

INTRAMURAL SPORTS

A Qualitative Inquiry of Females' Experiences With a Novel High School Intramural Program

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Abstract

Adolescent females' disengagement from physical education, physical activity, and sport has been well documented. Participating in a quality intramural program could help to increase rates of adolescent females' engagement in physical activity at school. This study was conducted with female students in four high schools in south-central Canada. A school-specific organizing committee consisting of an outside expert, teacher-lead, and several female student-facilitators designed and implemented a new optional intramural program rooted in best practices to 483 female students. Semistructured focus group interviews were held with 25 student-facilitators before and after the intramural intervention. There was a noticeable reduction in the females' perceived barriers to being engaged in physical activity at school after the program intervention. Accommodating the intrapersonal, interpersonal, and environmental needs of adolescent females may help intramurals to counter the allure of more sedentary options at school.

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The developmental benefits of PA (PA) go beyond disease prevention, and many of the positive social, affective, and cognitive outcomes linked to PA are consistent with the overall aims and objectives of school-based education (Chen & Gu, 2018). In fact, publically funded schools are generally recognized as ideal sites to provide children and adolescents with regular, quality PA opportunities because, in most economically developed countries, children spend a large portion of their time attending school (Dwyer et al., 2008; Goudeau et al., 2014). It appears that adolescents (Statistics Canada, 2019), especially teenage females (Owen et al., 2017; A. Watson et al., 2015), are particularly at risk of disengagement from physical education, PA, and sport (Edwards et al. 2011; Lodewyk & Pybus, 2013).

Intramurals is a school-based intervention implemented during school hours that is designed in part to facilitate the quantity and quality of students' PA experiences is intramurals. A quality intramural program is a key component of a comprehensive school health initiative (Chen & Gu, 2018) and has several positive youth development outcomes (e.g., Webb & Forrester, 2015), including PA (Erwin et al., 2013). In spite of this, the proportion of schools offering intramural programs is approximately 79% in Canada with elementary schools and those in rural areas with smaller student populations less likely to do so (Canadian Fitness and Lifestyle Research Institute, 2016). This is relatively high compared to the level of 50% of schools in the United States offering intramural programs (Lee et al., 2007). Of Canadian schools, 81% offer interscholastic or between-school sports (extramurals) despite these having higher associated costs and resources (e.g., transportation, uniforms) than intramurals. These intrascholastic (extramural) programs also limit participation to fewer students to focus predominantly on the development of more elite athletes. For example, on average, 48.4% of students are likely to participate in intramurals compared to only 22.5% in interscholastic sports (Dwyer et al., 2008). While both intramurals and interscholastic sports (extramurals) serve important roles in the provision of school-based PA, there is more of an underlying aim in most intramural programs on being inclusive and ideally accessible to a wider range of students regardless of ability (Bocarro et al., 2014).

Despite the aim of intramural programming toward inclusive participation, males make up over 85% of the participants in more than half of the co-ed intramural sports offered by various middle schools in the United States, with only volleyball seeing relatively equal gender distribution and cheerleading being exclusively made up of female participants (Edwards et al., 2011). The reasons for this type of distribution could be, for example, the heightened feelings of intimidation sensed by females in intramurals with such a high proportion of male participants, particularly in females with lower skill ability and in the presence of bullying and male aggression (Holt et al., 2012). Another deterrent to adolescent females' participation in intramurals is the PA options being limited to only traditional sports-based activities. Such activities are overly repetitive and competitive and often require a high level of skill for confident participation (Bocarro et al., 2014; Byl, 2008; Hills et al., 2014; Holt et al., 2012; McCombe, 2010).

The social-ecological model (McLeroy et al., 1988) has helped shape understanding of many intrapersonal, interpersonal, and environmental factors related to females' PA participation, engagement, and retention; hence, it served as the theoretical framework for the study. Research using the framework has recommended a reduction in intrapersonal barriers in intramurals through, for example, the facilitation of optimal levels of perceived competence; interest in and value for the activities; and feelings of enjoyment, support, positive body image, and autonomy (Lodewyk & Pybus, 2013; Owen et al., 2017; Webb & Forrester, 2015). More specifically, adolescent females tend to dislike situations in which their individual physical performance is on public display. This tends to elicit corresponding fears of being scrutinized and compromised self-esteem and motivation (Lodewyk & Pybus, 2013; McCombe, 2008; Webb & Forrester, 2015). Another important choice for adolescent females is whether to participate in PA programming that is either coeducational (i.e., mixed gender; Morgan et al., 2019; Newton, 2010) or more gender segregated (Bocarro et al., 2014; Edwards et al., 2011; Kanters et al., 2008).

An important interpersonal recommendation for intramurals is providing opportunities for positive social interactions and feelings of belongingness (Artinger et al., 2006; Baghurst et al., 2014; Pantzer

et al., 2018). Others include offering cooperative physical activities that foster interpersonal skills while building positive relationships with teachers and other potential positive role models, and having students active in planning, implementing, and evaluating the program (Byl, 2008; A. Watson et al., 2015). In addition to these more psychosocial recommendations, since physical education teachers are often fitting leaders and role models in school PA programs such as intramurals due to their training, qualifications, and experiences (Goudeau et al., 2014; Morgan et al., 2019; Newton, 2010), their supervision and leadership in intramural programs could help to reduce the social hierarchies imposed by students in more unstructured PA settings that tend to marginalize certain students and relegate them to the sidelines as passive spectators (Pope & O’Sullivan, 2003).

Byl (2008) and McCombe (2010) provide environmental recommendations for intramurals such as structuring the program according to each school’s aims, time schedule, facilities, space, grade levels, staff supervisors, volunteers, and equipment. For example, gym space can be used more creatively with indoor and outdoor activities being run simultaneously. Other options include having less frequent sessions except for a longer duration of multisport activities and pickup or drop-in sessions, which may be appropriate during busy periods when participation numbers are lower. Organizing single-day events that take place during school hours to promote school spirit and active living across the entire school may also be useful. In addition to these suggestions, there may also be different facilitators and barriers to intramural participation in structured and unstructured environments and levels of competition. For example, adolescent females often prefer individual and group fitness and dance activities and having both a competitive division and a noncompetitive division to choose from in intramural sports (McCombe, 2008). They also enjoy an environment wherein their input and choices are welcomed and valued (Webb & Forrester, 2015) and where they are allowed to participate at their preferred intensity level (Lee et al., 2007).

An abundance of quantitative research evidence suggests that a school-based intramural program that emphasizes females’ engagement in its development and implementation can become “female-friendly” and successful in confronting and interrupting

practices that alienate many (Owen et al., 2017). For example, Baghurst et al. (2014) and Pantzer et al. (2018) recommend intramural programs that provide many diverse activity options (a variety of individual, team, small group, and larger group activities) that enable students to go beyond what they experience in their physical education classes and interscholastic (extramural) sports programs. The intramural program should also provide them with choices of activities (so they can select those they deem less threatening) while fostering greater autonomy, different social interactions, new relationships, and improved school connectedness. Calls have been made for more qualitative research into the effect of intramural programs on at-risk groups such as adolescent females (Bocarro et al., 2014; Owen et al., 2017). Hence, the two objectives of this study were to qualitatively increase understanding about (1) why there are lower levels of PA and sport participation among adolescent females (Edwards et al., 2011; Owen et al., 2017; A. Watson et al., 2015) and (2) how those factors might be impacted by a novel high school intramural program designed to apply many of the research-based recommendations provided earlier for increasing PA motivation and participation in adolescent females, especially at school.

Method

Participants and Procedure

A new 3-month intramural program was designed and implemented to support females to become more engaged in sport and PA especially during school. Participants included female students in four high schools (one Catholic and three public) within three school districts in or near a large city in south-central Canada. One school had close to 1,600 students in Grades 7 to 12 and was in the suburbs of a mid-sized city (population 500,000), whereas the other three schools were 40 to 60 km outside of that city. Two of these schools were in small towns (population 5,000 to 10,000) and had approximately 500 students (Grades 9 to 12 and 7 to 12), whereas the other was in a more populated urban city (population 30,000) and had about 850 students in Grades 9 to 12. During the school day, each of the four schools provided students a break for about 5 to 10 min between classes and two longer (20 to 25 min) breaks (recesses) wherein students had the time to eat and to do other things such

as socialize, use their cellphones, progress on their homework, or engage in some PA. Preliminary anecdotal evidence from researcher observations and conversations with each school's director of physical and health education revealed that students' PA during these extended "recess-lunch" breaks from school classes was often a "co-ed open gym" time consisting mainly of males participating while some females participated, others watched, and the majority chose to do other relatively sedentary things in other areas of the school. This typically occurred even though there were some other physically active options available such as traditional intramurals or occasional recreational activities. Each of the schools also offered a competitive after-school sports program for more skilled athletes.

Prior to the study beginning, ethics approval was received from the research ethics board of a university and of each school board. Consent was then attained from school principals, volunteering teacher-leads, and students and their parents through written correspondence. A physical and health education teacher in each school was recruited and equipped to serve as the staff liaison (teacher-lead) between the school, student-participants, intramural program, and the expert program facilitator and researchers in this study. The expert program facilitator and lead-teacher of the program at each school then explained and recruited female students to participate in the student-leadership training workshop and co-design the intramural program during a short (10 to 15 min) school assembly for females. A couple of weeks later, the facilitator and teacher-lead implemented the intramural leadership training workshop (developed by the expert program facilitator and her colleagues at a nationally recognized organization) during a regular school day with 47 volunteering females across all of the schools (see additional explanation in the Focus Group Interviews and The Intramural Program sections). Four hundred eighty-three students (75 to 180/school) then participated in the revised intramural program for approximately 3 months. A female graduate-student researcher attended the assemblies and training modules at each school and used approximately 5 min of each assembly to introduce and invite students to participate in the study, following a verbal script.

Focus Group Interviews

The female graduate-student researcher, who had previous training and experience conducting focus group interviews, conducted four preprogram focus group interviews (1/school) with a convenience sample of 30 consenting female students ($n = 5$ in Grade 7, 2 in Grade 8, 4 in Grade 9, 10 in Grade 10, 4 in Grade 11, and 5 in Grade 12) who were recommended to the researcher by the teacher-lead in each school because they were perceived to have lower participation and engagement in PA, especially at school. The aim of these initial focus group interviews was to better understand why many adolescent females were likely to have lower levels of PA and sport participation, especially at school. Each interview ranged in duration from 30 to 50 min and followed an interview guide consisting of seven questions. Sample questions included “What do you like/dislike about school recess/lunch break?” “What kind of physical activities do you typically do during recess/lunch break?” and, “What keeps you from being more physically active during recess/lunch break?”

In addition to serving as data to meet the first aim of study, this information was informally useful for those planning the subsequent school-specific intramural program intervention as most of these focus group interview participants also served in that capacity. For example, the interviewees likely applied some of what they learned in this focus group interview to their subsequent planning and implementation of the intramural program intervention. Each school’s new intramural program intervention had similar features (e.g., novelty, choice, interest, collaborative) while being tailored by their student and teacher-lead planning committee for the unique needs, setting, and interests of participants in each school.

After approximately 3 months of implementing the school-specific intramural program, a second (postprogram) focus group interview was conducted in each of the four schools. All of those who participated in the preprogram focus group interview were invited to participate in the postprogram focus group interview, and 22 did so. Three other students who were actively involved as participants and planners in the program also engaged in the postprogram focus group interviews, which resulted in a total of 25 postprogram focus group interviewees ($n = 5$ in Grade 7, 0 in Grade 8, 5 in Grade 9,

9 in Grade 10, 3 in Grade 11, and 3 in Grade 12). Compared to the preprogram focus group interviews, the second focus group interviews assessed the potential role of the new intramural program on participants' motivation, affect, and participation in intramurals, PA, and sports. Some of the guiding questions included "What did you like/dislike participating in during the new intramural program the past 10–12 weeks?" "Do you think your experience in it might change your motivation and participation in PA and/or sport? Why or why not?" and "How else should intramurals during school/recess be better structured to increase motivation and meaningful participation?"

The pre- and postprogram focus group interviews were held at an agreed-upon classroom and time such as a recess/lunch break in the school but not during regular class time. In accordance with school board policy, no incentives were offered to students to participate in the research except for a complimentary pizza lunch during the second focus group interview. Participants names were replaced with self-selected pseudonyms.

The Intramural Program

The aim of the intramural intervention was to support females to become more engaged in sport and PA, especially during school. The intramural intervention consisted of a school day of intramural leadership training, several peer-group planning sessions, and then organizing and participating in engaging activities. The optional one school-day intramural leadership training event was implemented wherein a school-specific team of diverse student volunteers received 1 hour of leadership training theory from the nonresearcher expert facilitator. This followed with application opportunities supported by the teacher-lead and nonresearcher expert facilitator wherein student-participants discussed and planned their school's novel intramural program intervention to be innovative, culturally competent, varied, and inclusive; to leverage the support and available resources; and to reflect many of the best practices reported earlier. For example, the following program development principles were emphasized: (1) engage school champions (teachers/adult allies) who are empathetic, confident, good communicators, fun, and engaging; (2) make positive group engagement and social interactions a priority; (3) use a play-based format (rather than drills,

activities with long wait times, or sports played by all of the formal rules); (4) focus on building confidence, not winning or competition; and (5) allow young people to co-design and be involved in shaping their own experiences. For example, most of the intramural leadership training student-participants became the lead decision makers and implementors of the intramural program intervention in their respective school.

Small peer-group intramural-program-planning sessions tailored to the specific interests and desires of the female participants in each school were held regularly and facilitated the implementation of the intramural intervention either before, after, and/or during breaks from school. Although the frequency and form of these meetings varied somewhat by school, there were typically a few weekly planning meetings lasting 20–30 min each prior to the onset of the new intramural program and then weekly meetings for the same duration once the program activities began. Meanwhile, the expert program facilitator continued to work with the teacher-lead and the team of female student volunteers in each school to support them with developing and implementing the planned program. Finally, a variety of desired, engaging, and novel physical activities (decided by each school's student-leader intramural-program-planning committee) with the necessary equipment were organized and implemented during these periods. Each school was provided with funds on the basis of need for the necessary equipment, facilities, and/or guest instructors for implementing a variety of novel activities including yoga, fitness (e.g., Bodypump) and strength training, low-organized games, martial arts, glow sports, Zumba, ringette, kickboxing, and bicycling. For example, one school went several times to a local kickboxing venue, where they received instruction from a specialist, whereas another school invited a guest instructor to the school for several martial arts sessions.

Data Analysis

The four preprogram and four postprogram focus group interviews conducted with students served as the primary data source for the research. Students' responses to the questions were audio-recorded with small audio-recorders placed on the table and then transferred to a computer to be replayed as needed and transcribed verbatim by the graduate-student researcher who conducted the

interviews. The second author then conducted an initial thematic analysis guided by Braun and Clarke's (2006) step-by-step approach. In Phase 1, each transcript was read and reread for familiarization. "Jotting" was used to note coder preliminary thoughts, ideas, concepts, and so forth in the margin of each transcript (Miles et al., 2014). In Phase 2, initial descriptive codes that highlighted factors influencing females' participation levels (pre- and postintervention) and perceptions of the program (postintervention) were generated (e.g., "broken equipment," "work," "relaxation," "role of adults"). Analytic memos—more extensive writing in separate documents—were also created. These helped capture the analytic process around each of these developing ideas and to help draw connections between different themes and concepts. Initial codes were revisited, some of which were changed or merged on subsequent rounds of coding (e.g., the codes "work" and "relaxation" were grouped and recoded as "other priorities"). In Phase 3, codes were collated into themes and (Phase 4) checked across the data set overall and against the codes that had been created. These themes were then defined and named including, for example, "the role of gender" and "time constraints." A portion of the data was then reanalyzed by the third author to ensure suitable consistency and rigor of coding.

In addition to themes being generated inductively, a secondary deductive analysis guided by the social-ecological model (McLeroy et al., 1988) was conducted. In this analysis, themes that were generated inductively were compared against and grouped within the intrapersonal, interpersonal, and environmental categories of the model. For instance, the role of gender was grouped within the intrapersonal category and time constraints were associated with scheduling issues and grouped within the environmental category. In addition, when analyzing postprogram focus group interview data, the coder also analyzed the data in relation to the codes/themes from the first interview to determine if participants' perspectives changed between the two interviews. For the reporting of results, School C was the Catholic school and Schools A, B, and D were the public schools.

Results

Preprogram Focus Group Interviews

The first research objective was to increase the depth of understanding about why a significant proportion of adolescent females tend to have lower levels of PA and sport participation overall and at school. Through the preprogram focus group interviews, we identified themes and subtheme factors (Table 1) in females' participation in PA, particularly during school recess and lunch times.

Intrapersonal

Gender. Gender was a prominent topic of discussion for the participants. First, participants suggested that males and females have variable preferences for PA and that females' preferences have often been neglected or overshadowed by the interests of males. For instance, females at School D noted that the males constantly played basketball in the gym at lunch, which made it challenging for females to play anything else. Females also expressed a general lack of support for PA and sport in the school. Taylor (School D) expressed, "The mentality of the athletic spaces in our school is masculine" and there's "not really anything female based." Females also felt that their school sports teams were undervalued because the males were more likely to win but that a greater level of support might help their teams become stronger. Females also felt they were not receiving the same support from teachers at school in the form of, for example, being able to spend time in the weight room with only females while receiving proper training on use of the equipment. Perhaps the most prominent gender-related factor influencing females' participation in PA was a general feeling of discomfort during participation in co-ed spaces. Females from all four schools repeatedly used words such as "intimidating," "uncomfortable," "lack of confidence," and "guy-dominant" to express their feelings toward shared PA spaces. Some of their lack of confidence came from feeling that the males "wouldn't be accepting" of females using the open gym time for their own interests. The most frequently suggested solution to this problem was the introduction of a females-only space. For example, Amy (School D) stated, "Then one side would be girls and the other side would be co-ed, because a lot of girls don't go because the guys are there. So, if we do that, maybe girls would get more physically active."

Table 1
Thematic Findings

Theme	Subtheme factors
Preprogram	
Intrapersonal	<ul style="list-style-type: none"> • Gender • Time constraints and competing interests (e.g., social media, grades, peer interactions) • Autonomy, choice, and affect (e.g., self-esteem and shame)
Interpersonal	<ul style="list-style-type: none"> • Friends/social interactions • Adult leaders
Environmental	<ul style="list-style-type: none"> • Scheduling, space, access, and amount of quality equipment • Adult leaders • Activity type, diversity, intensity, and structure
Postprogram	
Intrapersonal	<ul style="list-style-type: none"> • Gender • Time and situational constraints • Autonomy, choice, and increased comfort levels • Increased motor competence and confidence
Interpersonal	<ul style="list-style-type: none"> • Role of friends and adult leaders • Positive changes in others
Environmental	<ul style="list-style-type: none"> • Differences between older and younger students • Overall lack of participation • Frustration in the facilitation role • Positive affect associated with enjoyable activities of a moderate intensity • New, varied, and accessible activity choices

Time Constraints and Competing Interests. There was generally consensus that the lunch break was too short to provide for meaningful movement opportunities. For instance, females at one school suggested lunch is “so fast paced and rushed” (Vicky, School C). While some females suggested they would often eat their lunch during class to gain back time for more activity, others felt that shortening breaks between classes was a more feasible solution as it

would increase the time for the lunch break. The perceived shortness of lunch break led to females highlighting the need to prioritize to determine how they would spend their time. “For instance, Vicky (School C) commented, “I don’t really have time to, like, make plans to play sports, especially if you only have 40 minutes, when you want to eat, maybe do homework, study, see your friends.” Academic performance and the need to relax and socialize with friends was regularly prioritized above PA. For instance, Anne (School B) suggested, “If I am, like, behind on a few classes, I’ll definitely put that first and then go into the gym.” Lily (School A) added that as students progress through high school, it “gets a lot harder and there is a lot bigger load on [them], so its just nice to relax with [their] friends.” Having jobs with shifts from after school to late evening was also a factor because lunch hour is “one really free hour in the day where I can pick what I need to do” (Taylor, School D). There were also many other events such as clubs and practicing a musical instrument, which often resulted in one being “way too tired to go and to motivate [themselves] to participate in any of the physical activities at school” (Katt, School A).

Autonomy, Choice, and Affect. While females frequently cited feelings of self-consciousness when participating around males, there were also references to their self-esteem and self-worth more generally. Relevant perceived threats were feelings of intimidation, peer comparisons, and the feeling of being judged fueled by the “extremely public” nature of the intramural system, suggesting that females “don’t want other people seeing” (Vicky, School C). Females also expressed an interest in being provided with opportunities to exercise some autonomy, particularly opportunities to make choices for themselves, for example, “the choice [whether or not] to do sports” (Tori, School C), the choice “to do whatever you want in open gym” (Turbo, School B), and the choice to “go out and play field hockey during lunch and organize something” (Hailey, School B). They added that even overcoming these barriers would still not guarantee their participation in school-based PA “if [they] don’t want to do games or sports” (Kelly, School A).

Interpersonal

Friends and Social Interactions. Although mentioned earlier as a subtheme of time constraints, the theme outlined here highlights

that females would rather be participating in some form of PA but tend to feel uncomfortable doing so without their friends. When their friends choose not to participate, it inadvertently leads to the nonparticipation of the females themselves. For example, “None of my friends are really like into . . . physical activity . . . so it’s kind of hard when, like, the people around you aren’t interested” (Emma, School D). While females recognize this as a barrier to their PA participation, they also seem to resist seeing it as a “negative influence” of their friends (e.g., “When you’re playing sports, you want to do it with people you are comfortable with and that you know can do it with you” (Vicky, School C).

Adult Leaders. While this theme was mentioned less frequently than the previous three, several females spoke of the role of adults (most frequently teachers) in their PA participation. These perceived roles were often negative and frequently linked to the previous themes. For instance, the time constraints created by their short lunch break were exacerbated by teachers who refused to allow them to eat their lunch during class. Some also felt that teachers could better moderate females’ concerns by, for example, being more aware and proactive of them (“teachers need to push more to support females,” Amy, School A), helping to meet their desire for participating in unfamiliar PA options (“Ya, we have trouble finding teachers for new sports girls would like to play,” Rachel, School A), and teaching them how to do so (“But once again no one knows how to do it. No one steps forward to teach it,” Amy, School A).

Environmental

Scheduling, Space, Access, and Amount of Quality Equipment. The extent to which participants were willing and able to engage in movement activities at school was also dependent on access to equipment, space considerations, scheduling, communication, and weather. For example, it can be difficult to “get equipment and different things, to find it, to use it” (Amy, School A), especially during the winter months, and the amount and quality of the accessible equipment was often lacking. For example, Anna suggested, “A lot of the equipment that we use were men’s size, so some of us couldn’t go out because we did not have the right size . . . and some of them were a lot broken.” Some students acknowledged that “[they] have a lot of stuff, except for nobody knows how to play it, and sometimes there’s

not enough space or time to learn it” (Rachel, School A). Females also spoke of a lack of space being available for the types of PA they were interested in pursuing. During open gym times, the gymnasium often felt “crowded” and “cramped,” which left them fearful of injuries. Even if space was available, females were often “disappointed” at not being able to use that space. The lack of communication about existing PA options at school including intramurals was also a frustration for several. They expressed that these barriers could be reduced if some simple scheduling adjustments and communication patterns were implemented and if a few more teachers would be willing to monitor the additional space. Finally, some females felt that cold winter weather was a barrier to being physically active outdoors at school, whereas others cited the hot summer weather as more challenging.

Activity Type, Diversity, Intensity, and Structure. There was general consensus about the importance of offering a greater diversity of activity choices at school (“I just think if we introduce new sports to our school, I think more girls would maybe come at least try and see what it is,” Anne, School A). Some recommendations related to this were creating a second workout room to the current weight room and equipping it with cardio machines, adding a spin and yoga class, and allotting half of the gym (or adding another activity space) for alternative activities: “I think that if half the gym would be used for something else then I would definitely go . . . but, like, since the whole gym is used for all these guys playing basketball, I don’t think I would go do that” (Lily, School B). While the activity itself was problematic for some of the females, so was the level of intensity during the activities. Lily suggested that to ease that, one of the two gyms could be used for students wanting a “competitive” or “vigorous” activity, while the other could be used to “just kind of play around.” She continued, “A lot of girls would go to that one and have, like, maybe, like, a vote on what they want to do in that gym for that day or something.” Finally, for females in schools where PA opportunities consisted largely of unstructured open gyms, there was often a desire for a greater level of structure. For example, several females spoke of how “chaotic” open gym times could be: “Just having more of those kinds of activities with a bit more structure, maybe led by other students; it wouldn’t be, I guess, as like scary as maybe an open

gym or something led by a teacher” (Katt, School B). Conversely, in a few instances, for females in schools where an activity structure was in place, there was a desire for less structured activities. For example, Michelle (School C) suggested that when activities were too structured, they were not “fun” or “casual.”

Postprogram Focus Group Interviews

The second research objective was to assess the potential role of the ReBOOT Intramural program on participants’ motivation, affect, and participation in intramurals, PA, and sports. Results revealed similar themes, although there was more variation than the preprogram results by school and grade level given that the programs were developed separately by students in each school. Some of the factors that were either positive or inconsequential to one group of females may have been a troublesome issue to females in another school on the basis of the issues they faced in planning and running their own program. There was a consensus among the sample that the intramural program was generally positive.

Intrapersonal

Gender. Having previously expressed concerns over feeling uncomfortable participating with males, many of the females expressed feeling better about being separated from the males during the intramural intervention. For instance, Hobbs (School A) shared, “You weren’t with a bunch of boys who are always competitive about it . . . I liked that . . . cause whenever we play with boys, its just boys; the girls aren’t included.” Similarly, Tory (School C) felt that females hold different expectations for one another that set a different tone: “Because we’re all girls, we don’t expect each other to have certain athletic ability and feel judged going to these programs or sessions.” There were also instances when females felt the point of their request for the females-only activities and spaces was missed. For instance, Puff shared that, despite being provided with some introductory knowledge of how to use weight-lifting equipment, females were still required to use the equipment in the same room as the males and this was uncomfortable and led to the thought, “Should I be here? Do I fit in?”

While several females spoke positively of the implementation of females-only spaces and activities, there were others who expressed

a strong preference to participate with the males, and even some who felt it was “wrong” to exclude them. For instance, Rachel (School A) suggested she “kind of [felt bad]” about the separation of boys and girls” and that she “love[s] playing sports with guys. They’re competitive, they’re hilarious . . . it’s just a lot more fun.” She goes on to suggest that more of the older students would likely attend if there was consistently a co-ed option that involved the same activity being offered in the females-only space. Similarly, Leah (School A) suggested that, despite the offer of a females-only option, “a lot of girls went in the co-ed side of the gym . . . they would rather be doing it with boys, as well as girls.” Micky asserted that, despite her preference for activities in a co-ed setting, she viewed the separation as a “good idea” but “just to start it off to make girls more comfortable.” The females also perceived that the males were similarly unhappy about the females-only activities when it meant having to give up space, particularly when space was taken but very few females showed up.

Time and Situational Constraints. Females in School B felt that splitting their lunch period into two separate sections (one for eating and one for playing) helped them achieve a balance. Anna stated, “So I think it was a good amount of time, like for intramurals and then, like, you still had time with your friends.” Females at other schools expressed being able to manage their priorities in other ways because the activities were freely accessible to all students and they could bring friends and feel as though they had plenty of time with them. The females in this study were generally more positive about the situational constraints to participation after the intramural intervention than before it. For example, they valued having the finances to purchase new equipment, visit community facilities such as a women-only fitness center), and pay instructors such as a boxer or a yoga leader to visit the school. Females in School B felt that the communication issues previously present were a nonissue during the implementation of their program given their efforts to use several strategies (e.g., morning announcements, video announcements, posters, banners) to advertise the program. Katt (School A) suggested that “everyone in the school [knew] that these things [were] happening” and that a failure to attend was based on choice, not a lack of awareness of available opportunities. Similarly, earlier space concerns were greatly improved with the addition of females-

only spaces that offered “a safe space for girls to play sports” (Hobbs, School A) and left the environment feeling “a lot less chaotic” (Rolo, School B).

The issue of time management and prioritization was still problematic for females in relation to their workload, particularly for older students. When asked why their friends did not often attend the intramural activities, students from School A suggested it was because of the heavy workload in upper grades. Other related reasons for lack of participation were needing time to eat, needing time to catch up on social media, taking part in alternative or extra-curricular pursuits, and not wanting to waste their lunch time if intramurals was not organized or fun. For example, Rolo (School B) stated, “It was kind of annoying for me having to wait for a bunch of other people to show up when I had taken a bunch of time out of my lunch break.” Negative postprogram situational constraints included the lack of some desired equipment (e.g., outdoor equipment) despite having purchased some new equipment. How to effectively announce and promote the program events was a major source of contention between those who participated in planning the program events and those who did not. While this created very evident tension, School A seemed to avoid this by agreeing that announcing something just prior to the activity and maintaining a public calendar outlining the events were highly effective modes of communication.

Autonomy, Choice, and Increased Comfort Levels. Activities offered through the intramural intervention often provided females with a stronger sense of autonomy than their former lunchtime PA programs, especially by providing them valued choices of “a variety of different activities that the girls could do, because you’d see different girls going to different ones depending on what they enjoyed doing” (Leah, School A). Hailey (School B), who was part of the group facilitating the program at her school, shared that they had started “going in and talking to more girls” and asking the females “what they [wanted] to play,” changes that she felt were helping to improve the program. Despite this, some of the females expressed the need for continued improvement in this area and several were also conscious of the logistical concerns associated with this level of autonomy. For example, Katt (School A) stated, “Those things [offering a wider range of options] would be nice, just the problem would

be organizing it, because then you would require more teacher supervision, and you would require more student volunteers.” The new format of the activities also helped females who previously felt intimidated to feel more comfortable participating. For instance, Anna shared, “Most who went to intramurals wouldn’t like, like judgmental at all, everyone was, like, welcoming and, like, you felt comfortable and stuff.”

Increased Motor Competence and Confidence. For some females, the environment fostered through the intramural intervention provided them with the opportunity to develop the skills they needed to feel more confident participating in PA both at school and for the long term. For example, Jessica suggested that the development gained from participating in the program surpassed mere physical skills and provided her with a sense of empowerment: “If I actually had time to go and, like, to be in a boxing session after school, I would honestly go, because I think it helps with your person, like, your person inside, and makes you powerful.”

Interpersonal

The Role of Friends and Adult Leaders. The role of friends seemed to shift postprogram wherein females who participated in and planned the programs began to encourage their friends to participate with them, although some of them continued to experience resistance from friends. For instance, Turbo (School B) tried to persuade friends to come, yet they often did not because they were not “really into that kind of stuff.” Others were, however, able to persuade friends who previously would not attend to participate and some believed that their participation led to others wanting to join: “When I go out, some of my friends will start coming in too, and so I am able to keep up with my friends” (Hailey, School B). While females previously perceived a lack of support from adults, this was hardly evident in the postprogram data. Females from School A suggested that they had more support from administrators and a few of their teachers, which increased their participation.

Positive Changes in Others. One of the topics females spoke most positively about was having the opportunity to see positive changes in others on the basis of their engagement in the program. For instance, Sam (School A) noted, “I enjoyed seeing more girls coming out as we did them . . . they were all smiling, and I like when

people enjoy themselves.” Amy (School B) added, “We got to see a change in girls’ PA, so I have been seeing a lot of different females coming out.” Hailey (School B) shared that, while the program had little effect of her PA participation given that she was already active, of the females who did participate, she had “never seen them play sports before.” Jessica (School C) supported this: “A lot of girls I never actually saw at any school sports, and in phys ed class they would hate playing sports...seeing them come together was actually fun, and it made me happy.” Many of the females shared this feeling of satisfaction and enjoyment in perceiving positive changes in others during the program.

Environmental

Differences Between Older and Younger Students. Females who were part of facilitating the programs and those who simply attended noticed a disproportionate number of younger students participating and a striking absence of students in Grades 11 and 12. For example, females in School A noted that “there [weren’t] as many older girls” (Lolo) and that it was “really hard to get Grade 11 and Grade 12 students to do anything” (Leah, School B). Rachel (School B) suggested that students in the upper grades have “a lot of work” and are “really focused,” although Leah (School B) cautioned that older high school females did participate but preferred co-ed options so it would be best to avoid the females-only activities that are part of the program. One female (Jessica, School C) asserted that the best solution is to overlook those senior students and focus on younger students who are interested in participating.

Perceived Overall Lack of Participation. The females—especially those who did want to participate or who invested time into planning the programs—were disappointed and frustrated by what they perceived to be a general lack of participation from the majority of females in the school despite the initial momentum of the new intramural program. For example, Anne (School B) shared that her greatest dislike about the program was that “there wasn’t a lot of participation” and Micky (School C) was “upset that there weren’t too many girls—not as many as she had hoped would come.” For example, Leah (School A) expressed that the girls had “[taken] half the gym and then hardly anybody [was] showing up . . . so this

one side of the gym [was] packed full, and then the other side of the gym there [were] like three or four people playing.” The perceived lack of participation was similarly frustrating for students who gave up a portion of their lunch break to participate only to “wait for about 10 to 15 minutes for other people [who] took a lot longer to show up” (Rolo, School B). The females believed that this would likely be improved if the program was of value or worth to students. For instance, Katt (School A) asserted that “if people can see . . . just how fun and easy it could be, it would probably change motivation to do it.” These suggestions were linked to the perception that those students who attended were often not the females they felt most needed to be there: “I think that a lot of the people who did end up coming out were people who would already participate in like PA, which is kind of unfortunate” (Emma, School D).

Frustration in the Facilitation Role. Many of the females who participated in the focus group interviews were a part of the planning and facilitation process of the programs. They shared several frustrations about serving in this role. First, they seemed to struggle to see themselves as facilitators and participants simultaneously because if they were “supervising,” they could not fully participate in the program. Sam (School B) suggested that they avoided participating to avoid “crowding” and because “the females who supervise are more likely females that normally do sports . . . so kind of making females that don’t play sports more invited and feeling more comfortable there.” Second, they felt a lack of ability to motivate students to participate even if they signed up to do so. This was evident in Amy’s (School D) comment:

So I, like, sent out all the emails to the females like who were participating . . . and then the day comes and no one shows up, and then who’s the one who has to chase them? Me. So I have to go classroom to classroom for those females, and that’s very frustrating.

Third, frustration also resulted from fellow planning committee members failing to fulfill their responsibility, which often resulted in more tasks being piled on a smaller number of student-facilitators who were often left feeling “practically alone” (Amy, School D).

Sam (School B) noted that the committee that started with approximately 20 people dwindled to “the same four people setting up every time.” Perhaps more frustrating, these absent committee members expressed a complaint that the females who usually did the set up were “not doing it properly or . . . should do it differently or . . . should communicate it more” (Sam, School B). The final source of frustration for program student-facilitators came from program participants who shared their complaints. For instance, Hailey (School B) pointed out that while “very few people [help] out . . . a lot of people [complain].” Despite these feelings of frustration, females from School B acknowledged that this was their “first time for running” the program, as a largely student-led initiative, and that they were “learning stuff along the way” (Hailey, School B).

Positive Affect Associated With Enjoyable Activities of a Moderate Intensity. The sample also spoke of the nature of the available activities as an influential factor in their positive movement experiences in the form of having fun (e.g., “I felt happy because of how much fun I was having,” Dopy, School B). They valued being able to just relax and play. For example, Anna (School A) expressed, “Like when we were little kids, so it brought back the past and we got to laugh; it was super fun.” Emma (School D) added, “It wasn’t like too intense or anything, so it was good; it was fun.” The affirming atmosphere provided a positive alternative and often helped motivate friends to participate.

New, Varied, and Accessible Activity Choices. One of the elements of the newly implemented intramural program that females spoke most favorably about was the inclusion of a variety of novel activities from which they could choose, including those relative to physical education. For example, Rachel (School B) stated,

I definitely liked the newer sports that we don’t play in gym, like the martial arts and the glow games . . . because a bunch of people came out, and the martial arts was just fun because it is not something that you do it in gym for some reason.

Vicky (School C) added,

It showed the girls that they can have fun doing physical things that we forgot we liked to do . . . I think the program doing different things really, really shows you that you can

have fun working out, and it doesn't have to be like the status quo stuff we do at school.

Similarly, Rolo (School B) felt that being involved in activities that she had not previously experienced “opened up [her] mindset . . . to some other options.” For some, being involved in the intramural program provided them opportunities to engage in physical activities that were previously inaccessible. For instance, Dopy (School B) expressed, “Well, I don't get to do a lot of sports because some sports we can't afford, so if I can do them at school, then I like this.”

Discussion

This study qualitatively increases understanding about why there are lower levels of PA and sport participation among adolescent females particularly during the time spent at school and how those factors might be impacted by a high school intramural program. One general intrapersonal findings about PA and intramurals at school prior to the intramural program is that females feel more needs to be done to recognize their needs and preferences for some different types and intensities (i.e., the freedom to choose how hard to exert oneself) of physical activities than those of males, to reduce feelings of discomfort and self-consciousness. Females also have an interest in being provided with opportunities to exercise some autonomy, particularly in being given opportunities to make choices for themselves. These findings generally corroborate the research reported earlier on intrapersonal factors of females' school-based PA including intramurals (Bocarro et al., 2014; Edwards et al., 2011; Holt et al., 2012; Morgan et al., 2019; Owen et al., 2017; A. Watson et al., 2015) and provide a necessary frame of reference for the post-program results.

These intrapersonal concerns may largely dissipate after an intramural program, with many females preferring more physical activities away from males, along with a variety of novel activities such as yoga, Zumba and Bodypump fitness, weight training, low-organized games, martial arts, glow sports, ringette, kickboxing, and bicycling. Females also feel more comfortable (less intimidated) and autonomous during intramural programs. Because adolescent females are often highly influenced by their peers to participate in activities that are deemed “gender appropriate”—and often associate PA

with sport, competition, and skill (Edwards et al., 2011)—redefining social views of PA and gender to include a wide array of activities can encourage safe and confident female participation (A. Watson et al., 2015). However, some females have a strong preference to participate with the males, even viewing it as “wrong” to exclude them given that females-only spaces are often not well attended. Hence, it may be useful to provide mixed-gender and females/males-only PA and sport options during intramurals while providing a variety of physical activities, venues, and instructors/leaders that will interest more students and motivate more to participate.

The preprogram results pertaining to the interpersonal socio-ecological realm reveal that females often feel uncomfortable participating without their friends and that they often have negative views about the role of teachers in facilitating PA through more exclusively co-ed and traditional sport-based intramurals. After the new more comprehensive and student-centered intramural program, there appears to be a noticeable improvement in how the females feel socially and about their teacher-leaders involved in the program. For example, after such a program, females may more intentionally encourage their friends to participate with them despite their resistance and the perceived lack of teacher support may disappear. Females may also have more personal satisfaction from seeing new participants in intramurals and the positive changes in others.

These interpersonal results signal the importance of positive social interactions, feelings of connectedness with peers and friends (Artinger et al., 2006; Baghurst et al., 2014; Pantzer et al., 2018), and effective adult leaders and mentors in adolescent females’ PA settings (Goudeau et al., 2014; Morgan et al., 2019; Newton, 2010). To illustrate, a pertinent finding of the study is that females who participate regularly in an intramural program may want others to also reap the rewards that they experienced. This provides support for assertions about the importance of helping females to realize the value of being physically active through intramurals (Webb & Forrester, 2015). The study also reveals especially low participation rates in the senior grades in a program designed to support female participation in PA. More of these females may participate if more opportunities for co-ed activities are offered. Some research signals that older females prefer co-ed PA, in comparison to their younger counterparts

(Morgan et al., 2019; Newton, 2010), and that female athletes intrinsically value both females-only and co-ed recreational basketball intramurals (Baghurst et al., 2014). Research needs to clarify these discrepancies by grade and ability in females.

Females part of the planning and facilitation committee for the intramural intervention in each school are generally positive about it and feel their experience can improve in time if they persevere. This corroborates research (e.g., Pantzer et al., 2018; D. Watson et al., 2000) generally showing that empowering students to serve as valued stakeholders involved in creating effective and inclusive policies, programs, and environments is vital to success. This is most likely because participatory approaches to program development can promote students' feelings of autonomy, enjoyment, engagement, and participation in the PA experiences. The SASFE features of autonomy-supportive teaching (Supportive, Active, Autonomous, Fair, Enjoyable) by Lubans et al. (2017) seem to closely align to these findings.

While many of these positive outcomes from serving as student-leaders appear evident in this study, student-facilitators may also have several frustrations about serving in such a role (e.g., less personal participation, feelings of inadequacy to motivate others, and experiencing some contention and alienation). This reinforces the need for adequate teacher and peer supports during the program. A study of adolescent females' experiences in a more traditional sports-focused intramural program by A. Watson et al. (2015; also see Newton, 2010) also highlights the importance of regular positive mentoring interactions between female student participants and student and teacher leader-role models as a means of promoting an active and healthy lifestyle at school.

While some of the initial time and environmental concerns are still evident after the program (e.g., not wanting to waste their lunchtime if intramural events are not organized or fun; the lack of some desired equipment for outdoor activities), a program designed to support female participation in PA can resolve some of these (e.g., females-only spaces, accessible activities, split lunches). Such a program can also reduce preprogram communication frustrations (e.g., being unaware of scheduling adjustments and existing PA options at school). Females also have a general appreciation for offerings such

as more alternative (less traditional sports), diverse, and moderate-intensity intramural activity choices with some additional options for the degree of structure (i.e., free-play or taught) depending on one's preference. One implication of this is that students should be afforded the opportunity to provide input on the types of activities offered as part of an intramural program, which can, if enacted, increase enjoyment and motivation (Webb & Forrester, 2015). Welcoming student input can also lead to higher levels of participation and engagement (Edwards et al., 2011; D. Watson et al., 2000), along with deeper learning and intention of students to continue to participate in PA (Kanters et al., 2008).

It is also important to note the variations in the results by school. Some of the factors that are either positive or inconsequential to one group of females may be a troublesome issue to females in another school on the basis of issues during planning and running their own program. This signals the need for a delivery approach that best suits each school's physical and cultural environment including the school schedule; number of student participants; volunteers and supervisors; and access to available funds, facilities, and equipment. With this in mind, the transferability of these findings is limited to similar settings (e.g., demographics, budget, facilities, equipment, incentives, mentors, and instructors). Also, we acknowledge that this study of adolescent females does not fully address the spectrum of what constitutes "male" or "female" (Kirk, 2003) and caution against any overgeneralizing of the results by gender. Finally, it is prudent to acknowledge that the funding provided for equipment, guest instruction, and some use of community venues in this study may have prompted some students to elevate their affirmations of the program. Moreover, the limited 3-month duration and variable event schedule of the program might have diminished its potential effect.

In conclusion, this study answers calls in the literature for qualitative research into the effect of intramural programs with adolescent females (Bocarro et al., 2014; Owen et al., 2017) and provides important new and specific information about the personal, social, and environmental complexities in intramural programming for this population. Most notably, this study shows a noticeable reduction in the females' perceived barriers to being engaged in PA at school after a program designed to encourage females to participate in

PA. Of specific importance, the intramural program needs tailored to each school culture through recruiting, training, empowering, and supporting student-volunteers who collectively (and following consultation with peers) decide on and administer the program. Other implications include addressing females' specific needs for socioemotional acceptance and comfort; positive social engagement with friends; time, space, and equipment for all seasons; teacher guidance; support; some basic instruction; intensity level options; and a variety of engaging and novel activities from which to choose, including whether to participate with males. Accommodating many of these needs in adolescent females can foster the enjoyment, value, and motivation for PA through intramurals and counter the allure of options that are more sedentary while enhancing the effectiveness of a multicomponent Comprehensive School Physical Activity Program (Owen et al., 2017).

References

- Artinger, L., Clapham, L., Hunt, C., Meigs, M., Milord, N., Sampson, B., & Forrester, S. (2006). The social benefits of intramural sports. *National Association of Student Personnel Administrators (NASPA) Journal*, 43(1), 69–86.
- Baghurst, T., Tapps, T., & Judy, A. (2014). A comparison of sport commitment in female-only versus co-recreational intramural basketball leagues. *Recreational Sports Journal*, 38(1), 143–152. <https://doi.org/10.1123/rsj.2013-0022>
- Bocarro, J., Kanters, M., Edwards, M., Casper, J., & McKenzie, T. (2014). Prioritizing school intramural and interscholastic programs based on observed physical activity. *American Journal of Health Promotion*, 28(3), 65–71. <https://doi.org/10.4278/ajhp.130430-QUAN-205>
- Braun, V., & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Byl, J. (2008). Organizing effective elementary and high school intramural programs. *Physical and Health Education Journal*, 70(3), 22–24.

- Canadian Fitness and Lifestyle Research Institute. (2016). *Encouraging active schools: 2015 opportunities for physical activity at school survey*. <https://www.cflri.ca/sites/default/files/node/1493/files/2015%20Schools%20Bulletin%208%20Extracurricular%20opportunities%20EN.pdf>
- Chen, S., & Gu, X. (2018). Toward active living: Comprehensive school physical activity program research and implications. *Quest*, 70(1), 191–212. <https://doi.org/10.1080/00336297.2017.1365002>
- Dwyer, J., Allison, K., LeMoine, K., Faulkner, G., Adlaf, E., Goodman, J., & Lysy, D. (2008). A survey of opportunities for school-based physical activity in Ontario elementary schools. *Physical and Health Education Journal*, 73(4), 36–42.
- Edwards, M., Bocarro, J., Kanters, M., & Casper, J. (2011). Participation in interscholastic and intramural sport programs in middle schools: An exploratory investigation of race and gender. *Recreational Sports Journal*, 35(2), 157–173. <https://doi.org/10.1123/rsj.35.2.157>
- Erwin, H., Beighle, A., Carson, R. L., & Castelli, D. M. (2013). Comprehensive school-based physical activity promotion: A review. *Quest*, 65(4), 412–428. <https://doi.org/10.1080/00336297.2013.791872>
- Goudeau, S., Baker, B., & Garn, A. (2014). Teacher perceptions of barriers to implementing a school-based physical activity club: A qualitative investigation. *The Global Journal of Health and Physical Education Pedagogy*, 3(3), 256–269.
- Hills, A., Dengel, D., & Lubans, D. (2014). Supporting public health priorities: Recommendations for physical education and physical activity promotion in schools. *Progress in Cardiovascular Diseases*, 5(7), 368–374. <https://doi.org/10.1016/j.pcad.2014.09.010>
- Holt, N., Sehn, Z., Spence, J., Newton, A., & Ball, G. (2012). Physical education and sport programs at an inner-city school: Exploring possibilities for positive youth development. *Physical Education and Sport Pedagogy*, 17(1), 97–113. <https://doi.org/10.1080/17408989.2010.548062>
- Kanthers, M., Bocarro, J., Casper, J., & Forrester, S. (2008). Determinants of sport participation in middle school children and the impact of intramural sports. *Recreational Sports Journal*, 32(2), 134–151. <https://doi.org/10.1123/rsj.32.2.134>

- Kirk, D. (2003). Student learning and the social construction of gender in sport and physical education. In S. J. Silverman & C. D. Ennis (Eds.), *Student learning in physical education: Applying research to enhance instruction* (pp. 67–82). Human Kinetics.
- Lee, S., Burgeson, C., Fulton, J., & Spain, C. (2007). Physical education and physical activity: Results from the school health policies and programs study 2006. *Journal of School Health*, 77(8), 435–463. <https://doi.org/10.1111/j.1746-1561.2007.00229.x>
- Lodewyk, K., & Pybus, C. (2013). Investigating factors in the retention of students in high school physical education. *Journal of Teaching in Physical Education*, 32(1), 61–77. <https://doi.org/10.1123/jtpe.32.1.61>
- Lubans, D. R., Lonsdale, C., Cohen, K., Eather, N., Beauchamp, M. R., Morgan, P. J., Sylvester, B. D., & Smith, J. J. (2017). Framework for the design and delivery of organized physical activity sessions for children and adolescents: Rationale and description of the ‘SAAFE’ teaching principles. *International Journal of Behavior, Nutrition, and Physical Activity*, 14, Article 24. <https://doi.org/10.1186/s12966-017-0479-x>
- McCombe, C. (2008). Where are the girls? *Physical and Health Education Journal*, 74(1), 30–31.
- McCombe, C. (2010). More than the traditional intramurals. *Physical and Health Education Journal*, 76(2), 20–21.
- McLeroy, K. R., Bibeau, D., Stechler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education and Behaviour*, 15(3), 351–377. <https://doi.org/10.1177/109019818801500401>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. SAGE Publications.
- Morgan, K., Van Godwin, J., Darwent, K., & Fildes, A. (2019). Formative research to develop a school-based, community-linked physical activity role model programme for girls: Choosing active role models to inspire girls (CHARMING). *BMC Public Health*, 19(1), 437–449. <https://doi.org/10.1186/s12889-019-6741-1>
- Newton, L. (2010). Keeping girls active through mentoring: The effects of leadership, self-image, and mentoring on intramural participation. *Physical and Health Education Journal*, 75(4), 20–21.

- Owen, M. B., Curry, W. B., Kerner, C., Newson, L., & Fairclough, S. J. (2017). The effectiveness of school-based physical activity interventions for adolescent girls: A systematic review and meta-analysis. *Preventive Medicine*, 105(1), 237–249. <https://doi.org/10.1016/j.ypmed.2017.09.018>
- Pantzer, J., Dorwart, C. E., & Woodson-Smith, A. (2018). Importance of bonding in middle school intramural sports participation: Psychosocial outcomes based on gender and grade-level differences. *The Physical Educator*, 75(4), 661–682. <https://doi.org/10.18666/tpe-2018-v75-i4-8258>
- Pope, C., & O'Sullivan, M. (2003). Darwinism in the gym. *Journal of Teaching in Physical Education*, 22(3), 311–327. <https://doi.org/10.1123/jtpe.22.3.311>
- Statistics Canada. (2019). *Physical activity and screen time among Canadian children and youth, 2016 and 2017* [Fact sheet]. <https://www150.statcan.gc.ca/n1/pub/82-625-x/2019001/article/00003-eng.htm>
- Watson, A., Elliott, J., & Mehta, K. (2015). Perceived barriers and facilitators to participation in physical activity during the school lunch break for girls aged 12–13 years. *European Physical Education Review*, 21(2), 257–271. <https://doi.org/10.1177/1356336X14567545>
- Watson, D., Poczwadowski, A., & Eisenman, P. (2000). After-school physical activity programs for adolescent girls. *Journal of Physical Education, Recreation, and Dance*, 71(8), 17–21. <https://doi.org/10.1080/07303084.2000.10605186>
- Webb, E., & Forrester, S. (2015). Affective outcomes of intramural sport participation. *Original Research Recreational Sports Journal*, 39(1), 69–81. <https://doi.org/10.1123/rsj.2015-0006>