perceived competence than the boys (5.19) $F_{(1, 24)} = 10.11$, $p < 0.01$. A main effect grade was found for perceived competence, $F_{(2, 24)} = 6.68$, $p < 0.01$ (see Table 1). Post hoc statistical analysis revealed that the grade eights ($p < 0.01$) and nines ($p < 0.05$) scored significantly higher than the grade sevens but were not statistically different from one another.

An interaction between gender and grade level was found for perceived competence; $F_{(2, 24)} = 5.58$, $p < 0.01$. Post hoc results suggested here that the grade nine girls scored significantly higher than the grade nine boys, as well as both the grade seven boys and girls. The grade eight girls also scored significantly higher than the grade nine boys, who had the lowest mean score (see Table 1).

Table 1

Intrinsic Motivation Inventory (IMI): Overall average values for boys and girls; grades; and values for the interaction between grade and gender

		Overall	Grade 7	Grade 8	Grade 9
Interest / Enjoyment	Boys	4.85	4.26	5.50	4.80
	Girls	6.12	5.40	6.34	6.62
	Overall		4.83	5.92	5.71
Perceived Competence	Boys	5.19	5.10	5.54	4.92
	Girls	5.69	5.00	5.96	6.12
	Overall		5.05	5.75	5.52
Pressure / Tension	Boys	3.45	4.14	3.02	3.18
	Girls	2.17	2.40	2.30	1.82
	Overall		3.27	2.66	2.50

Pressure/Tension

Statistical differences were found for the pressure/tension sub-category of the IMI, the overall mean score for the boys was 3.45 and for the girls it was 2.17 $F_{(1, 24)} = 102.04$, $p < 0.01$. A main effect of grade was found for the sub-component pressure/tension, $F_{(2, 24)} = 13.83$, $p < 0.01$ (see Table 1). Based on the post hoc statistical analysis, the grade eights and nines scored significantly lower than the grade sevens ($p < 0.01$), but were not statistically different from one another.

Finally, an interaction between gender and grade level also existed for pressure/tension $F_{(2, 24)} = 5.58$, $p < 0.01$. Post hoc results here suggest that the grade nine girls, who had the lowest mean, were significantly different from the grade nine boys, as well as the grade eight and seven boys. The grade seven and eight girls also scored significantly lower than all three groups of boys. In addition, the grade eight and nine boys scored significantly lower than the grade seven boys, who had the highest mean (see Table 1).

Focus Group Interview Data

Interview data was organized into three themes, current perceptions of PE, student ideas about enjoyment in PE, and how gender segregation impacts student's perception of enjoyment in PE. Each theme is discussed separately, with information from each gender presented sequentially. Commonalities between grades and genders are highlighted.

Current Perceptions of Physical Education

In attempt to develop a picture of students' current perceptions of PE, two basic questions were posed during the focus groups: First "what do you enjoy about physical education?" and second, "what do you dislike about physical education?" Responses from each gender are presented separately in order to develop a gender-specific view of current PE experiences. It is important to develop an appreciation for the fundamental views on PE for all students prior to attempting to understand the impact of gender segregated PE classes. Themes that resound across grades are highlighted within each section.

Boys

Across the grades, boys acknowledged that PE involves kinesthetic learning, whereas other subjects do not. During the focus group interviews, boys from each grade were very quick to point out that they enjoy physical education since it is physical activity based. In the educational environment, PE is often viewed as a "soft", or "light", course in terms of academics. There is not usually much work that needs to be written, very few notes taken, and seldom are there written tests or assignments. Students' in grade seven commented "you don't get homework from it." Evaluation is based on observation of each student's progression in each of the three domains of learning; psychomotor, cognitive, and affective (Newfoundland & Labrador Department of Education, 2004). The boys from all grades recognized this view. When specifically asked if there is anything about PE that they disliked, the boys had only positive feelings toward the subject. No comments surrounding negative feelings toward PE surfaced. One boy remarked, "I always look forward to physical education classes."

Girls

Similar to boys, the majority of girls from grades seven to nine also hold a positive view towards PE because it involves kinesthetic learning. It became evident through the focus groups that girls enjoy the active component of PE. Additionally girls valued the notion that PE is seen as a "soft" or "light" academic subject and considered it "a break from doing work."

In contrast to the boys, the girls were very outspoken regarding factors in PE classes that they did not enjoy. These were based around negative peer interactions, mainly with boys. One

stated, “When you’re trying to do your best and [the boys] make fun of you.” However, these issues were only identified by the grade eight and nine girls; grade seven girls did not seem to have any issues with peer influence, although they did point out minor concerns with the curriculum being delivered.

Students’ Ideas about Enjoyment in Physical Education

In trying to determine what might lead to increased enjoyment of PE classes, the researcher asked “what kinds of changes could be made to PE to make it better?” as well as “are you ever uncomfortable during physical education?”

Boys

In response to the first question, the boys’ main responses centered on the curricular content and the course organization. Boys would like to see the activities covered in class move from a multidimensional model in which a wide range of activities, including cooperative games, court games, alternative activities, fitness, movement education, and rhythmic activities, into a more sport oriented program. Also, the boys saw time allocation as an area in which the current PE program could be improved upon. One boy suggested to “play different sports instead of playing the same ones” while others suggested they needed “more time for more activities” and “more classes.”

When asked if they are ever uncomfortable during PE, the boys’ responses suggested a general acceptance of the nature of physical education activities. In other words, they have a general positive attitude toward PE thus they have a tendency to accept situations that have the potential to be uncomfortable.

Girls

When asked about possible changes that could improve the PE experience, the girls’ responses differed slightly from the boys’. Whereas the boys were concerned with curricular content and time allocation, the grade eight and nine girls’ priority was increasing participation rates of students during PE classes. The grade seven girls’ responses were more similar to the boys; dealing with infrastructure.

The grade eight and nine girls voiced their concerns regarding negative peer interaction when asked if they ever felt uncomfortable during PE classes. The grade seven girls’ responses to the same question were primarily based around personal abilities, or to the effect of never being uncomfortable.

How Gender Segregation Impacts Student Perceptions and Enjoyment in Physical Education

During the focus group interviews, a series of questions were asked to highlight the impacts of gender segregation on student perceptions and enjoyment during physical education classes: (a) “how do you feel when [the opposite gender] are present, or watching you, during physical education classes?” (b) “how do you feel when there are only [same gender] present during physical education classes,” (c) “was there anything about gender segregated physical education that you really enjoyed?” and (d) “was there anything about gender segregated physical education that you really disliked?” The following section summarizes the students’ responses based on the resulting themes.

Boys

The presence of girls during PE classes is a non-issue for boys across grades seven, eight, and nine. When asked if there was anything about gender segregated PE that they really enjoyed, the boys' responses did not present a common theme. The responses ranged from increased participation rates, to increased competition level, and others stated enjoying the experience but could not identify any real reason for it. When asked if there was anything about gender segregated PE that they really disliked, a notion of general enjoyment was presented, but again no real, definitive reasons were given as to why. Overall, the boys did not seem to care if their PE classes were gender segregated or mixed gendered; they were indifferent. One grade 8 boy suggested, "[It's not a big deal], we're in the classroom all the time together anyway."

Girls

In contrast, the grade seven girls' responses differed from the grade eight and nine girls' regarding gender segregation. The grade eight and nine girls had issues with the level of expectations placed upon them by the boys and commented "It's the boys who get mad at you sometimes when you do something wrong." The grade seven girls seemed to prefer gender mixed PE as opposed to gender segregated as it was noted "It's too quiet when the boys are not there."

The grade eight and nine girls made it clear through the focus group interviews that they feel nervous while participating in PE when boys are present. A grade 8 girl commented, "I'm nervous all the time because I know if I make a mistake, [the boys] are going to yell at me."

The girls in grade eight and nine felt more comfortable, more relaxed, and had more fun when there were only girls present for PE. However, the grade seven girls' feelings were in sharp contrast and stated "[It is] kind of boring [when there are only girls]."

The grade seven girls agreed with the grade eight and nine girls when asked if there was anything about gender segregated PE that they really enjoyed; all three grades liked the fact that the level of cooperation increased and competition decreased. When asked if there was anything about gender segregated PE that they really disliked, the grade eight and nine girls merely voiced concerns relating to the infrastructure of the classes; mainly with class size. Coming from a small school already, once the junior high classes were split based on gender, class size was down to approximately eight people.

Field Note Data

Grade Seven

Field notes suggested the grade sevens lacked a certain maturity level that the older participants appeared to possess. Notes highlighted that both boys and girls were attempting to peek around the gymnasium divider and often tried to initiate conversation with their peers around the divider. This presented issues pertaining to the process of gathering information through research. More guidance was required with the grade sevens throughout the research process. Both boys and girls in grade seven treated the physical education classes with little enthusiasm and struggled to stay on task. Frequent reminders and guidance were required.

Grade Eight

The field notes for the grade eight gender segregated PE classes reflected enjoyment for both boys and girls. All participants seemed to be having fun and enjoying the activities. The boys in grade eight had a tendency to become fairly competitive while participating in gender segregated PE classes. This sometimes led to unwanted behaviour issues. Teacher intervention was often needed. In contrast, the girls however took part the classes in a very cooperative manner; seldom were there competitive tendencies shown. Very little teacher intervention was

needed. Furthermore, the grade eight field notes show evidence that the boys often have a tendency to sway off task, while the girls are very task-oriented and driven.

Grade Nine

As was seen with the grade eights, both the grade nine boys and girls seemed to thoroughly enjoy the gender segregated physical education classes. There was evidence from the field notes that the grade nine boys did not take the classes as seriously as the girls. Girls seemed to figure out logical ways of completing tasks much quicker than the boys. This had a tendency to manifest itself into behavioural issues for the boys, perhaps as they spent too much time at each task. These challenges were not noted with the girls.

Discussion

The general inspiration for completing this project was to better understand students' perceptions of physical education, levels of interest/enjoyment, perceived competence and felt pressure / tension (Deci et al., 1994) in gender segregated physical education classes. All students, both boys and girls, expressed a general enjoyment of PE, primarily due to the fact that PE involves different elements than other school classes. Physical education classes provide an opportunity for students to be physically active; a chance for them to get up and move. In many ways, it is a break from the everyday stresses of other academic classes. For some students who are bused to school from neighboring communities, PE classes are their only chance for organized recreation.

Many differences were noted between the boys' and girls' current perceptions of PE. The boys were not able to verbalize anything they disliked about PE, whereas the grade eight and nine girls identified that they were unhappy with the way boys treat them during PE classes. The grade eight and nine girls stated that if any of the girls make a mistake, or do not perform up to the boys' standards, the boys are quick to point it out and ridicule them for their errors. The girls state that this ridicule is especially evident when participating in team activities such as volleyball, orienteering, or team building, but also true for individual activities such as aerobics, badminton, or archery. These activities cover the entire spectrum of PE activities outlined by the current prescribed curriculum document (Newfoundland & Labrador Department of Education, 2004).

The boys expressed no negativity about PE, their only ideas were to increase the number and duration of classes. Most grade seven girls echoed these comments. In contrast however, the grade eight and nine girls were concerned with the girl's participation rates during PE classes. They were interested in identifying ways to get all the girls in their class to participate. Their feelings appeared to stem from the negative social interactions involving the boys. The grade seven and eight girls commented that if their classes were gender segregated, both the participation rates and the enjoyment levels would be much higher. Evidence for these feelings was also reflected in the questionnaires, focus groups, and field notes.

Being comfortable during a PE class is imperative to student enjoyment (McHugh, 1995); a student is very unlikely to participate if he/she does not feel comfortable. Across the grades examined, no boys stated being uncomfortable during PE classes. The grade seven girls acknowledged being uncomfortable when they lacked confidence in their ability to perform successfully. But, the grade eight and nine girls' reasons for feeling uncomfortable reflected back once again to their perception of the boys in their classes. The grade seven and eight girls indicated they were sometimes uncomfortable since the boys had a tendency focus on them for

one reason or another; possibly assessing their skill level and ridiculing the girls if it is not up to their standards. The grade eight and nine girls also sometimes expressed that the boys had a tendency to stare at them while they were participating in PE. These comments are supported by the body objectification theory, which suggests females typically perceive an observer's perspective as a primary view of their physical appearance (Fredrickson & Roberts, 1997). For these reasons, the girls claim to feel uncomfortable during PE classes. This, in turn, can lead to performance anxiety, further failure, and increased reluctance to participate.

The final stage of the focus group sessions focused on assessing how gender segregation impacted student perceptions and enjoyment in PE. For the boys, the gender arrangement of PE classes did not appear to matter; the boys reported not caring if girls were present or not. However, the grade eight and nine girls suggested that they preferred their PE classes to be gender segregated. Again, they saw the boys as a negative influence on their enjoyment level. In sharp contrast to these feelings though, the grade seven girls felt that the gymnasium was too quiet without the boys; they expressed that the boys' presence added to their level of enjoyment.

One downfall of gender segregated PE classes noted by the girls however, was class size. Since the research took place at a relatively small junior high school, once the PE classes were divided by gender, class sizes became very small. In some cases, the numbers were less than ten in each group. This made it difficult for the PE program to include a wide variety of activities within each theme. Also, socialization might indeed suffer with such a small number of students, ultimately impacting the long-term social health of students (Tomme & Wendt, 1993). This fact is significant since the affective domain, which is one of the three domains of learning in physical education along with the psychomotor and cognitive, is largely characterized by social interactions (Newfoundland & Labrador Department of Education, 2004).

When comparing the results of the boys' IMI data across grade level in terms of interest / enjoyment, the grade eights scored significantly higher than the grade sevens, and slightly higher than the grade nines. These results are not surprising as throughout the focus group sessions, the grade seven boys were adamant regarding their dislike for gender segregated PE. Furthermore, they seemed bored and demonstrated disrespect for the research process as evident in the field notes. Although the grade eight and nine boys scored higher than the grade sevens on the IMI, data gained through the focus groups and field notes suggest that the level of enjoyment was not entirely different than an average, mixed gendered PE class.

The girls' IMI data in the subcategory of interest/enjoyment showed that the grade nine girls scored significantly higher than the grade sevens, and slightly higher than the grade eights. The grade eights' and nines' results represented an extremely high level of interest/enjoyment in the gender segregated PE environment, similar data in fact to the boys.

In terms of perceived competence, the girls once again scored significantly higher than the boys. The grades seven, eight, and nine boys expressed competence in their abilities to participate in gender segregated PE, however, the junior high girls reported even more competence. Throughout the focus group sessions, many of the grade eight and nine girls reported feeling very nervous when boys were present during PE classes. This no doubt has a negative effect on the girls' perceived competence levels. The grade seven girls would rather their PE classes included both genders, but their reasoning was centered on the fact that the boys bring more excitement. Recall that the boys reported their PE experiences remained relatively constant regardless of whether or not the girls were present. Therefore, their level of competence is also unlikely to change based on the gender segregation.

With reference to the level of pressure/tension felt by students while participating in gender segregated PE, girls scored significantly lower than boys. Since the majority, if not all, the pressure that the girls reported came from the boys' presence and actions, this pressure was alleviated with the introduction of gender segregated PE. Girls did not report any increases in competitiveness during the gender-segregated classes, which may also contribute to their lower levels of pressure/tension. Boys however reported a higher degree of competition when placed in gender segregated PE activities. The boys individually may have seen their like-gendered peers as being more aggressive and competitive and therefore may have adopted those characteristics themselves, resulting in an overall competitively heightened atmosphere.

All three grades of girls scored extremely low under the pressure/tension and no significant differences were shown between grades. This is not surprising as the grade eight and nine girls expressed their positive feelings toward gender segregated PE on every occasion; however the grade seven girls' results were unexpected. Nonetheless, the majority of the grade seven girls' negative comments during the focus groups referred to the enjoyment level of the research setting, not whether or not they felt pressured.

Information from the field notes highlighted that the grade seven students seemed to lack the maturity level necessary to properly complete the research process. Both boys and girls in grade seven were seen behaving in ways non-conducive to the process including peeking around the dividing surface, distracting classmates, and attempting to seek attention from classmates of the opposite gender on the other side of the dividing surface by shouting. Likewise, the grade seven students did not seem to give their best efforts and were not enthused with the gender segregated PE classes. This possibly resulted from the majority of the grade seven students feeling that the gender-segregated environment was not an improvement to their regular PE classes. One of the largest stressors in an adolescent's life is attempting to fit into their peer group (McHugh, 1995). When an adolescent is confronted with such a stressor, his or her adaptation is through the process of coping, which involves cognitive and behavioral strategies directed at eliminating or reducing extraneous demand set upon them (Patterson & McCubbin, 1987). Therefore the grade seven students might have begun to display immature behaviours as a coping strategy.

In contrast grade eight students seemed to thoroughly enjoy the gender segregated PE classes. Although not reflected in the focus group data, the observations made during the PE classes reflected that the boys were enjoying the gender segregated PE to the fullest; they were laughing, smiling, and seemed to be having fun for the majority of class time. It is important to note however that the grade eight boys enjoyed PE classes regardless of the class structure.

During the gender segregated PE classes, the boys in grade eight had a tendency to become overly competitive and aggressive which sometimes led to unwanted behaviours that warranted teacher intervention. The grade eight girls displayed a very cooperative and friendly demeanor; quite the opposite of the boys. In gender mixed PE classes, these two attitudes sometimes have a way of modifying one another; mainly, the boys become less aggressive. However, other times, this clash of attitudes and actions can present an issue if the two groups were combined for PE. This issue was addressed in the grade eight girls' focus group sessions. The girls reported that the boys "took things too seriously," which brought their level of enjoyment down much lower than that of gender segregated PE. Also in the grade eight field notes, evidence showed that the boys often had a tendency to initiate actions non-conducive to the learning environment, while the girls are very task-oriented and driven. This could further lead to the PE experience not living up to its potential for the girls. However, in all likelihood,

based on the focus group sessions, the grade eight girls enjoyed the gender segregated PE environment much more than the traditional classes.

While the grade nine girls showed no evidence of unwanted behaviours, the grade nine boys seemed to take the gender segregated activities a little too lightly at times in terms of not following general PE class rules, not always giving their best efforts, and sometimes distracting peers from giving theirs, and for this reason, the boys sometimes displayed behavioural issues. This reinforces the fact that girls have a positive influence on the behaviour of boys; however the reverse is not the case (Singleton, 2006). Once again, this was a similar case to the grade eight gender segregated PE classes.

Limitations

The results of this study are promising and provide evidence for the positive impact of gender segregation at the grade eight and nine levels. Future studies need to explore a longer duration of gender segregation, as five classes might not have been sufficient for students to truly determine how they feel about the environment. The statistical analysis may also have been impacted by the short study duration. Potentially, the novelty of the gender-segregated classes may have diminished after an extended period of time. Also, studies at larger schools with larger classes of students would be beneficial to the concept of gender segregated PE. Perhaps if class sizes were larger the level of enjoyment might be even further enhanced. Alternatively, competition might be enhanced with larger class sizes, potentially impacting enjoyment levels. An investigation of how students learn in a gender segregated PE environment as opposed to a mixed gendered one would shed light on any further benefits for, or arguments against it. The gender of the PE teacher along with the gender of the students in the class could also be explored. Finally, the way in which information is gathered from students to report their feelings could be altered; one-on-one interviews, peer evaluations, and open-ended questionnaires are just a few suggestions, since these methods may elicit more and different types of information. Finally, the IMI that was used for this research project did not allow students to express their opinions as well as a survey that includes open ended questions might have.

It is also possible that the novel testing environment impacted the data collection. Future studies ideally would incorporate more gender-segregated classes, over a longer time period, to determine if the class structure itself or the novelty impacted student's perception. Due to the scope of this project it was not feasible to include more gender-segregated classes over a longer time period, as the school district currently mandates non-segregated classes.

Overall, however this study revealed positive provisions of gender segregated PE for grades eight and nine students. Boys in these grades did not express any disadvantages of having only classmates of the same gender in their PE classes. The biggest advocates for gender segregated PE were the grade eight and nine girls. They expressed, with great enthusiasm, their positive feelings toward gender segregated PE classes. It is therefore conceivable that gender segregated PE classes may be a successful tool to counteract the decline in physical activity often noted during the junior high years.

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