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COMMENTARY

Coaching Beyond the Game: Empowering Rural Youth Through Physical Education and Community-Based Sport Leadership

Dr. Lawrence Judge

In many rural communities across the United States, coaches and physical educators assume roles that extend well beyond technical instruction, often serving as mentors, counselors, and community leaders who support the holistic development of youth. These professionals frequently function as enduring figures of adult mentorship, sources of psychosocial stability, and anchors of civic engagement in geographically isolated and resource-constrained environments. While the physical and psychosocial benefits of youth sport participation are well-documented, the broader civic and developmental implications of coaching in rural contexts remain underexamined in scholarly literature. As rural populations contend with intersecting challenges, including economic disinvestment, educational inequity, and reduced access to healthcare, the role of the coach must be reconceptualized not merely as a facilitator of sport-specific skills, but as an architect of social capital, community wellness, and positive youth development (Judge et al., 2021; Judge et al., 2023). This per-

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spective is reinforced by Newman et al. (2020), who describe coaches in rural areas as "social agents" whose influence extends beyond athletics into domains of emotional support, moral development, and community cohesion. Table 1 outlines the multifaceted domains in which rural coaches operate, demonstrating their broad contributions beyond sport-specific instruction.

Table 1

Expanded Roles of Rural Coaches in Underserved Communities

Domain	Role Description	Examples/Implications
Instructional	Deliver sport-specific skill training and physical education curriculum.	Teaching proper form in track & field; integrating fitness into daily routines.
Mentorship	Serve as long-term role models and sources of emotional support.	Building trust with students over time; supporting students during family crises.
Mental Health Support	Identify at-risk students, respond to trauma, and connect youth to services.	Referring students to school counselors; using trauma-informed coaching methods.
Community Engagement	Act as informal civic leaders and community organizers.	Organizing local clean-up events; serving on school-community task forces.
Health Promotion	Promote physical activity, wellness education, and healthy behaviors.	Leading school-wide health campaigns; educating on nutrition and sleep hygiene.
Academic Guidance	Encourage academic achievement, goal setting, and post-secondary readiness.	Helping students complete FAFSA; writing college recommendation letters.

Structural inequities in rural regions significantly restrict access to extracurricular opportunities, including organized sport and physical activity programming. Data from the U.S. Department of Health and Human Services (2018) indicate that youth in rural areas are less likely to meet recommended physical activity guidelines, are underserved by trained professionals, and have fewer after-school programs than their urban counterparts. These disparities limit physical development and critical psychosocial domains such as resilience, agency, and academic self-efficacy. Prior research underscores the potential of structured physical activity, when delivered by developmentally attuned professionals, to positively influence adolescent populations' body image, social connectedness, and

emotional well-being (Judge et al., 2023). Furthermore, organized sport participation has been shown to correlate with higher academic achievement in rural high school students, particularly when athletes engage in both breadth and intensity of participation (Lang & Tapps, 2021). However, access to such opportunities remains deeply stratified by socioeconomic class, with families in rural and working-class communities often lacking the resources to support sustained involvement in extracurricular programming (Weininger et al., 2015).

Moreover, rural coaches often operate at the intersection of education, social services, and mental health support. In many school systems with limited access to counselors, psychologists, or licensed social workers, coaches become de facto first responders to student trauma, familial instability, and socioeconomic distress. Their capacity to deliver mentorship, identify at-risk behaviors, and connect youth to essential resources highlights the need for expanded professional development incorporating trauma-informed pedagogies, culturally responsive practices, and mental health literacy (Allan et al., 2021). Recent scholarship has called for the formal integration of sport social work into coaching ecosystems, particularly in resource-constrained environments, to address the growing psychosocial demands placed on coaches (Judge et al., 2024).

This article aims to critically examine the multifaceted role of coaches and physical educators in rural communities, emphasizing their untapped potential as cross-sectoral leaders in health promotion, youth development, and community engagement. Through a synthesis of empirical literature, applied case studies, and interdisciplinary frameworks, the paper argues for a paradigm shift that equips rural sport practitioners with the competencies necessary to address complex health and educational attainment social determinants.

A compelling lens through which to examine the multifaceted role of rural coaches is Bronfenbrenner's Ecological Systems Theory (1979), which situates human development within a nested set of environmental contexts. Within this framework, coaches are positioned as proximal development agents in the microsystem, engaging directly with youth daily, while influencing broader systems such as families, schools, and community institutions. Their unique position allows them to mediate the effects of distal risk factors (e.g.,

poverty, geographic isolation, underresourced schools) by fostering protective environments characterized by structure, mentorship, and opportunity. This ecological perspective underscores the potential of coach education programs to produce practitioners who are competent in sport pedagogy and critically aware of the sociocultural and structural forces shaping youth trajectories in rural America.

Despite the centrality of coaches to rural youth development, most physical education and coaching education programs fall short in preparing professionals to navigate the complex realities of rural service. Curricula often emphasize technical instruction and sport science at the expense of contextual adaptability, community engagement, and equity-centered praxis (Judge & Smith, 2023). Emerging research supports the efficacy of community-engaged coach preparation models, which integrate culturally responsive pedagogy and localized problem-solving, as more effective in underserved contexts (Camiré & Trudel, 2014). Embedding leadership development, social-emotional learning, and trauma-informed care into the pedagogical core of coach education is essential to cultivating practitioners who can serve as instructors and transformative agents within their communities.

The importance of positive adult role models in rural youth development cannot be overstated. Drawing on Bandura's Social Learning Theory (1977), individuals acquire knowledge and behaviors not solely through direct instruction but through observational learning, especially when modeled by figures perceived as credible and relatable. In rural communities, where students may lack consistent access to health, education, or civic leadership professionals, coaches often serve as de facto exemplars of resilience, perseverance, and aspiration. When properly trained, coaches can foster critical developmental assets such as emotional regulation, self-determination, and social connectedness, which enhance athletic performance and life outcomes.

Recent empirical work further affirms the value of intentional sport-based leadership programming in advancing developmental goals. For example, Gould and Voelker (2010) found that rural youth engaged in structured sport leadership interventions demonstrated increased civic engagement, academic motivation, and college readiness. These outcomes reinforce the argument that coaching should

be reframed as a public-facing profession with broad implications for community development, educational equity, and public health advancement.

Strategic investment in rural coaching pipelines represents a high-leverage opportunity to disrupt cycles of disadvantage in underserved regions. This includes enhancing access to continuing professional development for rural coaches, creating university-school partnerships for immersive practicum experiences, and incentivizing rural service through stackable credentials or service-based loan forgiveness programs. Organizations such as the U.S. Center for Coaching Excellence and state-level high school athletics associations are well-positioned to institutionalize equity-focused development pathways that align with national standards and community needs.

Furthermore, academic institutions must be central in institutionalizing coaching leadership frameworks within undergraduate and graduate curricula across disciplines such as physical education, kinesiology, and sport management. This entails a deliberate expansion beyond technical skill instruction to include coursework in inclusive coaching practices, youth psychology, rural education policy, and the social determinants of health. As K-12 schools increasingly implement whole-child education models, coaches, especially in rural and under-resourced communities, must be strategically prepared to serve as developmental allies in fostering academic engagement, psychological well-being, identity formation, and postsecondary readiness among first-generation, low-income, and systemically marginalized youth. National initiatives such as *Coach Beyond* (LiFEsports, n.d.) and the *Million Coaches Challenge* by the Susan Crown Exchange (Susan Crown Exchange, n.d.) have underscored the urgent need for transformative coach training rooted in trauma-informed care, social-emotional learning, and equity-centered practice. These efforts affirm the necessity of embedding such competencies into the formal preparation of coaches, thereby positioning them not only as sport educators but as vital agents of youth development and community uplift (Judge & Smith, 2023).

Conclusion

Coaches in rural communities hold a critical yet often underrecognized role in advancing youth development, educational at-

tainment, and public health. Positioned within nested ecological systems, they influence athletic performance and broader psychosocial outcomes, particularly in regions lacking adequate educational and mental health infrastructure. Coaches can function as stabilizing agents, role models, and catalysts for community resilience when properly trained. To meet these demands, coach education programs must integrate culturally responsive pedagogy, leadership development, and social-emotional competencies tailored to rural contexts. Establishing equity-driven coaching pipelines, supported through university-school partnerships, credentialing frameworks, and targeted professional development, is essential to addressing disparities in opportunity and support for rural youth. Reframing coaching as a public service profession, rooted in interdisciplinary and community-engaged practice, is imperative. Doing so expands the coach's role beyond technical instruction and positions them as central figures in building sustainable, healthy, and equitable rural communities.

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PEDAGOGY

Social Emotional Competency Change During the Pandemic: Impacts of a Virtual Physical Activity Program

Austin J. Kulp, Xihe Zhu, Justin Haegele, and Shannon Moots

Abstract

The purpose of this study is to examine how a virtual after-school PA program impacts social-emotional competency (SEC) among elementary school students. Students (N=122) participated, and SEC was measured at the beginning and end of the program. Data analysis included descriptive analysis of demographic variables and SEC. A dependent sample t-test was used to examine changes in SEC, and Cohen's d was computed as the effect size. Independent sample t-test were used to determine changes (Δ) between boys and girls. A chi-squared test examined the potential association between student sex and composite scoring improvement (i.e., Δ > 0). Student's SEC significantly improved from pre- to post-measure. A statistically significant association between sex and SEC improvement was found, with girls

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improving SEC more than boys. These findings suggest that a virtual after-school PA program may benefit the SEC of elementary children.

Introduction

A well-rounded education can teach children the skills they need to become successful and healthy. Social and emotional learning (SEL) can provide children with opportunities to develop these skills. SEL is defined as the "process by which young people acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions" (CASEL, 2022). These skills comprise what is known as social and emotional competency (SEC). Specifically, self-awareness, self-management, social awareness, relationship skills, and responsible decision making are the five interrelated areas of SEC (Payton et al., 2008). A school can implement SEL-related activities in the classroom, before or after school, or as a separate program for indicated students. For SEL to be effective, it should develop SEC, provide experiences to practice social and emotional skills, involve the school community, and foster relationships with stakeholders (Greenberg et al., 2003). Current research indicates that SEL programs have positive and lasting effects for many different youth populations (Durlak et al., 2011; Payton et al., 2008).

In two extensive reviews examining the impact of SEL programs, researchers found that students in general classroom programs, after school programs, and indicated programs improved social emotional skills, attitudes, prosocial behavior, and academic performance while decreasing problem behaviors compared to students in control groups (Durlak et al., 2011; Payton et al., 2008). In a separate study about after-school programs designed to develop personal and social skills, youth from elementary and middle school significantly increased self-perceptions and positive social behavior, while decreasing problem behaviors compared to children not in the program (Durlak et al., 2010). SEL can have lasting effects years after exposure, with children having more community involvement, so-

cial emotional skills, well-being, and fewer mental health problems compared to others who did not receive SEL (Hawkins et al., 2008; Taylor et al., 2017).

The impact that physical activity (PA) has on areas like SEC and SEL has been reported as well. For example, older children and adolescents who are physically active report greater levels of physical, social, and mental functioning compared to less active peers (Gu et al., 2016; Gopinath et al., 2012). In addition, there is evidence that PA has been effective in lowering depression (Brown et al., 2013; Fox, 1999) and anxiety (Zhu et al., 2019), and improving self-esteem (Ekeland et al., 2005). Further, a young person's friends and relationships with their peers have been found to be positively associated with their PA levels (Ianotti et al., 2009; Strauss et al., 2001).

Research about how PA programs can affect SEC has primarily taken place at elementary schools with interventions before or after school. For example, a study by Goh et al. (2022) found that a before-school PA program improved children's SEC by 7-10% compared to a control group. Further, kindergarten to 8th-grade students who participated in a before-school PA program reported improved social-emotional wellness compared to students not in the program (Whooten et al., 2018). Additionally, in a similar study using an after-school PA program, Caldwell et al. (2022) found a slight improvement in peer relationships for children who participated. However, there was no significant improvement in the other areas measured: cognitive function, peer and family relationships, physical activity, life satisfaction, sleep, positive affect, and global health (Caldwell et al., 2022). Lastly, an after-school PA program, based on Hellison's Teaching Personal and Social Responsibility Model (2003), did not improve children's SEC based on reporting from before and after the program (Olive et al., 2020). As such, there remain many questions to explore about the impact of PA programs on the SEC of children.

Regular PA is associated with abundant physical health benefits for children and adolescents, such as improved bone health, weight status, cardiorespiratory and muscular fitness, and cardiometabolic health (U.S. Department of Health and Human Services, 2018). An individual's health is a multifaceted concept of physical, mental, and social well-being (World Health Organization, 1948). Previous studies have investigated how PA relates to health-related quality

of life, attitudes, emotional distress, and social health, but relatively few studies have examined how it relates to SEC. In addition, PA programs have been primarily in-person and have taken place before, during, or after school hours. In the context of the COVID-19 pandemic, many schools moved to a virtual environment and have continued to offer virtual options for learning. Children have found virtual PA programming a valuable experience (Barcelona et al., 2021). Further, a review of online PA programs discovered favorable outcomes among children, with increases in self-efficacy and connections with game enjoyment, mood experience, and attitude towards PA (Goodyear et al., 2023). There is evidence that virtual PA programs can provide opportunities for PA accumulation and possible benefits to the affective domain. However, research is limited about how virtual PA programs affect SEC. Therefore, the purpose of this study is to examine the effect of a virtual after-school PA program on SEC among elementary school students.

Method

Research Design and Context

This study used an observational design through pre-post measures of existing data from the elementary students who participated in the online after-school physical activity program, *Move 60!*. The program aimed to increase students' participation in physical activity and sports outside of school hours. The program offered one-hour sessions on Mondays to Thursdays during after-school hours on Zoom during the pandemic (from October to December 2021), and the activities included guided exercises such as jogging, jump roping, yoga, and other activities that can be done by the students, without additional equipment. The program was directed by certified physical educators trained for *Move 60!*. The program was free of charge to all elementary school students from grades 2 to 6 in a school district in a Northwestern state. The district's student population demographics included 13.1% Asian, 7.6% Black, 22% Hispanic/Latino of any race, 0.5% Native American, 0.9% Native Hawaiian/other Pacific Islander, 11% two or more races, and 44% white. The students and parents voluntarily registered for the program or withdrew from it any time after the registration.

Participants

The participants were 122 elementary school students from six elementary schools. The students were enrolled in 2nd to 6th grades; their mean age was 11.69 ±1.66 years. About half (50.6%) of the participants were girls, and 49.4% were boys. The students included 11.4% Asian, 7.6% Black, 20.7% Hispanic/Latino of any race, 48.1% white, 12.2% multiracial/Native American, and others at the schools. All participants voluntarily registered for the program and participated in the study, with their parental/guardian consent. Based on the attendance record on Zoom that the instructors kept, students (n =122) who attended at least 80% of the sessions were included in this study. Since this study used the teacher-collected and de-identified data, the school district and the researchers' college human subject review committee approved this study.

Variables and Measures

The measures of this study included the participant demographic variables and social and emotional competency.

Demographic Variables

The demographic variables included the elementary school student's age, race, ethnicity, sex, and grade level. These variables were collected directly through an online system that imported student information with the school district's approval. As such, the participants did not have to self-report them. It should be noted that the researchers only had access to the de-identified data, so the student and school names were not revealed to the researchers.

Social and Emotional Competency

We used the Washoe County School District (WCSD) Social and Emotional Competency Assessments – Short Form (SECAs), a free, open-source instrument that measures students' self-reported social and emotional competencies. The SECAs have been validated and tested among school-aged children in previous studies within large public-school contexts (Crowder et al., 2019; Davidson et al., 2018). The students completed the short form of the SECAs at the beginning (pre) and end (post) of the *Move 60!*. The WCSD Short Form contained 17 items that measured students' self-awareness ([four items]s elf-concept, emotional knowledge), social awareness

(three items), self-management ([six items] emotional regulation, goal management, schoolwork), relationship skills (two items), and responsible decision-making (two items). Each item begins with a short statement asking students to rate how easy or difficult it is. For example, an item on emotion knowledge reads "Knowing the emotions I feel", and another on self-management reads "Doing my schoolwork even when I do not feel like it." Each item has four response options: 1 = "Very Difficult," 2 = "Difficult," 3 = "Easy," 4 = "Very Easy." The total composite score from all 17 items was used to reflect the global social and emotional competence (Crowder et al., 2019), with higher scores representing greater social-emotional competency. The 17-item WCSD Short Form showed good internal consistency in this study, with a Cronbach $\alpha = 0.88$ based on the collected dataset.

Data Analysis

Three types of data analyses were conducted to meet the purposes of the study. First, descriptive analysis on demographic variables and social-emotional competency was conducted. A frequency analysis was conducted to show the percentage of students whose social-emotional competency has improved. Then, examine which student's social-emotional competency has changed from pre- to post-measures of the online physical activity program. A dependent sample t-test was conducted, and Cohen's *d* was computed as the effect size. Finally, to examine whether there were differences in student social emotional competency in the pre-test and changes (Δ) between boys and girls, independent sample t-tests were conducted.

A chi-squared test was also conducted to examine the potential association between student sex and whether the composite scores were improved (i.e., $\Delta > 0$). These analyses were conducted using SPSS (version 27; IBM, Armonk, NY), and statistical significance tests were done with $\alpha = .05$.

Results

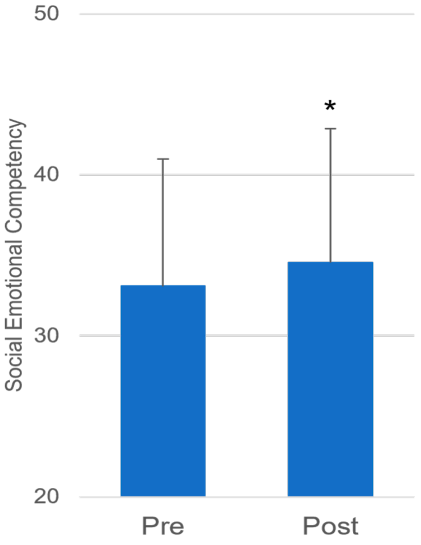
When examining the student social emotional competency in the premeasure, we did not find a statistically significant difference between boys and girls, $t = -.76$, $df = 120$, $p = .45$. Overall, student social emotional competency was significantly improved from the pre- to post-measure, as indicated by the total composite score changes.

Table 1
Student Social Emotional Competency Composite Score

Measure	Mean	SD	Δ	*d*	*t*	*p*
Pre for boys	33.59	8.37				
Pre for girls	32.50	7.40	1.09	.14	-.76	.45
Pre for all students	33.09	7.92				
Post for all students	34.56	8.32	1.47	.23	2.57	.01
Post-Pre (Δ) for boys	.73	.69				
Post-Pre (Δ) for girls	2.34	.92	1.61	-.25	1.41	.16

Note: SD = Standard deviation

Figure 1
Student Social Emotional Competency Measures Pre- and Post-Move 60!



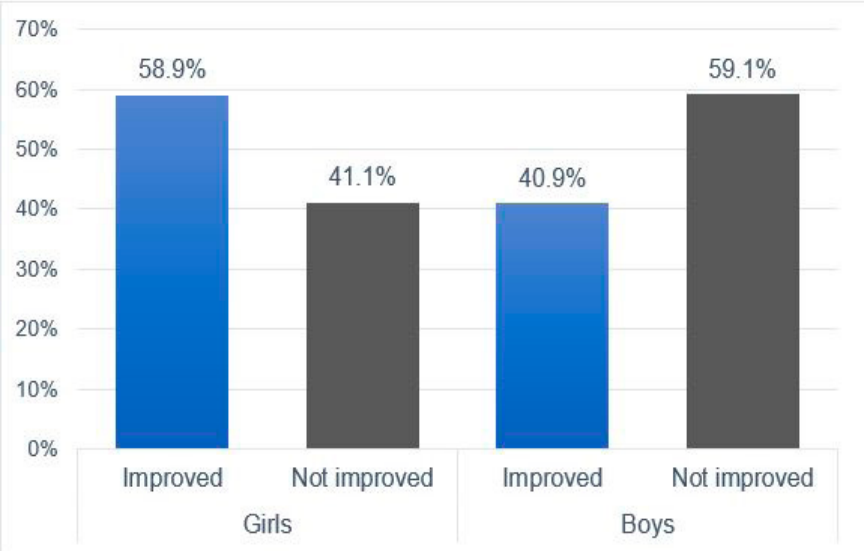
As shown in Figure 1 and Table 1, the student composite scores for social emotional competency increased from pre = 33.09 ± 7.92 to post = 34.56 ± 8.32, on average improving about Δ = 1.47 ± .57 from pre to post *Move 60!* program, $t = 2.57$, $df = 121$, $p = .01$. The effect size Cohen $d = .23$, showed a small positive effect size.

The average improvement on social-emotional competency composite did not differ significantly between boys and girls. In contrast, girls ($\Delta = 2.34$) did have higher though not statistically significant improvement than boys ($\Delta = .73$), $t = 1.41$, $df = 120$, $p = .17$. When examining the association between student sex and whether their social-emotional competency composite scores were improved (i.e., $\Delta > 0$), we found a statistically significant association between sex and whether there was an improvement in the composite score, $\chi^2 = 3.94$, $df = 1$, $p < 0.05$. As seen in Figure 2, about 60% of girls ' social-emotional competency scores improved, while about 40% of boys had such improvement.

In summary, there was no significant difference in the pre-measure of student social-emotional competency composite score.

Figure 2

Percent of Students Whose Social Emotional Competency Composite Score Improved, $\chi 2 = 3.94$, $df = 1$, $p < 0.05$



On average, students improved their social-emotional competency scores from pre- to post-Move *60!* program. There was a statistically significant association between student sex and whether they had improvement in their social-emotional competency scores. The average improvement was slightly higher for girls than boys, though not statistically significant.

Discussion

The purpose of this study was to examine the impacts that *Move 60!* had on SEC among elementary school students. Students who participated in *Move 60!* improved SEC from pre to post, showing a small effect size (Cohen *d*= .23). This result aligned with previous research investigating the effects of PA programs on elementary-aged children. Prior studies found improvements in SEC and social-emotional wellness among children who participated in before-school PA programs (Goh et al., 2022; Whooten et al., 2018). Another similarity to previous research is that *Move 60!* does not specifically teach SEL but is used as a PA opportunity. The differences in the PA programs should be noted. *Move 60!* was offered as an online program for children four times per week, and the physical activities were mostly self-sufficient with limited use of equipment. Previous research investigated in-person programs that met two to three times per week, focused on exercise and playing sports/games (Goh et al., 2022; Whooten et al., 2018). Considering the effect size (^{2}= .136) of a similar study by Goh et al. (2022), there is limited evidence to suggest that offering children different types of physical activities may help improve SEC.

Additionally, most of the existing literature examining how PA programs affect SEC has not addressed differences among girls and boys (Caldwell et al., 2022; Olive et al., 2020; Whooten et al., 2018). Goh et al. (2022) reported no statistically significant effect between girls and boys. This study's key addition is how the SEC changed between girls and boys. While there were no significant differences in average SEC composite scoring between girls and boys before *Move 60!* (girls= 32.50, boys=33.59, *p*=.45), after the online program, there were differences in average improvement. Although not significantly different, girls improved by almost two points more than boys. Additionally, there was a significant association between sex and improvement in the composite score, with about 60% of girls improving compared to about 40% of boys. This finding of uneven SEL improvement is unique and could potentially result from the nature of the activities offered in the online program. As described earlier, the online program's activities, such as jogging, jumping rope, and yoga, were mainly self-sufficient. These activities may appeal more to girls than boys, as boys tend to participate in more team sports

and active play (Peral-Suárez et al., 2020). As such, this could be a probable source for the higher portion of SEL improvement in girls than in boys.

The study adds to the limited research on PA programs and their impact on SEC and introduces differences between girls and boys. Several limitations should be noted for this study. First, we used children's self-reports to measure SEC. Even though the SECAs have been validated, the participants may not be able to respond to them accurately. Further, SEL is growing in popularity among schools nationally, and has increased from 2018 to 2021 (Schwartz et al., 2022). If children in this study received SEL instruction, that may have led to greater increases in SEC. Another limitation was that the sample size was relatively small, and the researchers did not directly monitor program attendance, but only by the teachers implementing the program through Zoom. Directly monitoring the program implementation may have led to more meaningful results and interpretation regarding a dose-response relationship between *Move 60!* participation and SEC. Lastly, the study did not have a control group to investigate differences between students who participated in *Move60!* and those who did not participate.

The results of this study support the idea that a virtual afterschool PA program may improve SEC among 2nd-6th-grade students. Further, girls may experience greater improvement in SEC by participating in a PA program. Another important finding is the effectiveness of a virtual PA program. This would help schools and students create programs and participate in PA without the challenges of in-person programs. For example, securing facilities and staffing would not be as difficult because teachers or trainers could run the PA program from their own space at home or in a classroom. It is apparent that youth today are struggling with health problems. Childhood obesity remains high (Ogden et al., 2015), and the American Academy of Pediatrics declared a National Emergency in Child and Adolescent Mental Health (American Academy of Pediatrics, 2021). Youth do not meet daily aerobic PA guidelines, and only 29% of children receive daily physical education (Centers for Disease Control and Prevention, 2014). The physical, social, and emotional benefits that PA programs have for children are well established (Bonhauser et al., 2005; Brown et al., 2012; Ekeland et al.,

2005; Goh et al., 2022; Gu et al., 2016; Whooten et al., 2018). Lastly, the opportunity for children to be physically active at home, with their peers and teacher online, may provide similar benefits.

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PEDAGOGY

The Impact of Integrating Mathematics into Elementary Physical Education

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Abstract

The purpose of this study was to examine the effects of integrating mathematics into physical education. Participants included 132 fourth-grade students from four physical education classes at two schools. In-tact physical education classes were assigned to intervention and control groups. Mathematics activities were integrated into the intervention group's physical education classes for seven weeks. Data collection included three assessments of mathematics performance: mathematics grades, standardized mathematics assessment scores, and mathematics unit assessment scores. Data were collected pre- and post-intervention from the intervention and control groups and analyzed using mixed nested ANOVA. Results showed that across all measures of mathematics performance, students in both groups significantly improved from pre- to post-intervention. Significant differences based on the interaction of time (pre- and post-test) and group (intervention/control) were evident in mathematics unit assessment scores. These findings add to the growing body of literature on integrated curriculum in physical education.

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Introduction

The National Physical Education Standards state that physical education is a site for knowledge and skill development (SHAPE America, 2013). While the focus of physical education is movement education, physical education has the potential to be a site for learning other academic content through an integrated curriculum. Curriculum integration theorists use several terms in the literature to describe similar curriculum designs. Despite their terminology disagreements, these experts agree on the limitations of the separate-subject approach traditionally adopted in schools. Teaching subjects independently of one another does not allow students to make connections between content areas (Beane, 1995, 1997; Drake, 1997; Fogarty, 1991, 2002, 2009; Jacobs, 1989). Therefore, physical education offers the potential of movement-based cross-curricular learning.

In the classroom setting, previous research found that students who participated in integrated curricula performed just as well, if not better, than students who did not participate in integrated curricula (Chen & Yang, 2019; Kurt & Pehlivan, 2013; Vars, 1996). Furthermore, previous educational research has shown a link between movement and academic performance in the classroom (Donnelly et al., 2009; Duncan et al., 2012; Jensen, 2000; Mahar et al., 2006; Reed et al., 2010), where time-on-task improved (Mahar et al., 2006) and fluid intelligence increased (Reed et al., 2010). This connection between learning and movement in the classroom could be replicated in a naturally movement-based setting, such as physical education.

Although combining movement and classroom content in the classroom setting has shown favorable findings, empirical data regarding integrated curriculum in physical education are scarce (Marttinen, McLoughlin, Fredrick, & Novak, 2017). From the teachers' perspectives, integrated curriculum in physical education excited students (Hastie, 2011), allowed teachers to cover more material (Hastie, 2011), and encouraged students to make meaningful cross-curricular connections (Chen et al., 2011). Further, despite the addition of classroom content, physical activity was not sacrificed during physical education class (Cecchini & Carriedo, 2020; Chen et al., 2010).

Of this small body of literature examining integrated curriculum in physical education, two studies objectively measured academic performance (Cecchini & Carriedo, 2020; Derri et al., 2010). Derri et al. (2010) evaluated the effect of a five-week integrated physical education and language program on 67 kindergarten students. The experimental group used physical education to teach the oral and written speech program, while the control group taught the program in a traditional, non-movement-based classroom setting. Results showed the experimental group scored significantly better than the control group in all categories of analysis: written speech scores, oral speech scores, and total language scores. These findings suggest that oral and written speech are taught best in movement-based settings, such as physical education.

Similarly, Cecchini and Carriedo (2020) explored the impact of a three-week integrated unit connecting physical education and mathematics with 46 first-grade students. The control group participated in mathematics and physical education separately, and the intervention group participated in a shared (Fogarty, 1991) physical education and mathematics curriculum design. Results indicated both groups significantly improved subtraction knowledge from pre- to post-test. Further, the subtraction knowledge of students in the intervention group was significantly greater than that of the control group. These findings suggest that integrated curriculum designs in physical education can improve mathematics achievement.

Despite the overwhelming bodies of literature regarding integrated curriculum in the classroom setting and incorporating movement in the classroom setting, the similar area of inquiry of integrating classroom content into physical education is relatively small and predominantly non-empirical. The seven data-based articles demonstrate a foundational and promising qualitative account of the perspectives of teachers and students (Chen et al., 2007; Chen et al, 2011; Hastie, 2010; Rovegno & Gregg, 2007). More quantitative data are needed to explore the topic in greater detail. Although only two physical education empirical studies objectively measured academic achievement (Cecchini & Carriedo, 2020; Derri et al., 2010), findings from the classroom literature show integrated curriculum and incorporating movement into the classroom setting improved academic performance (Chen & Yang, 2019; Donnelly, et al., 2009;

Kurt & Pehlivan, 2013; Reed et al., 2010; Vars, 1996). Therefore, the purpose of this study was to examine the effects of integrating mathematics into physical education on multiple measures of mathematics performance. Specifically, does integrating mathematics in physical education influence mathematics grades, standardized mathematics assessment scores, and mathematics unit assessment scores?

Methodology

Participants and Setting

Fourth-grade students were recruited from two urban elementary schools in the same school district in the Southeastern United States. All 233 fourth-grade students in the two schools at the start of the study were eligible to participate. The potential participant pool comprised students from 11 different fourth-grade classrooms: five from Miller Elementary School and six from Woods Elementary School. A total of 132 participants, 57% of the population (57 boys, 75 girls), returned the parental consent and minor assent forms to participate in the study, as approved by the Institutional Review Board for Research Involving Human Subjects. Two physical education classes (one class from each school) made up the intervention group (n=59), and two physical education classes (one class from each school) served as the control group (n=73), participating in regularly planned physical education. Intact classes were assigned to intervention and control groups for integrated curriculum delivery. Figure 1 illustrates the schools' fourth-grade populations and the participant sample.

Design

The purpose of this intervention was to integrate mathematics into physical education using a connected integration design (Cone et al., 2009). The intervention utilized four templates to integrate classroom content, including *If – Then*, *Knowledge Tag*, *Out and Back*, and *Dice Roll and Solve* (Cosgrove & Richards, 2019). Before the study, the primary investigator communicated extensively via email and in person with the fourth-grade classroom teachers. During the intervention, weekly emails and meetings were held with

Figure 1
Study Participants

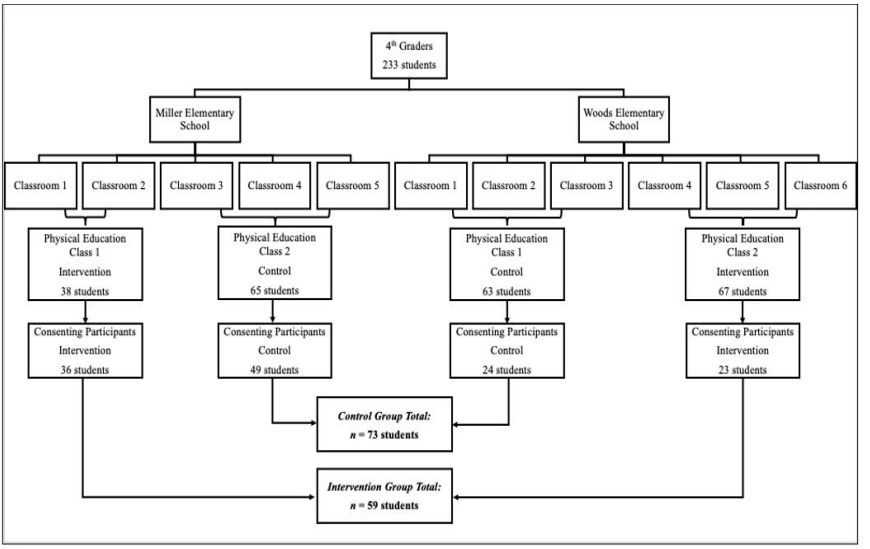


Table 1
Integrated Activity Template Examples, Adapted from Cosgrove & Richards (2019)

If – Then	
If	**Then**
The angle is an acute angle	Do 5 crunches
The angle is an obtuse angle	Do 5 mountain climbers
The angle is a right angle	Do 5 burpees
Knowledge Tag	
Math Task	
Identify which type of angle is pictured on the card to return to the game	
Out and Back	
Physical Education Movement Task	**Math Task**
Dribble the soccer ball	Convert the metric system measurements and order the cards from least to greatest
Dice Roll and Solve	
Physical Education Movement Task	**Math Challenge**
Frisbee passing with a partner	Solve for the perimeter and pass that many times

the intervention teachers to ensure the content covered in the physical education intervention reinforced what was being taught in the mathematics lessons. Throughout the study, topics covered in the mathematics unit were equivalence, symmetry, angles, area, perimeter, and properties of quadrilaterals, and the units taught in physical education were soccer and fitness at Miller Elementary School and frisbee and fitness at Woods Elementary School. The procedures of collaborating with classroom teachers and implementing the four integrated activities templates were piloted before this study. Table 1 provides an example of each activity template used in the study. The physical education teachers implemented one activity per day for 10 minutes for seven weeks. The researcher collaborated with the physical educators to create and deliver all the instructional materials needed for the ten-minute intervention activities, and the physical education teachers decided when the activities fit best in their lessons.

Data Collection

Data collection included three assessments of mathematics performance: mathematics grades, standardized mathematics assessment scores, and mathematics unit assessment scores. These data were collected pre- and post-intervention from the intervention and control groups. Student demographic data (age, sex, and race) were collected from school records.

Mathematics Grades

Participants' first quarter (nine weeks) and second quarter (nine weeks) mathematics grades were collected. First quarter grades served as the pre-intervention measure, and second quarter grades served as the post-intervention measure. Mathematics grades were obtained from school administration.

Standardized Mathematics Assessment

Standardized mathematics assessment scores were measured with the Scantron *Performance Series* assessment. "Scantron *Performance Series* is a computer-adaptive, online assessment that offers educators an efficient, standards-based method to immediately diagnose student needs and inform placement and instructional strategy decisions" (Alabama State Department of Education, 2018).

Students completed the assessment twice: in the fall (August) as a baseline and winter (December) to measure growth. This assessment was compulsory and administered by the classroom teachers. All students in the schools completed the Scantron *Performance Series* assessment; however, only consenting participants scores were collected. *Performance Series* assessment scores were obtained from the school administration.

Mathematics Unit Assessment

A mathematics unit assessment was completed pre- and post-intervention. All fourth-grade students completed these assessments; however, only the study participants' scores were obtained and analyzed. Topics covered in this unit were equivalence, symmetry, angles, area, perimeter, and properties of quadrilaterals. The textbook's unit assessment was used because all 11 fourth-grade teachers at both schools used the same book and sequenced their instruction identically. "A" and "B" forms of the assessment were created by the primary investigator; test items were pulled directly from the unit assessment and reviewed by the fourth-grade teachers. All unit topics were evaluated on both forms of the assessment, and both the "A" and "B" forms consisted of 12 questions. Those who completed the "A" assessment at pre-intervention took the "B" assessment at post-intervention, and vice versa.

Data Analysis

Data were entered into a Microsoft Excel document by the lead researcher and two trained research assistants and transferred into IBM SPSS Version 26 for analyses. Data were analyzed using a mixed nested analysis of variance (ANOVA), with time (pre-/post-intervention) as the within variable, group (intervention/control) as the between variable, and school (Miller Elementary School and Woods Elementary School) as the nested variable. All analyses included the Bonferroni adjustment to reduce the risk of Type I error.

Results

Participant Demographics

One hundred thirty-two students (n = 132) participated in the study. Participant age, sex as assigned at birth, and race data were

gathered from school records. Participants ranged in age from nine to eleven years old at the time of the study. Table 2 displays the demographic information for the total sample.

Table 2
Total Sample Participant Demographics

	Female		Male	
Number of Participants	75		57	
Percentage of Sample	56.8		43.2	
	Asian	**Black**	**Hispanic**	**White**
Number of Participants	2	77	18	32
Percentage of Sample	1.6	59.7	14.0	24.8

Mathematics Grades

A mixed nested ANOVA was used to determine whether mathematics quarter grades differed based on group and time. There was a significant difference in mathematics grades between the two schools ($F_{2, 120} = 13.531$, $p < .001$), where about 18% of the variance can be attributed to the school ($\eta^2 = .184$). There was no significant difference in mathematics grades based on the interaction of group and time ($F_{1, 120} = 0.406$, $p = .525$, $\eta^2 = .003$). Because there was no significant interaction, the main effects were examined. There was a significant difference in mathematics grades based on the group ($F_{1, 120} = 5.225$, $p = .024$), where the intervention group's mathematics grades were higher than the control group's. The interaction explains about 4% of the variance in mathematics grades ($\eta^2 = .042$). Additionally, there was a significant difference in mathematics grades in the first and second quarters ($F_{1, 120} = 41.728$, $p < .001$), where mathematics grades were higher for the second quarter than the first. About 26% of the variance was explained by the time (first and second quarter) ($\eta^2 = .258$).

Standardized Mathematics Assessment

A mixed nested ANOVA was used to determine whether standardized mathematics assessment scores differed based on group and time. The standardized mathematics assessment used was the Scantron *Performance Series*. There was no significant difference in the Scantron *Performance Series* scores based on the school ($F_{2, 124}$ = .459, p = .633, η^2 = .007). There was no significant difference in Scantron *Performance Series* scores based on the interaction of group and time ($F_{1, 124}$ = .975, p = .325, η^2 = .008). Because there was no significant interaction, the main effects were examined. There was no significant difference in Scantron *Performance Series* scores based on the group ($F_{1, 124}$ = .001, p = 0.973, η^2 < .001). However, there was a significant difference in Scantron *Performance Series* scores pre- and post-test ($F_{1, 124}$ = 91.828, p < .001), where Scantron *Performance Series* scores were higher post-test than pre-test. About 43% of the variance was explained by the time of the assessment (η^2 = .425).

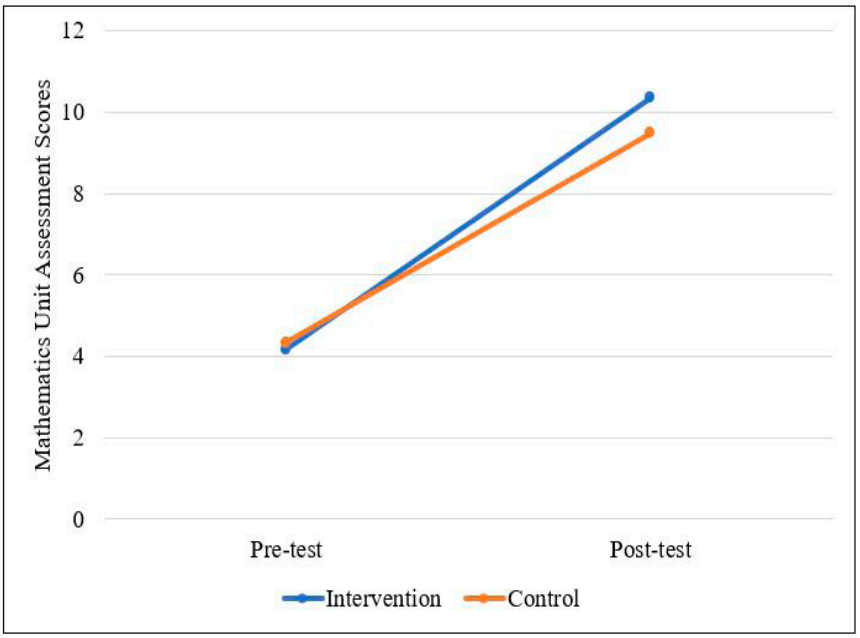
Mathematics Unit Assessment

A mixed nested ANOVA was used to determine whether mathematics unit assessment scores differed based on group and time. There was no significant difference in the mathematics unit assessment scores based on the school ($F_{2, 118}$ = 2.836, p = .063, η^2 = .046). There was a significant difference in mathematics unit assessment scores based on the interaction of group and time ($F_{1, 118}$ = 4.164, p = .044). The interaction explains about 3% of the variance in mathematics unit assessment scores (η^2 = .027). To follow up on this significant interaction, simple effects analyses were completed. There was no significant difference in mathematics unit assessment scores at pre-test based on the group (t_{122} = -.404, p = .687). However, there was a significant difference in mathematics unit assessment at post-test based on the group (t_{128} = 2.105, p = .037). See Figure 2 for a visual depiction of mean unit assessment scores.

Discussion

Objective measures of academic performance regarding integration in physical education have been widely excluded from the literature. To address this gap, the purpose of this study was to examine the effects of integrating mathematics into physical education

Figure 2
Mean Scores of the Mathematics Unit Assessments



on academic performance. Multiple measurements of mathematics performance were included: mathematics grades, standardized mathematics assessment, and mathematics unit assessment. It was hypothesized that mathematics performance would improve after integrating mathematics into physical education, as there appears to be a link between movement and academic performance in both the classroom setting (Donnelly et al., 2009; Reed et al., 2010) and physical education (Cecchini & Carriedo, 2020; Derri et al., 2010).

Across all measures of mathematics performance, students in both groups significantly improved from pre- to post-intervention. Mathematics grades significantly increased from the first quarter to the second quarter, Scantron *Performance Series* assessment scores significantly increased from pre-test to post-test, and mathematics unit assessment scores increased from pre-test to post-test. These findings confirmed those of previous physical education integration studies (Cecchini & Carriedo, 2020; Derri et al., 2010), where all students improved over time, showing no detrimental effects of the intervention.

When considering the interaction of group (intervention and control) and time (pre- and post-intervention), significant differences were only observed in the mathematics unit assessment, where the intervention group saw significantly greater improvements from pre- to post-test compared to the control group. This significant difference supported previous findings (Cecchini & Carriedo, 2020; Derri et al., 2010). Derri et al. (2010) found that kindergartners who participated in a written and oral speech program in physical education outperformed their peers taught the same content in a traditional classroom setting. Cecchini and Carriedo (2020) found that first graders who participated in an intervention that integrated mathematics into physical education performed better on a subtraction assessment than students in the control group.

To explain why mathematics performance significantly differed based on the interaction of group and time on only the mathematics unit assessment, the objective measures of academic performance of previous physical education integration studies were explored (Cecchini & Carriedo, 2020; Derri et al., 2010). Previous studies only employed one objective measurement of academic performance. Derri et al. (2010) created an assessment to measure written and oral speech, and Cecchini and Carriedo (2020) used a timed subtraction assessment to measure subtraction skills. In both studies, the content of the interventions aligned with the assessments. In the present study, mathematics grades and the Scantron *Performance Series* assessment represented global measures of mathematics performance, where the intervention covered some, but not all, of the content related to those assessments. However, the mathematics content covered in the intervention was informed by the content taught in fourth-grade mathematics during the study. Therefore, the entirety of the mathematics content integrated into physical education during the intervention was evaluated on the mathematics unit assessment. While this seven-week intervention had no impact on global measures of mathematics performance, integrating mathematics into physical education improved scores on a short-term mathematics unit assessment.

Limitations

As with any study, this one was not without limitations. School differences were a limitation of this study. While recruiting par-

ticipants from multiple schools was a strength because it increased the sample size and added diversity, there was a nesting effect of school, where scores from Miller Elementary School were significantly greater than from Woods Elementary School. This limitation was accounted for by analyzing the data with a mixed nested ANOVA. A potential cause for the nesting effect could be the demographic differences between the two schools. Although in the same school district, students at Woods Elementary School represent a lower-income demographic. Additionally, more students at Woods Elementary School were English language learners, making language differences a potential barrier for students and their parents. This language barrier could explain the variance in the return rate of informed consents between the two schools. At Miller Elementary School, approximately 83% of the fourth-grade students consented to participating in the study. However, only approximately 36% of the fourth-grade students at Woods Elementary School consented to participate. Thirteen students between the two schools requested that all information and assessments to be translated into Spanish. One of these students was from Miller Elementary School, and 12 were from Woods Elementary School. Another potential cause of the differences in consent form return rate could have been a lack of trust in the university and the researchers.

Future Directions

Future studies are needed to continue to add to the body of literature surrounding integration in physical education. As Derri et al. (2010) suggested, future work should integrate other subjects into physical education after integrating language arts into physical education. Hastie (2011) connected science and physical education, and Rovegno and Gregg (2007) combined physical education with social studies; however, neither of these studies collected measurements of academic performance. Before the current study, Cecchini and Carriedo (2020) was the only study to objectively measure mathematics performance when mathematics was integrated into physical education.

In addition to further exploring integration across school subjects, future studies are suggested to examine integrating classroom content into secondary physical education. All previous studies (Cecchini & Carriedo, 2020; Chen et al., 2007, 2011; Derri et al.,

2010; Hastie, 2011; Rovegno & Gregg, 2007), including the current study, examined integration in physical education at the elementary level. Secondary students represent a novel population regarding the effects of classroom content integration in physical education.

Lastly, future research should explore the manipulation of study timelines. Although the current study was the longest intervention integrating classroom content into physical education with quantitative measurements to date at seven weeks, longer interventions could see greater improvements across all measures, especially global measures of academic performance. This study used mathematics grades and a standardized mathematics assessment to evaluate mathematics performance globally. The seven-week timeframe of this intervention was potentially a limiting factor in impacting those measures.

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PEDAGOGY

Examining the Impact of Community Inclusive Sport Event on Attitudes Toward People with Intellectual Disabilities Through a Sport Management Coursework: A Pilot Study

Chih-Chia (JJ) Chen and Soyoun Lim

Abstract

People with disabilities have become part of a growing population in the U.S. and globally. This study investigated the implicit and explicit attitudes after involvement in a community-inclusive soccer festival, StarkVegas Fútbol Jamboree, that included people with intellectual disabilities (ID). Nine sport management graduate students who enrolled in a sport event and facility management course and organized and implemented this event participated in this study. In addition, 15 event volunteers were recruited. Multiple strategies during event planning were utilized to reduce attitude bias. The measure of implicit attitudes toward disability was administered to sport management students before and after the event. The measure of explicit attitudes was collected on the event day for sport management students and volunteers. There was no association between implicit and explicit attitudes since both may tap into distinctly different knowledge structures. The strategies achieved a partial success. The sensitivity to disease and contact

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with people with disabilities may be possible factors associated with this change. However, explicit attitude scores were lower than in past literature due to limitations in direct and quality contact. The findings prove that faculty may use an inclusive community sport event to improve attitudes toward people with ID.

Introduction

Approximately 64 million (one in four) adults in the United States live with a disability (Centers of Disease Control and Prevention, 2022), and increasingly more are starting to participate in sport and physical activities because of their well-documented psychological and physiological benefits (Adams & Morgan, 2018; Lord & Patterson, 2008). Traditionally, Kinesiology, an interdisciplinary field that addresses human body movement, has placed disability issues in sub-disciplines, such as clinical exercise physiology or adapted physical education/activity. However, relevant disability information that spans all sport management domains is currently scarce. Shapiro and Pitts (2014) found only 0.016% of papers pertained to disability sport, leisure, recreation, or physical activity in 34 sport business management journals between 2002 to 2012. Further, Pitts et al. (2022) identified only 0.0006% of content related to disability, disability sport, and/or people with disabilities in sport across 24 sport management textbooks. As the field of sport business management develops, people with disabilities are a growing population in this industry. Thus, sports management curriculum standards (COSMA, 2016) have required sports management programs to prepare students to work in a "diverse sport management environment" (p. 54). It is important to include disability sport in the sport management curriculum for sport management majors.

Intellectual disability (ID) is currently the most common developmental disability. Approximately seven to eight million people in the United States have an ID (Administration for Community Living, 2022). This means people with ID have intellectual deficits and other cognitive limitations that may affect their adaptive behaviors in communication, social, and self-care skills. Regrettably, less favorable attitudes toward people with ID in society have been commonly observed. Chan et al. (1988) noted greater public acceptance for people with physical disabilities compared to those with ID. In

another study, de Laat et al. (2013) found that respondents have more positive behavioral and affective aspects of attitudes toward people with deafness, paralysis, and blindness than those with ID. Thus, much less favorable attitudes could be a potential barrier to achieving social inclusion (Kleintjes et al., 2013), which can lead to low self-esteem and psychological disorders in people with ID (Dagnan & Waring, 2004; Paterson et al., 2012). To change these attitudes, researchers embraced the "contact" hypothesis (Allport, 1954), which suggested that more structured contact can lead to positive public attitudes toward people with ID (Albaum et al., 2022; Ferrara et al., 2015). In the research areas of attitudes toward people with disabilities, the literature has focused on teachers and health professionals. However, studies that focus on sport management students are rare.

Measuring implicit and explicit attitudes toward people with disabilities is a common approach researchers use. Implicit attitudes represent an individual's unconscious thoughts and automatic responses whereas explicit attitudes indicate conscious control and deliberate action (Greenwald et al., 1998). In addition, sport management students are trained to develop skills related to planning, programming, administering, and evaluating an event. The current study aimed to examine implicit and explicit attitude changes after involvement in a community-inclusive soccer festival, StarkVegas Fútbol Jamboree, that included people with ID. The objective of the study was 1) to determine the association between implicit and explicit attitudes toward people with ID; 2) whether the implicit attitudes about ID among sport management students would differ in a sport management coursework program and 3) to determine differences in explicit attitudes between sport management students and volunteers after event participation. To date, no research has examined implicit attitudes or explicit attitudes in relation to involvement in this kind of community sport event, nor has research considered sport management students.

Methods

Participants

The current study employed a convenience sampling method. Nine graduate students (four males, five females) who enrolled in the Sport Event and Facility Management graduate-level course at

a Southeastern University in the United States participated in the study. Their mean age was 24.78 years (SD = 3.60). Additionally, 15 volunteers were randomly selected from StarkVegas Fútbol Jamboree. The mean age was 21.73 years (SD = 4.32).

Instrument

Harvard's Disability Implicit Association Test

Harvard University's Project Implicit (https://implicit.harvard.edu/) offers a free online assessment framework to help individuals identify implicit biases toward disabilities. Respondents were asked to sort pictures and words into groups as fast as possible to measure the strength of subconscious associations in their memory between certain concepts (e.g., physically abled and physically disabled people) and evaluations (e.g., good, bad). In this assessment, it was observed that respondents who were quicker to respond when items were more closely related in their mind would share the same button. Each respondent would also receive a suggestion that he/she had no preference or had a strong, moderate, or slight automatic preference for physically abled people over physically disabled people. The scoring system used a 4-point Likert-type scale from +4= no preference to +1 = strong automatic preference. Higher scores would indicate more favorable attitudes toward people with disabilities.

Attitude Toward Disabled Persons Scale, Form-O (ATDP-O)

ATDP-O is a 20-item instrument that uses a 6-point Likert-type scale from +3 = I agree very much to -3 = I disagree very much) to measure explicit attitudes towards people with disabilities. It was used to observe the extent to which the respondents perceived people with disabilities as similar to those without disabilities and the extent to which the respondents believed people with disabilities should be treated similarly to people without disabilities (Yuker & Hurley, 1987). After calculating the total scores of each item, a score of 60 was added to eliminate the negative scores. Thus, the possible range of final scores would be between 0 and 120. Higher scores would indicate more favorable attitudes toward people with disabilities.

Sport Event and Facility Management Course

Graduate students who enrolled in the Sport Event and Facility Management course were required for a practicum project to orga-

nize and implement an inclusive community soccer festival. Students worked in groups to contribute in different ways to run the event. A multi-strategy intervention was called for to impact deep-seated biases and a variety of existing negative stereotypes. One strategy that instructors utilized was consciousness-raising, wherein a topic of disability and sport was introduced in the lecture to make students aware of the nature of disability bias and the importance of physical activity and inclusion for people with ID. Another strategic intervention involved perspective taking. Students heard professionals who offered adapted physical activity for people with ID about what they did, how people with ID felt, and what the positive outcomes of sport participation people with ID. The final strategy involved exposure to people with ID. Students could watch their performance in the inclusive community soccer festival. These strategies were promoted in conjunction with the course schedule, allowing students to connect theoretical concepts in class material to real-world applications.

Procedure

The implicit attitude testing sessions were conducted by individual appointment at the beginning and end of the semester. The general purpose and procedure of the study were explained when the participants arrived. They were then led to a quiet room where they were administered Harvard's Disability Implicit Association Test on notebook computers with 14-inch screens set at a resolution of 1024 × 768 pixels. The test was completed under the direct supervision of the researchers.

The Attitude Toward Disabled Persons Scale questionnaire was distributed to participants on the event day. Participants completed the questionnaire individually to measure their explicit attitudes toward people with disabilities after watching the sports performance of people with ID in the event. The Human Subjects Institutional Review Board of the University approved all protocols.

Data Analysis

Analyses were conducted using SPSS for Windows (Version 28). The insufficient power and the violation of the normality assumption could be observed due to the small sample size in the current study. Non-parametric tests were utilized to test the hypothesis. A Spearman's rank correlation coefficient was conducted to test the

correlations between implicit and explicit attitudes. Wilcoxon signed rank test, similar to the parametric paired t-test in which the median values were used, was conducted to compare the differences in implicit attitudes between pre- and post-intervention. In addition, the Mann-Whitney test, similar to the parametric independent t-test in which the median values were used, was conducted to compare the differences in explicit attitudes between sport management students and volunteers. The statistical significance was evaluated at the alpha .05 level.

Table 1
Spearman's Rank Correlation Coefficient Among Attitude Measures

	Implicit attitude $_{\text{pre-intervention}}$	Implicit attitude $_{\text{post-intervention}}$	Explicit attitude
Implicit attitude $_{\text{pre-intervention}}$	-	.694*	.312
Implicit attitude $_{\text{post-intervention}}$		-	.206
Explicit attitude			-

note. * < .05

Results

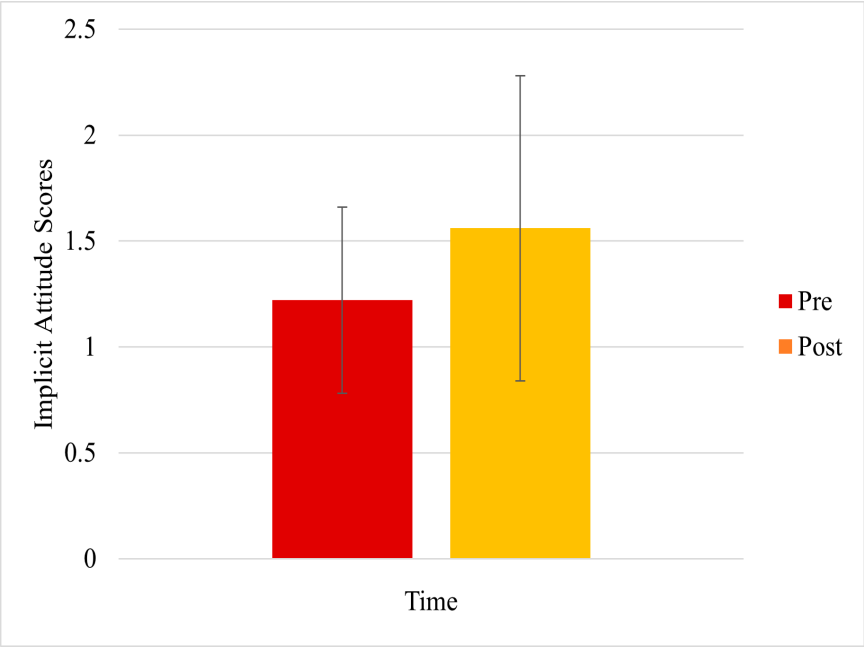
Correlations

A Spearman correlation coefficient between implicit and explicit attitudes was computed. As shown in Table 1, there were no significant correlations between implicit attitude $_{\text{pre-intervention}}$ and explicit attitude, r_s = .312, p = .414, and between implicit attitude $_{\text{post-intervention}}$ and explicit attitude, r_s = .206, p =.595.

Implicit Attitudes toward People with ID

As shown in Figure 1, implicit attitude had a mean of M = 1.22 (SD = 0.44) before intervention and a mean of M = 1.56 (SD = 0.72) after intervention. Wilcoxon signed rank test was calculated for these data and determined no significant difference in the implicit attitudes between pre- and post-interventions. However, the difference did approach conventional levels of significance, z = -1.73, p = 0.08.

Figure 1
Changes in the Implicit Attitude Scores



Explicit Attitudes Toward People with ID

The mean scores for students were 48.67 (SD = 5.72) and the mean scores for volunteers were 57.53 years (SD = 14.17). The Mann-Whitney test was calculated, which showed no significant difference in the implicit attitudes between students and volunteers, z = -1.37, p = 0.17.

Discussion

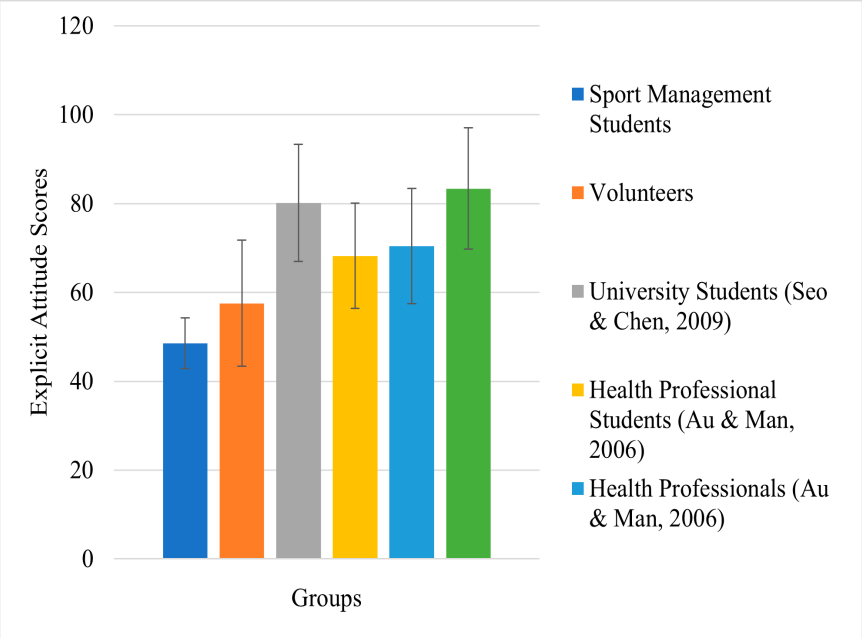
The current study aimed to assess the efficacy of a multi-strategy intervention to reduce implicit and explicit disability bias. First, consistent with past findings (Chen et al., 2011; Wilson & Scior, 2015), we did not observe statistically significant results between implicit and explicit attitudes. According to Devine's (1989) dissociation model, implicit and explicit measures may tap distinct knowledge structures. Further, in the present study, students reported strong implicit disability bias before the intervention, suggesting these sport managers did have unconscious prejudice that may inform, without recognizing it, their interactions with people with ID. The results of the implicit disability bias could be problematic. Because

of the unconscious nature of implicit attitudes, sports managers may fail to provide accessible equipment or spaces, use plain language when describing exercise programs and procedures, and make biased decisions about adaptation and modification in sports settings. Hence, future research should investigate how implicit disability bias can affect the associations between sports managers' behavior and people with ID.

Although implicit bias remains difficult to change, our findings seemed promising. The intervention achieved partial success since the mean value of implicit bias was reduced to a marginally significant level. Factors such as sensitivity to the concept of disease (Wilson & Scior, 2014) and contact with people with disabilities (Enea-Drapeau et al., 2012) appear to be associated with implicit attitudes. The current study showed that multiple strategies can effectively reduce bias by providing students with opportunities to increase their understanding of the nature of ID. Lastly, StarkVegas Fútbol Jamboree provided a situation-specific environment for greater contact with people with ID and evoked students' empathy toward people with ID. Face-to-face interactions increase people's knowledge about people with disabilities, and thus understanding the special needs of people with disabilities may further improve their attitudes toward disabilities (Yildirim Hacıibrahimoğlu & Ustaoğlu, 2020).

Importantly, as shown in Figure 2, after StarkVegas Fútbol Jamboree, the mean ATDP-O scores for the respondents in the current study were, however, still lower than other university students (Seo & Chen, 2009), healthcare professionals and students (Au & Man, 2006) and teacher education majors (Marsh, 1983). Hence, it was determined that this could be due to the duration and quality of intervention (Babik & Gardner, 2021). For example, six- to eight-hour-long interventions involving eating lunch, chatting, playing games such as Bingo and Hot Potato, engaging in crafts, and dancing with people with disabilities and participants improved their attitudes toward people with disabilities (Hsiao, 2022). Moreover, participants may not have had prior contact or early experience with an individual with a disability, which may also affect their attitudes toward people with ID (Goddard & Evans, 2018). StarkVegas Fútbol Jamboree was a half day event. Only a three-hour-long observation, therefore, may also fail to reduce bias in students and volunteers.

Figure 2
Explicit Attitude Scores Compared to Other Studies



Some limitations in this study need to be addressed. A convenient sampling method was used. First, external validity and generalizability may not be strong enough due to the small sample size recruited from a college town in the Southeast. Second, although no significant difference in implicit attitudes with a moderate to strong effect size. This preliminary result is promising but needs to be replicated with a large sample size to validate the effectiveness of the course strategies. Third, more duration and quality contact experiences can help to validate the changes in attitudes towards people with ID.

Attitudinal barriers may hinder the inclusion of people with ID into our communities. However, the present study suggested that the impact of strategic interventions and a community-inclusive sport event through a sport event and facility management course may lead to changes in implicit attitudes toward people with ID among sport management graduate students. By training students to be able to work in a diverse environment, the improvement in disability sport and quality of life in people with ID may be feasible in the near future.

Compliance with Ethical Standards

Disclosure of potential conflicts of interest: Authors have no conflicts of interest to declare in reference to this work.

Research involving human participants and/or animals: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: Written informed consent was obtained from the participant(s) for their anonymized information to be published in this article.

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ADAPTED PHYSICAL EDUCATION

Physical Activity Preference and Participation in Middle School Age Students in Kentucky

Fabian Correia and Heather Erwin

Abstract

Physical activity in youth is significant as it lays the foundation for a healthier lifestyle. However, in physical education classes, the voice of the student often goes unheard. The purpose of this study was to determine how the perception or preference of physical activity differs by age, gender, and/or ethnicity in a middle school setting. Students in grades 6, 7, and 8 completed two surveys relating to physical activity and their experience in physical education. The validated PEAS (Orlic et al., 2017) and an activity list of activities typically offered in PE, as well as others outside of regular physical education classes. Gender played a significant role in female students being uncomfortable in and unsatisfied with their current PE experience. Ethnicity was a factor for students preferring individual sports above all others. Age did not show significance across any grade or activity. Findings are in favor of the inclusion of student voice in physical education to improve student experience and engagement. More research about the inclusion of ethnicity and gender must be done.

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Introduction

Physical activity (PA) in youth is significant as it lays the foundation for a healthier lifestyle as children age. The benefits of being regularly physically active are plentiful, as it improves muscle strength, cardiovascular fitness, and cognitive functions (Rodgers, 2008). Children also benefit socially from being physically active and learning sportsmanship and respect through group gameplay. Focusing on being physically active during youth has become agreed upon as developing movement skills and healthy habits at this age can be the foundation needed for success later in life. As children age, their motivation to be active may dwindle around their early teenage years because other interests or distractions begin to take precedence (Rodgers, 2008).

This study aims to investigate how the perception or preference for physical activity varies among different age groups, genders, and ethnicities in a middle school setting. The present study will achieve this by grouping the skills most likely to be taught in the yearly curriculum, along with activities students may participate in outside of class, to determine which activities are most enjoyed. The goal of this study will be to shed light on how building a more inclusive and student-led physical education class will improve participation.

Howard et al. (2011) investigated the impact of positive attitudes on participation in physical activity in their study, which included 1,317 participants (603 boys and 714 girls) in 9th to 12th grades. All students were from public high schools in five different school districts in New York City. The students were given Physical Education Activity Attitude Scale questionnaires, administered by their PE teachers, and scored using a 5-point Likert Scale to gather results. Scores of 20 indicated the most negative attitude, 21-40 indicated a negative attitude, 41-60 indicated a neutral attitude, 61-80 indicated a positive attitude, and 81-100 indicated a highly positive attitude (Howard et al., 2011). The second questionnaire was the Sports/Activities Preference Questionnaire. Reflecting on these scores indicates that students are not only aware of the need for physical education but also enjoy participating in group activities while in class (Howard et al., 2011).

Widening the array of physical activities offered in class could have a range of extensive benefits. One prominent example uses the

self-determination theory (SDT) to promote lifelong PA participation by providing positive experiences and attitudes. This theory asserts that humans have three basic psychological needs: autonomy, competence, and relatedness; and environments that promote the satisfaction of these needs are more likely to facilitate the internalization of motivation (Ryan & Deci, 2017). Giving youth opportunities to engage in activities they prefer during physical education (PE) may improve their attitudes towards physical activity as they progress towards these three pillars. Thus, it may improve their intrinsic and extrinsic motivation to be active both in class and outside (Ryan & Deci, 2017).

The use of SDT can play an extensive role when examining physical activity. Jonsson et al. (2017) found that when looking into students (age range 12-13) from multicultural communities with low socioeconomic status in Sweden, students mostly referred to spontaneous PA rather than organized PA. They also expressed that they enjoyed their PA engagement, which they indicated was promoted by the variation of PA, available options for PA, their physical skills, and the presence of peers. This ties into SDT as the results stress the importance of facilitating intrinsic motivation with a supportive PA environment in which students in the 12-13 range can satisfy their needs for autonomy, competence, and relatedness (Jonsson et al., 2017). These ideas are further cemented when looking into Vasconcellos et al. (2019), as they found results that show the effect of peers. Examples include, "I like sport, one is with friends, one can laugh," along with, "I am with my friends and my class is great to be around and it is just fun," (Vasconcellos et al., 2019, p. 5) when looking at positive quotes that improve relatedness. The results, however, were not all positive, as peer comparisons and varying interest in activities halted motivation. "… our teacher says, 'What do you want to do today?' and the boys yell, 'dodgeball' … so it's dodgeball … we just stand there," and "because I'm always sort of behind what everybody's doing."

Having a student's voice play a factor in a classroom setting can lead to a successful environment. In a few places, this is more prevalent than in a physical education setting. One study done by Couturier (2005) explains this very idea as faculty and teachers worked in unison to design, administer, and analyze a student

survey that would give voice to middle and high school students' perspectives on PE. This study distributed 7000 surveys, of which 5308 were returned for analysis (76% response rate). The school system was composed of four high schools (grades 9-12) and seven middle schools (grades 6-8), and the participants ranged in age from 11 to 20 years. The survey results showed varying statistics about students' participation in other topics in physical education. The top response for why students participated was, "It makes me healthier" (70.7%), followed closely by, "I like participating because I have fun" (69.6%), and "I like getting out of the classroom and moving" (68.8%) (Couturier & Chekpo, 2005). These results show that most students understand the benefit of being active while also enjoying leaving the more sedentary classroom to participate in movement activities. Moving forward in the survey, a large majority of students liked the idea of having input stating, "I would like to be able to pick my activities" (75.5%) and "I would like to be able to tell the teacher the activities I would like to do" (73.6%). This, once again, puts the curriculum, which is usually set in stone for teachers, in question.

Grade and Age

Age tends to become more of a factor in physical activity participation once students arrive at adolescence, with many dropping physical activity for other reasons, such as art, music, school, work, or relationships. Couturier et al. (2005) found that when asked about the curriculum, high schoolers were more likely to want to choose their activities (79.3%) as opposed to middle schoolers (71.7%). Middle schoolers scored higher in "wanting to choose my group" (67.1%) as opposed to high schoolers (56.8%). A more concerning contrast is why students in each age range participate. High schoolers in this area selected "because I have to" more than their middle school counterparts, with 41.3% and 32.4%, respectively (Couturier et al., 2005, p. 173). This shows the increase in students who feel they are forced to participate or only attend for a grade as they age.

Gender

Gender differences play a significant role in participation in different activities during a PE class. Bradley et al. (2000) state that middle school girls prefer non-competitive or individual activities, whereas middle school boys tend to choose traditional team sports.

Typically, most curricula revolve around group activities to involve the majority of the class better, but this approach may isolate those who do not prefer this type of activity. Girls in this age group tend to prefer individual and non-contact activities, such as swimming, volleyball, contemporary dance, aerobics, gymnastics, and rope jumping, compared to boys, who more frequently select contact and power activities, such as weight training, floor/street hockey, and football (Hill, 2005). This can be linked to the suggestions by Greenwood and Stillwell (2001) that boys tend to conceptualize those physical activities as providing an opportunity for competitive experiences. In contrast, girls may focus more on the social nature of activities.

Ethnicity and Race

Different ethnic and cultural backgrounds can also play a factor in students' preferences for different activities. Although research in this area is not extensive, Howard et al. (2011) state that students are likely to become more positive toward PA if they are in a learning environment that makes them comfortable and confident. Creating safer and more inclusive environments for students with different backgrounds would encourage participation across these fields. Representation also matters here as teachers have remained homogeneously white (80%) for decades in public school settings, and it was determined that 83% of undergraduate physical education majors were white (Boyd, 2021). The lack of representation from those charged with leading the physical education setting could negatively affect the students. Boyd (2021) found that Black, Latinx, Asian/Pacific Islander, and Native American students (i.e., students of color) in the United States represent more than 50% of public school students. Among this group, a teacher will find children of all different backgrounds, genders, ages, and differing opinions on PA.

If given opportunities, minority students have been shown to have improved levels of physical activity (Taverno et al., 2012). Minority girls who usually participated in an after-school program engaged in approximately three more minutes per hour of moderate to vigorous physical activity (MVPA) per day during after-school hours compared to those who usually went home after school. Further, minority girls who attended an after-school program accrued an additional five minutes per hour of total PA compared to those who went home after school. For white girls, the amount of time spent

in sedentary behavior, MVPA, and total PA did not differ by after-school setting (Taverno et al., 2012). Taverno and colleagues (2012) also found that though the interaction effect between race/ethnicity and the after-school setting was not significant for boys, minority boys who usually attended an after-school program (17.3%) spent less time in sedentary behavior ($p<0.05$) and had higher levels of MVPA and total PA compared with minority boys who usually went home after school.

Ethnicity and Gender

The Centers for Disease Control and Prevention found that among Hispanic and African American high school females, there is a higher prevalence of inactivity among African American girls than among Caucasian girls. Additionally, the prevalence of girls who receive insufficient physical activity is higher among eleventh- and twelfth-grade girls compared with ninth- and tenth-grade girls (Grieser et al., 2006). The need for intervention is clear, as evidenced by a study conducted by Grieser et al. (2006) who used semi-structured interviews and checklists to gauge interest in physical activity and determinants. Participants were from twelve schools selected for variety in setting, ethnicity, and socioeconomic status. Eighty interviews were completed, half for students in seventh grade and half for students in eighth grade. The checklist contained 54 activities ranging from sports and recreation to chores completed by 130 girls (half in the sixth, half in the eighth).

The results from this study showed that the girls perceived that the most significant benefit of physical activity was staying in shape; 88% of African American girls indicated that the most significant benefit of PA was staying in shape. Eighty-five percent of Caucasian students and 64% of Hispanic students selected staying in shape as the most significant benefit. The girls in this study correlated staying in shape with a healthy, strong, and attractive body with one student saying, "I think it would help to keep myself in shape, like if I'm busy all the time, then I'm not just loafing around. . .. When I get older, [like] 40, I can still look like I'm 30" (Grieser, 2006, p. 44).

The study also reported on determinants that fell into the categories of injury (41%), sweating (20%), and disliking certain sports or exercises (20%) (Grieser, 2006). The results showed injury concerns were based on either past injuries (their own or friends) or fear of

future injuries (aggressive players or perceived risk). Addressing these concerns would come with safer equipment, personal space, and playing games. The determinant of sweating also came with the potential for embarrassment or physical discomfort, with students saying, "I don't like to sweat. Because, for example, I have dance first period, and it gets my hair all messed up, and it just makes you stink and everything." Another student stated, "I have been knocked down before . . . and then, I got back up and I was breathing very heavily. It looked so embarrassing because the other girls were so physically active, still breathing right, and it was just horrible." (Grieser et al., 2006, p. 45). Addressing concerns about embarrassment is difficult, as each student perceives moments differently, but being able to hear their thoughts in advance should lead to teachers making their space more inclusive.

Methods

Participants

Participants were 147 students (n=85 male) from three local middle schools (grades six, seven, and eight) in Fayette County, Lexington, KY. The ages of the students ranged from 11 to 14 (11 years old: 39, 12 years old: 49, 13 years old: 43, 14 years old: 14), with one student each who was 10 and 15. Ethnicity broke down as follows: 38 Caucasian, 48 African American, 61 Other. The schools involved were Leestown Middle School, Morton Middle School, and Winburn Middle School. Recruitment took place through the school's physical education classes, and the school's willingness to involve the students. Consent forms were sent home with students following the expressed interest in the study. The forms were signed by an adult and returned to their PE teacher throughout the week. Upon the arrival of the researcher on the day of the survey distribution, assent forms were given to all students who returned their consent forms, which a parent or guardian signed. If students then decided to sign the assent forms, they were promptly given a survey. Participants' identities were completely anonymous as no names were collected. It is unclear, however, the number of students who missed the day of data collection (possible reasons include absence, transfer, and suspension) and were not included in the data, even though their consent form was signed.

Instruments

Students were given a survey with a list of activities/units offered in their regular physical education curriculum, along with the already validated Physical Education Attitude Scale (PEAS) (Orlic et al., 2017). The PEAS was chosen for this survey as it is all-encompassing for a PE class. The survey was previously validated using studies from 547 students from three primary (13- to 15-year-olds) and secondary (15- to 17-year-olds) schools in Serbian urban communities. The PEAS measured four dimensions: Satisfaction, Comfort, Activity, and Teacher. The satisfaction factor was saturated by items related to general emotional experience about PE. The Comfort factor consisted of somewhat more specific emotions toward PE, such as relaxation or anxiety related to PE. The third factor, Activity, covered motivational processes related to participating in PE classes. The last factor, Teacher, was saturated by items measuring the students' views of the PE teacher (Orlic et al., 2017).

Students were also given a survey consisting of a list of different activities (35) that they may or may not have in their regular PE class and asked to rank each based on their preference. The surveys used a Likert scale with a 5-point rating scale ranging from strongly prefer (5) the activity unit to dislike (1) the activity/statement strongly. At the end of the survey, participants were asked to add written information on why they placed certain activities in the strongly preferred or strongly disliked categories. Included in the survey was also a section for participant to give their age, gender, and/or ethnicity if they were comfortable sharing; however, no names were included. The goal of this was to better group responses by these parameters to observe preferences while maintaining anonymity. The only other equipment needed during the survey was either a pen or a pencil for filling in information.

Procedures

Data collection consisted of a one-time visit to the schools, although researchers had previously visited the schools to hand out consent forms. The surveys were completed on paper copies during the students' regularly scheduled PE class and were completed only once. Both surveys were given to the students at the same time to minimize movement during completion. The lead researcher, along

with the students' PE teacher, reviewed the instructions for the survey and the expectations of the students. Students were instructed to answer truthfully and complete the survey to the best of their ability. The researcher attempted to have students remain quiet during the survey to minimize the potential for biasing others' responses due to the presence of others. Following the completion, students raised their hands, and the proctors collected the survey. Students were given about twenty minutes of class time to complete the survey. If not completed, students were allowed more time, while the regularly scheduled class activities began.

Data Analysis

Following the completion of the surveys, codes were created based on the answers obtained from participants. Then, any common themes were identified in terms of the activities chosen by age, gender, and ethnic group, and the data were analyzed. Three-way ANOVAs (Analysis of Variance) were conducted to analyze the significance of preference for physical activity (PA) by age and ethnicity, while t-tests were administered for gender comparisons. Data were analyzed using SPSS to provide inferential statistics via a chi-squared test. The data were grouped by age, gender, or ethnicity using the different activities or statements to facilitate comparisons.

In the second survey, items were categorized into three groups: Team Sports, Individual Sports, and Leisure Activities. The independent variables in the study were the students' genders, ethnicities, and ages/grades. The dependent variables for this study were the activities, grouped in team, individual, or leisure. This was done to understand the differences in participation better. Bias towards certain activities was noted, for example, a student who solely enjoys individual sports may lean strongly towards activities such as tennis or archery as opposed to other activities. Students placing bias towards other students were dealt with during the presentation of surveys as proctors informed students to remain silent.

Results

Upon running the descriptive statistics, the frequency and proportions for the different age, gender, and ethnic groups were presented (see Table 1). For each group (gender, ethnicity, and age), a Pearson chi-squared value was reported. Along with this value, there

Table 1
Descriptive Statistics Combined

Age	Frequency	Percent
10	1	.007%
11	39	27%
12	49	33%
13	43	29%
14	14	10%
15	1	.007%
Ethnicity		
White	38	26%
Black / African American	48	33%
Asian	3	.02%
Hispanic	47	32%
Other	11	.7%
Gender		
Female	59	40%
Male	85	58%
Other	3	.02%

was an Asymptotic Significance (2-sided) column, which shows the level of significance between activity and either age, gender, or ethnicity. The same results were provided for the PEAS, as any statements with an Asymptotic Significance (2-sided) score lower than 0.05 were deemed to be significant. The significance is related to the statement/activity concerning the age, gender, or ethnicity of the student.

After the completion of the chi-square Tests, value scores were placed into the groups of Team Sports, Individual Sports, and Leisure Activities as well, using the PEAS dimensions of Satisfaction (further broken down into positive and negative), Comfort, Activity, and Teacher. One or two asterisks indicated the significance of these

scores. The number assessed to determine significance was 0.05, with one asterisk signaling the Asymptotic Significance (2-side) was lower, while two asterisks showed that the Asymptotic Significance was much lower. With a significance lower than .05 in their age, ethnicity, or gender, the student is more likely to prefer an activity or statement as opposed to the other groups. There were instances where no significance was shown for an activity or statement, meaning neither age, ethnicity, nor gender affected how the students perceived it. On a few occasions, some statements or activities had significance for two categories simultaneously.

Upon reviewing the results of the chi-square tests, age did not show any significant differences between Team Sports, Individual Sports, or Leisure Activities, indicating that there was no specific age group that preferred one activity over another within this data set. This finding differed for gender and ethnicity, as on two separate occasions, significant differences were present for the same activity. These activities were basketball (a Team Sport) and dancing (an Individual Sport). However, it is unclear which groups particularly enjoyed them due to the nature of the chi-squared test (see Table 2).

Table 2

Average Scores of Sports Between Genders and Ethnicities

Sport	Gender		Chi-Square	Ethnicity					Chi-Square
	Female	Male		White	Black or African American	Asian	Hispanic	Other	
Dancing	3.2	2.0	27.730**	2.3	3.3	3.0	2.7	2.1	49.104**
Basketball	3.3	3.6	23.829**	3.2	4.0	4.7	3.6	4.0	43.931**
Yoga	3.0	2.0	24.538**	2.7	3.1	2.3	2.7	3.4	20.889

Note. ** refers to p<0.001. * Refers to p<0.05

In this instance, yoga had the most significance when compared to gender, rather than ethnicity or age. When viewing ethnicity, several individual sports showed significant differences in this category: swimming (p <.01), tennis (p <.05), badminton (p <.05), and

dancing (p <.01), many of which are typically associated with high socioeconomic areas (Table 2).

A constant while conducting the analysis was the significant differences associated with gender. When exploring satisfaction, there was a greater likelihood of significant differences compared to ethnicity and age (see Table 3). Statements such as, "I'm mostly bored in PE classes," "I can't wait for PE class to end," and "I skip PE classes whenever I can," all showed major significance within the category of gender (although not present was which gender was the primary cause), but not age or ethnicity.

Table 3
Negative Satisfaction Comparison Across Different Groups

Statements	Gender	Ethnicity	Age
I'm mostly bored in PE classes	26.683**	26.256	16.594
I can't wait for PE class to end	22.371**	14.250	21.171
I don't like PE	11.114	20.555	16.160
I skip PE classes whenever I can	35.295**	6.877	18.592

Note. ** refers to p<0.001. * Refers to p<0.05

Continuing with the trend of Negative Satisfaction, several statements in Comfort showed more significance for gender than age or ethnicity. These statements were, "Sometimes I'm afraid while we exercise in PE classes", "I avoid some exercises we perform in PE classes," "I think that PE is only a waste of time," "and I feel uncomfortable in PE classes" and 'I feel fear in PE class" (see Tables 4 and 5). In terms of age and ethnicity, very few statements were significantly different. Statements such as, "I like to attend PE classes," "Too much competition in PE classes bothers me," and "PE classes are too tiring for me," all showed significance by age. When looking at ethnicity, two statements had major significance: "I find PE classes interesting" from Positive Satisfaction, and "I find PE classes interesting," from Teacher. Both are also being affected by their respective PE classes and teachers, as well as their ethnicities.

Discussion

Age

When looking at the results of the chi-squared tests for all types of activities, none stood out as being preferred or disliked. This may be perceived in both positive and negative ways. The former can be viewed as the students being willing and able to participate in any type of activity presented. If this is the case, then their PE curriculum could include more variety during class units, as the open-minded students then engage in activities typically not done in PE. The negative side could be that the students did not show significance in the activities listed due to a lack of interest in PA. Students in this age group may begin to phase out of being active. Research presented by Couturier et al. (2005) is supported by the significance shown in age and the comfort table of the current study. Statements such as "I avoid some exercises we perform in PE classes," "Too much competition in PE classes bothers me," and "PE classes are too tiring for me" showed significance regarding age and all have negative connotations associated with them.

Ethnicity

While going through the results related to ethnicity, Howard et al. (2011) come to mind as they state that students are likely to become more positive toward PA if they are in a learning environment that makes them comfortable and confident. In this study, this sentiment is echoed as there was major significance shown with the survey choice, "My PE teacher is too strict," and ethnicity. This could lead to these students being disinterested in PE or PA. However, there is optimism as significance was also shown in statements such as: "I am happy in PE classes," "I am active in PE classes," and "I find PE classes interesting." The latter showed major significance with ethnicity. All the statements presented show a clear attraction to PE and the need to foster a safe environment for the students to succeed. Improving ethnic representation may be needed at this point, as all PE teachers in this study were Caucasian, which aligns with Boyd's (2021) previous indication that most teachers in public school settings are homogeneously white (80%) and have been for decades.

Table 4
Comfort Comparison Across Different Groups

Statements	Gender	Ethnicity	Age
Sometimes I'm afraid while we exercise in PE classes.	32.642**	12.375	21.352
I avoid some exercises we perform in PE classes	26.944**	7.314	32.931*
I think that PE is only a waste of time	41.862**	11.359	15.968
I do not feel comfortable when wearing PE gear	11.348	13.410	26.655
I feel uncomfortable in PE classes	30.870**	19.806	21.014
Too much competition in PE classes bothers me	13.575	11.848	36.696*
PE classes are too tiring for me	12.060	20.262	34.476*
I think that PE is less important than other school subjects	10.158	20.103	21.200
PE class does not stimulate socializing	6.025	23.678	15.819
I feel uncomfortable changing my clothes in front of others in the dressing room	4.308	24.010	23.605
I feel fear in PE classes	22.191**	9.758	12.880
I feel uncomfortable as soon as I enter the school gym	11.599	23.375	18.624

Meanwhile, only 38% of this study's student population identified as Caucasian.

Ethnicity also appeared to be a factor affecting how the students responded to the activity list, as most sports showing any significance were or could be considered individual sports. The sole exception to this was the team sport basketball but the likes of tennis (.025), dancing (p<0.001), climbing (p=.031), skating (p=.015), swimming (p<0.001), badminton (p=.019), and golf/mini golf (p=.026) all showed significance with ethnicity. No other activities (n=27) were shown to have any significance, and many assumptions could be made from this list. One may consider that the students in the present survey did not enjoy working with others in the classes. It may also be a result of their family; either a relative plays/played the sport and the child became interested that way, or the students were placed in

an activity early on. Similarly to Hill and Cleven (2005), who found disparities in their results as they also found strong evidence of ethnic differences in the preference for activities, which might also have some basis in socioeconomic status, racial stereotyping, perceived dominance of sports by a culture, and role modeling within a culture.

Gender

For gender, there was major significance present for only three activities: basketball, yoga, and dancing. The latter is supported by Hill (2005), who writes about how girls in this age group may favor individual and non-contact activities, as opposed to boys, who select sports such as football. This finding also receives some significance. Along with the chi-squared test results, the use of descriptive averages conducted earlier in the study verifies the previous literature that girls preferred these no-contact activities, such as dancing ($_{Girls}$=3.2; $_{Boys}$= 2, respectively) and yoga ($_{Girls}$=3.1; $_{Boys}$=2, respectively) as opposed to boys.

Concerning the PEAS survey for gender, it was clear that the students involved in the Satisfactory (negative) category did not receive it well. Three out of the four statements in the negative satisfactory category showed significant differences based on gender (See Table 3). In other words, girls were receiving more negative satisfaction from their PE class than boys. When going through descriptive averages for their scores, it was shown that girls scored higher on average for all these statements than boys. Statements such as, "I'm mostly bored in PE classes, ($_{Girls}$ = 2; $_{Mboys}$ = 1.6$_{)}$" "I can't wait for PE class to end, ($_{Mgirls}$ = 2.2; $_{Mboys}$ = 1.6$_{)}$" and "I skip PE classes whenever I can, ($_{Mgirls}$ = 1.5; $_{Mboys}$ = 1.2)," all show the significance toward girls (Table 5).

This issue was also shown in the Comfort table as statements such as, "Sometimes I'm afraid while we exercise in PE classes," "I avoid some exercises we perform in PE classes," "I think that PE is only a waste of time," and "I feel uncomfortable in PE classes," all showed major significance. Girls felt more strongly about the following statement when analyzed with descriptive averages; "Sometimes I'm afraid while we exercise in PE classes, ($_{Mgirls}$ = 2.6; $_{Mboys}$ = 1.8)" "I avoid some exercises we perform in PE classes, ($_{Mgirls}$ = 2.5; $_{Mboys}$ = 1.8)" "I think that PE is only a waste of time, ($_{Mgirls}$ = 1.5; $_{Mboys}$ = 1.3)" "and "I feel uncomfortable in PE classes, ($_{Mgirls}$ = 2.6; $_{Mboys}$ = 1.8)" and

Table 5
Average Scores of Comfort Between Genders

Statements	Female	Male
I feel uncomfortable in PE classes.	2.6	1.8
I'm mostly bored in PE classes.	2.0	1.6
I avoid some exercises we perform in PE classes.	2.5	1.8
I skip PE classes whenever I can.	1.5	1.2
I can't wait for PE class to end.	2.2	1.6
I feel fear in PE classes.	2.0	1.4
I think that PE is only a waste of time.	1.5	1.3
Sometimes I'm afraid while we exercise in PE classes.	2.3	1.8

'I feel fear in PE class, ($_{Mgirls}$ = 2; $_{Mboys}$ = 1.4)".. Once again this makes the need for students' voices in PE more prevalent as it could be conducive to a more successful environment (Howard et al., 2011). This may be the result of several determinants such as injury, sweating, or disliking certain sports and exercises (Grieser, 2006) or level of competition/ intensity. Although this study did not measure these determinants, it is of note due to the nature of the statements and the outcomes of previous literature.

Conclusion

The findings in the present study reveal a wealth of information in favor of incorporating students' voices into physical education classes moving forward. Examining the lens of age, gender, and ethnicity, each grouping has its dilemmas with current PE. Gender and ethnicity specifically have the most work to be done, as students' needs have yet to be met. More research must be conducted into this matter; however, it has shown that there is a need for improvement, as well as ground to build on. The surveys involved in the study cover a wide range of activities and topics, all of which may contribute to a better understanding of what the students enjoy in PE. Ideally, future

teachers will use this study and the information provided to adjust how their class curriculum runs throughout the year potentially.

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ADAPTED PHYSICAL EDUCATION

Children's Recess Affect, Enjoyment, Physical Activity, and Opportunities by Victimization, Developmental Level, School Region, and Recess Location

Ken R. Lodewyk and Lauren McNamara

Abstract

Research on school recess has highlighted the need for more integrated and situated knowledge of students' recess experiences as a function of school and recess context. This study assessed differences in recess-specific negative affect, enjoyment and opportunities (indoors and outdoors), and physical activity and moderate-to-vigorous physical activity (MVPA) during outdoor recess as a function of victimization, developmental level (grades 4-6 or 7-8), and school urbanization (Greater Toronto Area) or in a small more isolated city or town within southwestern Ontario, Canada. Online surveys were completed during school by 445 students (209 boys; 236 girls) in grades 4-6 (n = 266) and 7-8 (n = 179) in 11 government-funded schools (four public in the GTA and seven Catholic in smaller cities and towns). MANOVA

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results revealed main affect differences by recess victimization, developmental level, and school urbanization. Students reporting victimization had a significantly higher negative affect, lower recess, physical activity, MVPA, opportunities, and enjoyment in outdoor recess, and lower opportunities for play during indoor recess. Students attending school in the Greater Toronto Area had a significantly higher negative affect on recess, enjoyment, and opportunities for play during indoor recess. Finally, students in grades 4-6 were statistically higher than those in grades 7-8 in each measured variable except for negative affect. These findings help illuminate specific insight into the potential role of victimization, recess location (indoors or outdoors), developmental level, and school urbanization on students' school recess experiences.

Introduction

School recess is a vital component of a Healthy School (CDC, 2022) and a Coordinated School Physical Activity Program (CDC-SHAPE America, 2017). Although elementary school recess is generally understood as a time for children to break from instruction, there is compelling evidence that students also tend to learn and develop mentally, physically, and socially during recess through positive physically and socially interactive play (Centers for Disease Control and Prevention, 2010; Durlak et al., 2011; Hodges et al., 2022; Pellegrini & Bohn, 2005; Ramstetter et al., 2010). For example, a recent systematic review of the benefits of school recess reported that recess "improves cognitive functioning, attention, classroom behavior, and classroom production; socially improves communication and negotiation skills; emotionally improves perseverance, self-control, and stress management skills; and physically improves motor skills and generally physical health" while decreasing sedentary behavior and elevating moderate-to-vigorous physical activity (MVPA) levels (Hodges et al., 2022, p. 960). Although school recess could account for up to 40% of recommended daily physical activity levels, students tend to be physically active for only about 40% of recess (Jarrett & Duckett-Hedgebeth, 2003), with only an average of 12 minutes of MVPA each day during recess (Hodges et al., 2022). Unfortunately, many of the potential positive outcomes can be stifled in negative school recess environments. Research has re-

vealed (e.g., London et al., 2015; McNamara, 2013; McNamara et al., 2018; Robert Wood Johnson Foundation, 2010; Vaillancourt et al., 2010) aspects of such compromised recess environments include, for example, a physically and socio-emotionally risky climate (i.e., cliques, power struggles, injuries, bullying, exclusion, teasing, and frequent conflict), inadequate staff supervision, and a lack of space (e.g., restricted to an indoor classroom or hallway; lacking adequate outdoor field and/or playground area) and options (i.e., suitable and diverse equipment) for wholistically engaging, physically active play.

Recess scholars (e.g., Hodges et al., 2022; McNamara et al., 2014; Parrish et al., 2020; Ramstetter et al., 2010) have welcomed research that illuminates environmental (e.g., indoors versus outdoors; school location), developmental (e.g., grade or age), organizational (e.g., access to equipment and a variety of optional activities), psychosocial (e.g., victimization, enjoyment, affect) aspects of recess that either facilitate or stifle positive outcomes during elementary school recess. Heeding such calls, the aim of this study was to discover more about levels of grade 4-8 students' recess affect, physical activity, and opportunities by their experiences of victimization, recess location (indoors or outdoors), school city size (metropolis or smaller more isolated cities), and developmental level (grades 4-6 and 7-8). The study was framed in social cognitive theory (Bandura, 1986) espousing that behavior emanates primarily and reciprocally from personal aspects such as thoughts, feelings, and beliefs; social dynamics like peer relationships, interactions, and conflict resolution; and environmental factors in the form of, for example, sociocultural climate and opportunities.

Enjoyment, Affect, and Victimization

Feelings of enjoyment ("generalized feelings such as pleasure, liking, and fun") (Scanlan & Simons, 1992, p. 203) and positive affect (collectively feeling enthusiastic, alert, happy, attentive, safe, accepted, confident, and proud) (Watson et al., 1988) tend to coexist (Pringle, 2010) and impact health and well-being (Gagne et al., 2003) through, for example, elevated and more consistent physical activity (Smith & St. Pierre, 2009) and self-determined motivation (McDonough & Crocker, 2007). Research (e.g., Hyndman et al., 2017; Ridgers et al., 2012) has revealed numerous positive recess outcomes that students tend to experience when they enjoy and have a

positive affect. These include being physically active, having choices, belongingness, support from peers, and positive social interactions from which students tend to feel more accepted, content, and calm (Baumeister & Leary, 1995; Gere & MacDonald, 2010).

Conversely, when students dislike and experience negative affect during recess, it often coincides with reduced physically active play (London et al., 2015; McNamara et al., 2014) and feelings of social exclusion and victimization during recess (Doll et al., 2003; McNamara, 2013). Victimization can take several forms (physical, social, or verbal) and is defined as "repeated exposure to purposeful attempts to injure or inflict discomfort and pain on another individual through words, physical contact, gestures, or exclusion from a group" (Olweus, 1993, p.1). Approximately 20-25% of school students report bullying, being a victim of bullying, or both (Juvonen & Graham, 2014) and it occurs mostly during recess (especially outside) perhaps because of the increased autonomy and reduced supervision relative to instructional settings in school (Vaillancourt et al., 2010). Being a victim of bullying can have short and long-term consequences such as feelings of fear and loneliness during recess, a compromised self-esteem, academic performance, and social relationships; and elevated risk for depression, suicidal thoughts, and abuse of substances (Hansen et al. 2012).

Opportunities During Outdoor and Indoor Recess

School recess in North America is generally held outdoors except in cases of inclement weather when the principal (in consultation with relevant policies and representatives from the school and School Board) decides to restrict students to indoor spaces only (McNamara et al., 2014). Compared to indoor recess, students tend to prefer it outdoors and have significantly higher levels of PA and MVPA outdoors (Tran et al., 2013). A Polish study by Lelonek and Przychodni (2020), revealed that 79% of girls and 68% of boys were sedentary during indoor recess (restricted to their classroom) which might be a concern because higher recess PA levels has been linked to more attention, on-task behavior, and self-regulation after recess (Hodges et al., 2022). These benefits can be compromised when rainy weather prevents students from going outdoors for recess for long periods of time (e.g., rainy springs or cold winters), often leading students to become more agitated and difficult to manage (Pellegrini

& Bohn, 2005). According to Vaillancourt et al. (2010), students feel the least safe in areas of the school that lack adult supervision; report the highest incidences of victimization in the playground/ school yard (71.6%) and outside recess areas (62.7%); and reported feeling unsafe during outdoor (39% of students) than indoor (17.9% of students) recess.

Providing adequate student opportunities for diverse, safe, and physically and socially interactive play during recess is also important. For example, the dominant environmental recess barriers reported by students are weather, bullying, social conflicts, safety concerns, boredom, and a lack of space, equipment, and play facilities (Knowles et al., 2013; Pawlowki et al., 2014). More specifically, students aged 8-12 tend to have elevated physical activity levels during recess when they enjoy and can participate in higher MVPA activities like tag games and sports, especially if they have the appropriate equipment (Hyndman & Lester, 2015). It appears that superior recess environments offer a range of well-organized equipment, ample and creative activity choices, adult support, peer role models, multiple suitable facilities (e.g., gyms, outdoor fields, and playing areas), diverse loose equipment (e.g., balls, frisbees, and skipping ropes), and possibly some optional structured/organized activities (Hyndman et al., 2014; Kuh et al., 2013; Parrish et al., 2020; Ridgers et al., 2012).

Developmental Level

Elementary schools in Canada typically include children from as young as kindergarten (or junior kindergarten) through grade 8, who tend to use the same facilities, space, and equipment (McNamara et al., 2014). According to Malina et al. (2004; Juvonen & Graham, 2014), on average at approximately 12 years of age, students transition from childhood to adolescence with corresponding cognitive, physical, and socio-emotional changes that include a more fragile physical self-concept and body image, an increased importance placed on peer acceptance and interactions, and an elevation in bullying (Juvonen & Graham, 2014). Further, research on recess PA and MVPA levels by age or grade has been mixed, although it appears that students in the upper grades tend to have lower PA and MVPA while being more sedentary (i.e., sitting or standing time) (Hyndman et al., 2017; Ridgers et al., 2010).

Students' interests in what to do during recess also change. For example, Knowles et al. (2013) reported that as elementary school children aged, they increasingly enjoyed games and outdoor recess more than indoor recess. Results from Lodewyk and McNamara's (2020) recess study noted that compared to those in grades 7-8, students in grades 4 through 6 preferred MVPA "and organizing and playing different games and activities with friends and others" during recess; whereas students in grades 7-8 "reported significantly higher enjoyment for having free time to hang out with and talk to others" (p. 368). For such reasons, along with evidence (e.g., Ridgers et al., 2012) that most recess studies have used children rather than adolescent samples, this study investigated differences in the previously reviewed constructs between students in grades 4-6 and 7-8.

School City Size

Finally, little is known about the relations between the school city size and recess outcomes, which might be due to the challenge of differentiating city size from other potential sociocultural factors like socio-economic status (SES), ethnicity, and cultural beliefs. For example, Massey et al. (2018) reported that:

> Disparities in school-based physical activity and recess opportunities exist for students in low-income schools. Children in urban schools, children in schools with more than 50% minority students, and children in schools with 75% of students eligible for free or reduced lunch have the lowest number of recess minutes per week and are the *least* likely to engage in school-based physical activity. These disparities become magnified given that youth in under-resourced communities typically have less access to physically active environments outside of school. (p. 48)

In somewhat of a contrast, a study in Spain by Ariz et al. (2022) reported significantly more MVPA during elementary school recess in those from ethnic minorities and with lower SES. Further, a study of school day physical activity in 3416 Iowa (USA) children in grades 4-6 by Joens-Matre et al. (2008) highlighted that the largest difference in total school day physical activity by children in urban cities (>250,000), semi-urban cities (<250,000), and rural areas (<50,000)

was at lunch time; with urban children significantly lower than those from both small cities and rural areas. Exploring differences in recess enjoyment and opportunities (indoor and outdoor) and negative affects between highly urban areas and smaller and more isolated cities will contribute new insight into this topic.

Study Objectives

This study addressed five research questions about recess with students in grades 4-8. First, what are grade 4-8 school students' levels of recess-based negative affect, outdoor PA, outdoor MVPA, indoor and outdoor enjoyment and opportunities, and victimization? Second, how do these constructs relate in the sample? Third, do enjoyment and opportunities differ significantly between indoor and outdoor recess? Fourth, is negative affect for recess predicted by the other variables (outdoor recess PA and MVPA; indoor and outdoor recess enjoyment and opportunities) after controlling for victimization (step 1), urban-rural (step 2), and developmental level (step 3)? Finally, do the constructs differ statistically as a function of being a victim of bullying during recess (Yes or No), developmental level (grades 4-6 and 7-8), and school location, being in a large urban area (i.e., GTA) or in smaller cities and towns?

Methods

Procedure and Participants

After securing ethical approval from all necessary personnel (i.e., university ethics board, school board, principal, teacher, student, and parent), consenting students accessed and completed a 40-item online survey through surveymonkey.com, with 27 items used to fulfill the aims of this study. The survey was administered by a research assistant in the school's computer lab/library during regular class time. Following the removal of five outlier cases evident through excessive Mahalanobis distance values ($p = .001$) using protocol from Tabachnick and Fidell (2006), the final sample was 445 ($n = 209$ boys and 236 girls) in grades 4 ($n = 90$), 5 ($n = 115$), 6 ($n = 61$), 7 ($n = 88$), and 8 ($n = 91$).

School and Recess Setting

Data was collected from consenting students in 11 government-funded schools (four public and seven Catholic) representing seven cities in a central Canadian province. In line with previous protocols for classifying city size (e.g., Barros et al., 2009; Joens-Matre et al., 2008), the schools located within the GTA were in a large concentrated urban area, as 6,255,000 persons resided there (Statistics Canada, 2021). In contrast, schools located in more isolated cities and towns had populations of 19,000 - 137,000. As the city with the smallest population (19,169) had more than 10,000 persons, none of the schools in the study were classified as highly rural (Statistics Canada, 2021). The annual average income per household (SES) for full-time workers in each city with schools in this study was $66,200 – $92,400 and correlated positively with city size (r = .53). Each school in this study had recess for their grades 4-8 students at the same time using the same facilities, space, and equipment; complied with the Ontario Ministry of Education (2014) policies requiring no fewer than two adult supervisors during outdoor recess; and followed a 'balanced day' schedule that included two 40-minute breaks per day, each consisting of a 20-minute "nutrition break" followed by a 20-minute "fitness break" that enabled (weather permitting) students to be outside for recess.

Measures

Demographic information (e.g., grade, sex, school name, and city) was requested of students first in the survey. Insight into specific ways students were experiencing victimization through bullying during recess was gathered through a seven-item checklist (Yes/No) wherein students responded to the stem: "Do others ever make you feel unwelcome or uncomfortable during recess because of any of the following?" Responses pertained to: (1) "My race, culture, or skin color"; (2) "My first language"; (3) "The way I look"; (4) "My religion or faith"; (5) "How much money my family makes"; (6) "A disability that I have"; and (7) "My activities or hobbies that I like." This survey item was adapted from the Ministry of Ontario sample school climate survey (2009) and has also been used previously in an elementary school recess setting (McNamara et al., 2018).

The remaining items were Likert-style to measure PA, MVPA, enjoyment, opportunities, and negative affects. These items were counterbalanced and used a 5-point Likert response scale (1 = *never* and 5 = *all the time*) with higher values reflecting more of each. The two items assessing PA during recess were: "I tend to move my body (walk, run, play actively) during outside recess"; and "I tend to stand still or sit down during outside recess" (reverse scored). The two items for MVPA in outdoor recess were: "I spend most of outside recess time being so physically active that I am breathing hard and sweating," and "During outside recess, I am really physically active." The PA and MVPA items have been used previously in research to reflect physical activity and MVPA (e.g., Lodewyk & Mandigo, 2017). Another four items assessed participants' overall enjoyment of recess (two for outdoor and the same two adapted for indoor recess). These were: "I enjoy outside recess" and "I like outside recess," and are from the longer enjoyment measure by Motl et al. (2001). The recess opportunities scale also consisted of four items (two for outdoor and the same two adapted for indoor recess). The first was: "I feel that there are many activity choices and options during outside recess." It has been used previously to assess autonomous choice as part of the *Learning Climate Questionnaire* (Standage et al., 2006). The second opportunity item ("Does your school have the equipment that you want to play with during outside recess?") has been used previously in an elementary recess setting (McNamara et al., 2018). Finally, negative affect consisted of the mean of five corresponding items (nervous, embarrassed, bored, anxious, and lonely) from the shortened Positive and Negative Affect Schedule (PANAS) developed by Watson et al. (1988) and validated for several settings (e.g., Crawford & Henry, 2004) including recess (McNamara et al., 2018). The stem for each negative affect item (nervous, embarrassed, bored, anxious/uptight, and lonely) was "During recess I usually feel…". Each scale's alpha reliability was satisfactory (.67 - .85), especially for scales with fewer than 10 items (Loewenthal, 1996; see Table 1).

Data Analysis

Following survey completion, the data was extracted from surveymonkey.com to the Statistical Package for Social Sciences (SPSS; version 28) for analysis. Descriptive statistics and Pearson bivariate correlations were computed to analyze relationships among the vari-

Table 1

Scale Descriptive Statistics and Alpha Reliability by Victimization, City Size, and Developmental Level

		All	Victimization		GTA		Developmental Level	
	α	*M (SD)*	No	Yes	No	Yes	Grade 4-6	Grades 7-8
N *or n*		445	314	131	350	95	266	179
Negative Effect in Recess	.72	2.05 (.67)	1.86 (.59)	2.49 (.68)	2.01 (.68)	2.20 (.62)	2.04 (.62)	2.06 (.75)
Scales								
Outdoor Recess								
Physically Active Level (1.01)	.75	3.91	(.90) 4.04 (.87)	3.80	(.91) 3.93 (.95)	3.89	(.87) 4.07 (.78)	3.67
Outdoors								
MVPA Level Outdoors (1.12)	.80	3.41	(1.03) 3.49 (.99)	3.22	(1.12) 3.42 (1.06)	3.39	(.95) 3.60 (.92)	3.14
Opportunities Outdoors (1.03)	.67	3.33	(1.02) 3.42(.98)	3.11	(.83) 3.33 (1.03)	3.33	(.97) 3.47 (1.00)	3.13
Enjoyment Outdoors	.79	4.03 (.78) 4.13 (.71)		3.79 (.87) 4.06 (.78)		3.93 (.77) 4.16 (.74)		3.85 (.80)
Indoor Recess								
Enjoyment Indoors	.85	3.45 (1.04)	3.47 (1.01)	3.41 (1.12)	3.40 (1.05)	3.64 (.96)	3.57 (1.02)	3.28 (1.05)
Opportunities Indoors	.70	3.28 (1.04	3.35 (1.03)	3.10 (1.03)	3.19 (1.05)	3.59 (.92)	3.48 (1.00)	2.98 (1.02)

Note. M(SD) = Mean (Standard Deviation); *α* = alpha reliability; GTA = Greater Toronto Area; MVPA = Moderate-to-Vigorous Physical Activity.

ables in the study. Paired samples *t*-tests were utilized to determine significant differences in enjoyment and opportunities between indoor and outdoor recess. Determining whether negative affects were predicted by the remaining study variables after controlling for location and developmental level was assessed using hierarchical multiple regression analyses with victimization entered as step one, location at step two, developmental level at step three, and the recess variables (victimization, physical activity, enjoyment, and opportunities) at step four. Finally, multivariate analysis of variance (MANOVA) was used to assess differences in each of the dependent variables (negative affect; outdoor recess PA, MVPA, enjoyment, and opportunities; and enjoyment of and opportunities during indoor recess) as a function of three independent variables; namely, expe-

riencing bullying (victimization; Yes or No), school location (in the GTA metropolis or not), and developmental level (grades 4-6 or 7-8).

Results

Results revealed normal distributions (e.g., skew, kurtosis) and satisfactory (Loewenthal, 1996) alpha reliability coefficients (>.67) for each of the dependent variables in this study. These, and the descriptive statistics overall and by victimization, school location, and developmental level, are reported in Table 1. The mean sum of the seven victimization to bullying items was .52 (*SD* = 1.02). The frequency of each form of victimization were my "activities or hobbies" (*n* = 80; 18%); "the way I look" (*n* = 68; 15.3%); "how much money my family makes" (*n* = 28; 6.3%); "my race, culture, or skin color" (*n* = 16; 3.6%); "a disability that I have" (*n* = 15; 3.4%), "my religion or faith" (*n* = 14; 3.1%); and, "my first language" (*n* = 10; 2.2%). A total of 314 (70.6%) reported no victimization, 72 (16.2%) reported one form, 35 (7.9%) two forms, 18 (4%) three forms, and 6 (1.2%) four or more forms.

Pearson bivariate correlations and among dependent variables for the overall sample are presented in Table 2. There were moderate ($r > .25$) and statistically significant ($p < .01$) correlations between each of the outdoor recess variables (PA, MVPA, opportunities, and

Table 2
Scale Correlations

Scales	1	2	3	4	5	6	7
1. Negative Effect	-						
2. Physical Activity Outdoors	-.38**	-					
3. MVPA Outdoors	-.29**	.65**	-				
4. Opportunities Outdoors	-.25**	.30**	.35**	-			
5. Enjoyment Outdoors	-.40**	.50**	.50**	.46**	-		
6. Enjoyment Indoors	.08	-.13**	-.19**	.05	-.03	-	
7. Opportunities Indoors	-.09	.12**	-.06	.35**	.13**	.53**	-

Note. * $p < .05$; ** $p < .01$. MVPA = Moderate to Vigorous Physical Activity.

Table 3
MANOVA Differences by Victimization, City Size, and Developmental Level

	Victimization			GTA or Smaller City			Developmental Level		
Dependent Variables	F	*P*	η^2	F	*p*	η^2	F	*p*	η^2
Negative Affect	96.00	<.001	.178	6.53	.011	.015	.19	.67	<.001
Physical Activity Outdoors	13.60	<.001	.030	1.55	.214	.003	21.18	<.001	.046
MVPA Outdoors	6.42	.012	.014	.074	.786	<.001	21.80	<.001	.047
Opportunities Outdoors	8.28	.004	.018	0.00	.97	<.001	12.56	<.001	.028
Enjoyment Outdoors	18.20	<.001	.039	2.15	.14	.005	17.18	<.001	.037
Enjoyment Indoors	0.28	.60	.001	4.21	.041	.009	8.37	.004	.019
Opportunities Indoors	5.47	.02	.012	11.64	<.001	.026	26.70	<.001	.057

Note. η^2 = eta squared. GTA = Greater Toronto Area; MVPA = Moderate to Vigorous Physical Activity.

enjoyment) along with negative affect (inversely). More specifically, outdoor recess enjoyment and lower negative affects were associated with elevated PA, MVPA, and opportunities during outdoor recess. Pertaining to the indoor recess experience, students were significantly more likely to enjoy indoor recess if they had lower levels of PA and MVPA outdoors and if they had ample activity and equipment opportunities during indoor recess. Students were also more prone to report such play opportunities during indoor recess if they enjoyed and were more physically active in outdoor recess.

The paired sample t-test results assessing differences in indoor and outdoor recess enjoyment revealed significantly higher enjoyment for outdoor than indoor recess $t(444) = 9.31$, $p < .001$). There was no significant difference between indoor and outdoor opportunities [$t(444) = -.995$, $p = .320$).

Results of the hierarchical regression analyses with negative affect as the outcome variable, victimization entered at step one, school city size added at step two, developmental level included at step three, and the remaining six recess variables entered at step four as predictors are displayed in Table 4. Results revealed that victimization predicted negative affect in step one [$R^2 = .176$, F (1, 443) = 96.00, $p < .001$], school city size added significantly to the prediction

Table 4

Results of Hierarchical Multiple Regression on Recess Variables

			Negative Affect		
Step	Predictors	β	R^2	R^2 Change	*t*
1			.176	.178***	
	Victimization	.422			9.80***
2			.203	.024***	
	Victimization	.435			10.21***
	Location	.157			3.68***
3			.205	.003	
	Victimization	.434			10.19***
	Location	.174			3.88***
	Developmental Level	.055			1.23
4			.336	.132***	
	Victimization	.349			8.65***
	Location	.109			2.59**
	Developmental Level	-.051			-1.18
	Recess Variables				
	Physical Activity Out	-.186			-3.43***
	MVPA Out	.004			.072
	Opportunity Out	-.045			-.938
	Opportunity In	-.045			-.875
	Enjoyment Out	-.217			-4.30***
	Enjoyment In	.065			1.35

Note. * $p < .05$. ** $p < .01$. *** $p < .001$. β values are standardized regression coefficients; R^2 values are cumulative with each incremental step adding to the variance explained. PA = Physical Activity; MVPA = Moderate-to-Vigorous Physical Activity; Out = Outdoors recess; In = Indoors recess.

of negative affect in step three [$R^{2\ Change} = .024$, $p < .001$], developmental level did not account for a significant portion of the remaining variance for negative affect in step three [$R^{2\ change} = .003$, $p = .221$], and the remaining variables added significantly to the prediction of negative affect in step four [$R^{2\ change} = .132$, $p <= .001$]. Statistical individual predictors of negative affect for recess in the final step were outside recess enjoyment ($\beta = -.217$, $t = -4.30$, $p = .001$) and outside physical activity ($\beta = -.186$, $t = -3.43$, $p < .001$).

Finally, results of the MANOVA analyses separately exploring differences in the seven dependent variables (PA, MVPA, negative affect, and indoor and outdoor enjoyment and opportunities) as a function of victimization (Yes or No), school city size (in the GTA metropolis or not), and developmental level (grades 4-6 or 7-8) revealed a main affect for each. These were [$F(7, 437) = 14.17$, $p < .001$, $\eta^2 = .185$] for victimization; [$F(7, 437) = 3.25$, $p = .002$, $\eta^2 = .050$] school city in a metropolis or not; and [$F(7, 437) = 8.51$, $p < .001$, $\eta^2 = .120$] for developmental level. The results of follow-up ANOVA tests are reported in Table 3. They revealed, first, that those reporting being a victim of bullying during recess were significantly more likely to have a negative affect for recess ($p < .001$); lower physical activity ($p < .001$), MVPA ($p = .012$), opportunities ($p = .004$), and enjoyment ($p < .001$) in outdoor recess; and fewer opportunities for play during indoor recess ($p = .02$). The second MANOVA procedure specifically revealed that students attending schools in the GTA were significantly higher in negative affect for recess ($p = .011$) and more likely to enjoy $p = .041$) and report opportunities for play ($p < .001$) during indoor recess than students in smaller more isolated schools. Finally, the third MANOVA specifically revealed that students in grades 4-6 were significantly more likely than those in grades 7-8 to be higher in each of the dependent variables ($p < .004$) except for negative affects ($p = .67$).

Discussion

This study aimed to discover more about the levels of grade 4-8 students' recess affect, physical activity, and opportunities by their experiences of victimization, recess location (indoors or outdoors), school city size (metropolis or smaller, more isolated cities), and developmental level (grades 4-6 and 7-8). In line with previous re-

search (e.g., Lodewyk & McNamara, 2020), students in our study reported significantly higher enjoyment for outdoor recess than indoor recess. Ridgers et al. (2010) reports that, although students can be content to stay indoors if there are enough opportunities and choices of things to do, they tend to prefer outdoor recess because of, for example, the fewer environmental constraints for active play in the form of adult expectations and rules, bullying, constrained spaces, and a lack of usable equipment. Levels and significant predictive relations between negative affect and victimization in this study also corroborate previous research linking these constructs (e.g., Hansen et al., 2012; McNamara, 2013**;** Pringle, 2010) in elementary school recess. For example, our finding that 29.4% of students reported at one form of victimization (feeling unwelcome or uncomfortable) during recess, 13.3% reported two, and 5.2% reported three or more of the seven possible forms resembled values reported by Author et al. (2018) using the same victimization measure. These results affirm the importance of recognizing students with high victimization and negative affect while targeting strategies to help them feel more welcomed, comfortable, and socially connected during recess (McNamara, 2021).

The present study also contributes new insight into how victimization and negative affect vary as a function of the enjoyment and opportunities students experience during indoor or outdoor recess, along with their level of physical activity and MVPA during outdoor recess. For example, a UK study of grades 3-5 students (Boulton et al., 2009) revealed that higher victimization predicted compromised recess liking in boys and girls. In our study, students who were higher in victimization reported significantly fewer opportunities for play during indoor recess and lower physical activity, MVPA, opportunities, and enjoyment in outdoor recess. Students were also more likely to enjoy indoor recess when they had ample activity and equipment opportunities, and if they enjoyed and had lower levels of physical activity and MVPA during outdoor recess. Students, especially those who experience victimization during recess, may need more support in the form of more diverse and available equipment and activity choices during inside recess, but especially during outside recess when they may feel more vulnerable due to the increased autonomy and reduced supervision compared to classroom settings

(Vaillancourt et al., 2010). According to the findings in this study and others, providing such support might also reciprocally improve these students' affects and levels of outside recess physical activity, MVPA, and enjoyment (Pringle, 2010; Smith & St. Pierre, 2009). For example, physical activity during recess has been linked to several positive academic outcomes after recess (Hodges et al., 2022), elevated affect and enjoyment during recess (McNamara, 2013), enhanced peer relationships at school, relatedness to school, and school climate (Haapala et al., 2014).

The significant developmental differences evident in this study are also worth discussing. The finding that students in grades 4-6 were significantly higher in physical activity and MVPA during outdoor recess than those in grades 7-8 corroborates other studies consistently showing the same, especially among girls (Hyndman et al., 2017; Ridgers et al., 2010). This result may be partially explained by the finding in the study that students in grades 4-6 also reported more enjoyment and opportunities during indoor and outdoor recess than those in grades 7-8. This may be partly due to the cognitive, physical, and socio-emotional changes associated with transitioning from childhood to adolescence, such as a more fragile physical self-concept and body image and an elevated value on peer acceptance and interactions (Juvonen & Graham, 2014). Corresponding changes in upper elementary school students' recess preferences from physically active and vigorous games to more sedentary activities that better meet their desire for socializing and relaxing with their friends (Lodewyk & McNamara, 2020; Lopes et al., 2006; Ridgers et al., 2010). Svanelöv's (2023) interviews with 18 Swedish middle school students provide some support for this by revealing that "students engaged in physical activity during recess to form a social group and community that was personally affirming, facilitated personal identity, and helped to counteract feelings of loneliness" (p. 11). Adolescents may need strategic interventions to increase their recess physical activity levels, such as providing them with more choices for semi-structured activities by a trained adult or student-leader that they can participate in with their friends, including opportunities for communication and cooperation, and that have a unifying weekly theme such as "obstacle course week" or "fitness circuit week" (Ramstetter et al., 2010; Stellino et al., 2010).

Perhaps the most noteworthy finding in this study was that, compared to students in Catholic schools located in smaller, more isolated cities, those from public schools within the GTA were significantly higher in negative affect for recess and were more likely to enjoy and report opportunities for play during indoor recess. We recognize that many contextual factors (e.g., ethnicity, culture, SES, school policies and practices) beyond urbanization were not fully accounted for, rendering it impossible to make any strong conjectures about these results beyond some potential explanations based on previous research. The noted differences between the GTA-public and smaller city-Catholic school samples could be related to unique concerns in highly urban settings. To illustrate some, Kasali and Dogan (2010) reported more space and variety of activities in private than public elementary schools in Turkey, Astor et al. (2001) found that as many as 23% of the urban elementary school students rated their playground as unsafe, and Massey et al. (2018, p. 48) noted that "levels of community violence, cost of extracurricular activities, lack of organized programs, lack of green space, and safety have been reported as barriers to PA among urban youth." McNamara (2021) explains more specifically relative to recess in Canada, stating:

> Many school playgrounds, particularly those in dense, urban neighbourhoods, do not have the capacity to provide ample space for children to run freely and engage in active play... Although there is little scholarly documentation available with regards to the description of schoolyards across Canada, the traditional built environment of many schoolyards, particularly those in urban or low-income neighbourhoods, tends to be lacking in natural landscape elements such as trees, shrubs, grass, hills, logs, sand, and rocks… It is not uncommon, particularly in lowincome areas, to see 'playgrounds' created from parking lots, sharing space with school dumpsters and lacking any fixed equipment or ground markings. (p. 1820)

Another viable explanation for these differences is that indoor recess in the public-urban schools may have (for whatever reason) been more motivating for students, hence their elevated enjoyment,

sense of activity choices, and perceptions of equipment to use during indoor recess.

According to Kasali and Dogan (2010, p. 530), "students are more likely to be stationary and stay inside their classrooms when indoor and outdoor spaces are too congested, lack variety, and are inaccessible." They recommend that students have the personal choice of indoor or outdoor recess, as it enables them to make a choice that is aligned with their preferences. Depending on the results of subsequent research, it might also be helpful to tailor interventions to the specific cultural dynamics of each school and surrounding demographic because, as Anthamatten et al. (2011) found, recess yards that are "culturally tailored" within a community intervention can facilitate voluntary physical activity and healthy physical development during recess. More research into the specific features of schools, including availability of social media for use during recess, is necessary to make more robust assertions about potential causes for this elevation in indoor recess enjoyment and opportunities in urban-public elementary schools.

There are inherent limitations on potential inferences in using self-report data and focusing on construct means and relationships in this study. We also note the potential confounding of having each GTA school be a public school while each school from a smaller city was a Catholic school. A final limitation was not collecting and reporting on more individual and school-specific demographic data, such as students' SES, school policies and procedures, and the structure of the school areas (e.g., green space, line markings, supervision, and availability of stable and loose equipment) used for indoor and outdoor recess. This would have added significantly to the study because, according to Hannus et al. (2018), "assumptions cannot be made about which barriers and facilitators affect a specific population in its social, organizational, physical, and cultural context" (p. 1017).

Future research should investigate the potential role of SES, ethnic, religious, and socio-cultural factors "climate" of each school community on students' recess experiences because, for example, neighborhood dynamics are associated with children's well-being and activity patterns, especially in low-income areas (Ariz et al., 2022). For example, Ridgers et al. (2016) found that playground in-

terventions such as adding physical structures and field markings to the school playground increased recess involvement and physical activity levels in low-income areas. Barros et al. (2009) found an increased likelihood of not having recess in children who were black or Hispanic, living in a large or medium-sized city, attending public school, and having lower family income and parental education.

Finally, an investigation of schools' recess policies and practice by Olsen et al. (2024, p. 131) recommended that school leaders "consider establishing cohorts, developing a handbook, creating a rotation schedule (i.e., blacktop, field, playground), developing a recess committee, utilizing the physical education teacher for staff development, assigning recess, equipment and bags, offering a variety of activities, and teaching children how to play." The present study adds useful insight into some of these dynamics by investigating grade 4-8 students' recess affect, physical activity, and opportunities by their experiences of victimization, being indoors or outdoors, urbanization, and developmental level.

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PHYSICAL ACTIVITY

Carrying Out Full Face-To-Face Classes in Primary Grades: Threading the Preparations, Challenges, and Best Practices of Schools Through the Lens of Elementary Teachers

Marc Angielou Alagao and Ruben Jr Tagare

Abstract

When COVID-19 continued to spread in 2020, many institutions were impacted and began adapting to the new environment, which most people call the new normal. Schools were among the most impacted institutions, with pupils at all grade levels, from primary to higher education, forced to stay home and choose between modular and online learning modes. Hence, this study aimed to explore the experiences of elementary school teachers' preparations, challenges, and best practices in carrying out full face-to-face classes to design proactive measures to prevent further harm in the entire basic education system. The study used a qualitative descriptive research design approach, with in-depth interviews as the primary data collection method. Findings revealed that primary teachers extensively prepared for face-to-face classes by ensuring facilities were fixed, maintaining transparent communication with parents, rigorously implementing COVID-19 protocols, employ-

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ing structured teaching methods, and focusing on personal development. These encompass ensuring safe school environments, personal financial sacrifices due to inadequate government support, addressing poor academic skills of pupils, navigating insufficient parental support, and tackling learning gaps among pupils. The findings revealed that the elementary teachers propose several best practices for preparing face-to-face classes. These suggestions encompass motivating oneself to overcome challenges, maintaining an optimistic outlook, ensuring proper communication with parents/guardians, responsibly facing challenges, and fostering cooperation among school personnel.

Introduction

When COVID-19 continued to spread in 2020, many institutions were impacted and began adapting to the new environment, which most people call the new normal. Schools were among the most impacted institutions, with pupils at all grade levels, from primary to higher education, forced to stay home and choose between modular and online learning modes. Many pupils, as well as their parents and guardians, have encountered numerous difficulties in learning and guiding, particularly elementary pupils who are still learning basic and fundamental subjects (Andarwulan et al., 2021).

The challenges primary school teachers face in adapting to various modes of learning, as highlighted by Rasmitadila et al. (2020), underscore the need for comprehensive studies addressing the unique strategies and difficulties elementary teachers encounter in this specific context. Scholars, such as Widodo et al. (2020) and Rahmawati (2022), have identified the initial impacts of reopening schools at the elementary level, emphasizing the daunting task of managing diverse learning needs and adapting teaching methods to individual student requirements. However, a gap in the literature is noted, pointing to a lack of comprehensive studies addressing elementary teachers' specific challenges and strategies during transitions to full face-to-face classes.

Though several studies have been published investigating the problems that elementary school teachers are experiencing in different school settings, research exploring the preparations, challenges, and best practices of elementary teachers on the full implementation of full face-to-face classes is barely sufficient. Hence, this study will

be conducted to bridge this gap by investigating the difficulties that elementary teachers face as they prepare for the full adoption of face-to-face classes.

This study was very significant to the elementary school teachers who served as research participants, as a venue to express themselves and to generate authentic responses from the grassroots. These significant concerns from the teachers were essential information for educational leaders to design proactive measures to prevent further damage in the entire basic education system. This study was also significant as a contribution to the body of knowledge as a future reference for scholars who wish to pursue relevant topics.

Methodology

Research Design

This investigation used a qualitative method approach, particularly Husserl's Transcendental Phenomenology (TPh) approach. The researcher will use Transcendental Phenomenology to obtain a neutral description of the raw facts. With this, the researcher eliminates any personal bias. This comprehensive design aims to identify primary teachers' preparations through diverse individuals' lived experiences, providing insight into the core structures and meanings inherent in adaptability in the post-pandemic.

Research Participants and Materials

The study's research participants were seven primary school teachers in Libas Elementary School in South Cotabato who had been selected using a purposive technique. These elementary teachers took part in an open-ended interview. A list of guide questions was used as the study's materials. All record-keeping activities were documented in audio and video recorders.

Data Collection

The researcher will start all the undertakings by sending a letter to the Principal of Libas Elementary School of South Cotabato to conduct this study. After obtaining the permission, the researcher will secure informed consent from the research participants to serve as proof that all involved in the study consented and were granted permission. Informed consent emphasizes that participants are

Table 1
Readiness Activities for In-Person Elementary Classes

Essential Themes	Core Ideas
Maintenance of School Equipment and Facilities	• Primary teachers address and fix damages. • Primary teachers get themselves and the school ready for potential impacts of the pandemic. • Primary teachers arrange and set up the physical layout of the classroom.
Ongoing Communication with Parents and Guardians of Young Learners	• Primary teachers reach out to parents to provide updates. • Primary teachers communicate important information to parents. • Primary teachers organize meetings with parents when necessary.
Modern Teaching Approaches for Young Learners	• Primary teachers deliver fundamental lessons to their pupils. • Primary teachers cover core subjects necessary for student learning. • Primary teachers provide instruction on key academic concepts.
Cultivate Individual Competence in Teaching	• Primary teachers build their own teaching readiness. • Primary teachers develop independent teaching skills. • Primary teachers enhance their self-preparedness for instruction.

entirely aware of and informed about the study's undertakings. A preliminary visit and interview with participants will be conducted; therefore, the researcher is authorized to collect extra data to make the study more authentic and believable. The researcher will conduct in-depth interviews (IDI) with the participants to obtain more accurate data and assess their honesty and impartiality.

To validate the research findings, the researcher will use a validation and triangulation approach that gathers and compares data from several people. Finally, the researcher will be through three processes in the thematization process: data reduction, which involved shifting the data from the participants and translating it into figures, tables, and discussion, data display, which involves showing the organized data; and conclusion, drawing, and verification, which involves summarizing the primary inputs and, in contrast, assessing the given data to enhance the conclusion.

Data Analysis

The data from the qualitative research was analyzed using thematic analysis. This analysis aimed to comprehend the experiences, ideas, or behaviors reflected in the data, identify patterns of themes, and assess the research instrument's relevance, applicability, and adaptability for exploratory purposes (Vaismoradi et al., 2013). After addressing all the research questions, conclusions were drawn, and the key inputs of the study were validated. The foundation of the conclusion underwent verification through repeated review of all the data until the desired result was obtained.

To attest to the objectivity and creativity of this qualitative investigation, a changeover concept based on empirical theory, as put forward by Piantanida and Garman (2009), was employed. Following an in-depth exploration of the research participants' experiences, an engaged interpretation rooted in their statements was provided. The discussion was constrained in its incorporation of theories, research, and personal biases, strictly aimed at supporting data interpretation and preserving the genuineness of the participants' perspectives and emotions.

Results

Readiness Activities for In-Person Elementary Classes

Maintenance of School Equipment and Facilities

This theme investigates the research participants' physical preparation in school equipment and facilities, so pupils will be comfortable in their environment while learning. It revealed a broader perspective that fixing school equipment and facilities is linked to a holistic education enhancement. By addressing these issues, schools could improve the quality of education, enhance teacher-student interactions, and better prepare pupils for future challenges. This idea is expressed by research participants 1 and 6:

> "…what I did was repair the pupils's tables if they were broken, and I also fixed the designs inside and outside our room, including the flowerpots and other items that required design." –RQ1P1

Table 2
Difficulties Experienced by Primary Teachers in Readying for Full In-Person Classes

Essential Themes	Core Ideas
Ensuring Positive and Safe Learning Environments	• Primary teachers face difficulties in preparing the learning environment for students. • Primary teachers take on the responsibility of preparing both the classroom and themselves.
Out-of-Pocket Expenses Due to Inadequate Government Support	• Primary teachers use their own funds to support students' needs. • Primary teachers do not depend on external donations. • Primary teachers face higher personal expenses.
Underdeveloped academic abilities in children	• Primary teachers noticed the underdeveloped academic skills of students. • Primary teachers identified weaknesses in students' academic abilities. • Primary teachers observed struggles in students' academic performance.
Lack of Adequate Parental Support	• Primary teachers get minimal assistance from parents. • Primary teachers receive limited support from parents. • Primary teachers benefit from only a small amount of help from parents.
Filling Educational Gaps in Young Learners	• Primary teachers identified learning gaps in students. • Primary teachers noticed educational gaps among students. • Primary teachers recognized discrepancies in students' learning.

> "…we need to start by cleaning the things inside and repairing any broken equipment in the classroom. This way, when the pupils return, everything will be in order. Then, I arranged my room, making sure to space the chairs apart to allow social distancing among the pupils." –RQ1P6

This theme implies the importance of preparation in terms of the physical aspects of the learning environment to be substantially appealing to learners despite the ongoing pandemic. Berris & Miller (2013) emphasize that a learning environment should be inviting to pupils, fostering a sense of safety while promoting an atmosphere conducive to learning. The process of resuming limited in-person classes amidst the pandemic has seen certain schools taking proactive steps to initiate a gradual transition.

Table 3
Difficulties Experienced by Primary Teachers in Readying for Full In-Person Classes

Essential Themes	Core Ideas
Encourage personal determination to overcome challenges	• Primary teachers inspire themselves. • Primary teachers encounter challenges despite the difficulties they face.
Fostering a positive outlook	• Primary teachers cultivate a positive attitude. • Primary teachers foster an optimistic mindset. • Primary teachers build a constructive outlook.
Establishing proper channels of communication with parents/guardians	• Primary teachers engage in clear communication with parents. • Primary teachers maintain effective communication with parents. • Primary teachers ensure proper communication with parents.
Addressing challenges with conscientiousness	• Primary teachers embrace accountability for their profession. • Primary teachers own their professional duties. • Primary teachers assume responsibility for their work.
Joint cooperation among educational staff	• Primary teachers collaborate with school staff members. • Primary teachers team up with other school personnel. • Primary teachers cooperate with the school workforce.

Estrellado (2022) highlights this priming as a pivotal move in preparing for the return to physical classrooms. However, despite these initial efforts, the implications of readapting educational landscapes post-pandemic still present a notable and evolving challenge. The complexities involved in this transition go beyond mere logistics and encompass multifaceted considerations, including safety protocols, pedagogical adjustments, pupils' emotional well-being, and equity in access to education. Navigating these implications effectively demands comprehensive planning, ongoing assessment, and adaptable strategies to ensure a smooth and sustainable transition back to in-person learning.

Ongoing Communication with Parents and Guardians of Young Learners

This theme expressed the effective communication with parents and guardians of elementary pupils. Respondents consistently em-

phasized the need for clear, timely, and comprehensive communication to address concerns, disseminate vital information, and reassure parents about the safety and logistics of the full implementation of face-to-face classes in primary school. As stated by participants 1 and 5:

> "…prepare pupils by providing updates and information through contacting their parents." –RQ1P1

> "…before the classes started, I called a meeting for the parents and informed them to teach their pupils writing at home." –RQ1P5

This theme underscores the significance of effective communication when discussing important matters and issues with parents or guardians. According to Ozmen et al. (2016), parent-teacher communication offers diverse advantages to teachers, the school, and parents alike. Fostering collaboration between schools and families is a focal point in educational discourse among scholars. Establishing a partnership with parents is deemed essential for enhancing the quality of education as families significantly influence pupils' learning process and development (Buza & Hysa, 2020).

Modern Teaching Approaches for Young Learners

It emphasizes the need for a well-structured curriculum, thoughtful lesson planning, differentiation, assessment, classroom management, technology integration, and strong collaboration with parents. These elements collectively contribute to a holistic and systematic approach to primary education that benefits educators and pupils. As highlighted by participant 2:

> "…we provided them with only basic instruction. It wasn't as intensive as usual due to the pupils being impacted by two years of the pandemic." –RQ1P2

The theme entails how primary teachers manage the level of difficulty of their topics in the return to face-to-face classes. Primary school teachers shared valuable perspectives on educators' readiness levels and suggested ways to enhance preparation for teaching pupils after the pandemic (Akçay et al., 2023). The study conducted

by Lawal (2021) delves into the strategies pertinent to the effective implementation of blended teaching and learning within teacher preparation institutions during the "new normal." It illuminates the importance of diverse stakeholders' engagement in this endeavor.

The strategies outlined likely encompass a range of approaches such as technological integration, pedagogical innovation, and collaborative planning among educators, administrators, and support staff. This study underscores the necessity for a concerted effort among these stakeholders to navigate the challenges of the evolving educational landscape and capitalize on the opportunities afforded by blended learning methodologies.

Cultivate Individual Competence in Teaching

It underscores the need for teachers to be lifelong learners, continuously evolving and honing their skills. It emphasizes professional development, pedagogical techniques, classroom management, educational technology, curriculum design, reflective teaching, emotional intelligence, and parental collaboration. These elements collectively contribute to the development of self-equipped teachers who are better prepared to meet the evolving needs of their pupils and the educational landscape. Participant 5 stated:

> "…then, for me, we really need to be equipped. You should be ready so that when the pupils return and you face them, you are full of energy." –RQ1P5

This theme suggests that ensuring personal well-being is crucial for being adequately equipped and energetic while teaching pupils. According to Elas et al. (2019), possessing knowledge and skills related to technology leads to more effective teaching, enabling educators to be better equipped in their approach. Even amid the pandemic, primary teachers make a concerted effort to exude energy in front of their pupils, aiming to uplift the mood and alleviate any apprehension about returning to school.

Baser et al. (2016) emphasize that teachers undergo self-transformation by cultivating positive perspectives, attitudes, and dedicated efforts to acquire knowledge, ultimately enhancing their teaching methods significantly. This internal evolution toward positivity and continuous learning contributes to their ability to deliver more impactful and impressive teaching experiences for their pupils.

Difficulties Experienced by Primary Teachers in Readying for Full In-Person Classes

Ensuring Positive and Safe Learning Environments

Educators, administrators, and parents gather to prioritize maintaining safe and thriving school environments post-COVID-19. It revolves around adapting health protocols, fostering mental well-being, implementing flexible learning models, and creating a collaborative approach involving stakeholders. Insights focus on the need for adaptable strategies to balance safety measures and maintain a conducive learning environment. As stated by P1 and P4:

> "….what I mean is to determine if the school is ready for face-to-face interactions, as this poses the most significant challenge. Being adequately prepared for face-to-face learning is crucial for enabling pupils to learn easily." –RQ2P1

> "…the preparation of the internal and external learning materials within the classroom needs to be clean and in good condition for the pupils, as that's the main problem we encounter."–RQ2P4

This theme implies the challenges in adapting health protocols for the safety of learners. In response to the extensive trauma induced by the worldwide COVID-19 pandemic, it is increasingly imperative for educational institutions to actively seek methods to cultivate secure, trauma-sensitive, and rehabilitative learning environments (Brown, 2021). Findings underscored the apparent readiness of public schools at the beginning of the academic year, evident in their preparedness and organization before class commencement. The study highlighted that these institutions adhered to safety protocols aligned with the Department of Health's mandates, demonstrating compliance among public schools. Consequently, the study concluded that public schools effectively executed and implemented school improvement and safety plans, tailored explicitly for limited face-to-face classes, as evidenced by the observed protocols and strategies (Gildo et al., 2023).

Out-of-Pocket Expenses Due to Inadequate Government Support

Participants share personal experiences, highlighting financial challenges and sacrifices made due to the lack of adequate governmental aid. The conversation delves into the emotional and practical implications of navigating financial uncertainties independently. Insightful narratives shed light on strategies employed, community support networks, and the resilience demonstrated amid these challenges. The aim is to understand the human perspective behind these sacrifices and advocate for improved support systems. As stated by participants 5 and 6:

> "…The government budget falls short as it struggles to cover and sustain all the pupils' needs. As a teacher, it's disheartening when you can't supplement these limitations for the pupils' and classroom's improvement." –RQ2P5

> "…Before the class starts, my intention is to complete the classroom setup for the pupils. Additionally, I've taken the initiative to construct a personal comfort room for the pupils, leveraging donations from others while also contributing as a teacher." –RQ2P6

This theme implies that due to insufficient government funding for school repairs, primary teachers often use their finances to cover these expenses. The return to face-to-face classes post-pandemic for teachers unveiled a complex web of challenges. Primary teachers face ongoing financial difficulties, striving to meet their financial obligations. To address this, Fernando and Arrieta (2023) suggest that school leaders should examine these financial challenges and consider incorporating a financial literacy initiative into the in-service training teachers provide. This would assist in enhancing their financial management skills.

The emotional toll of personal losses experienced during the pandemic is exacerbated by financial instability. Teachers adapted to new teaching norms, balancing work-life demands while navigating reduced resources and increased pressures. Understanding these themes is crucial, revealing the importance of support networks, professional development, and strategies to foster resilience amidst profound personal and professional upheavals (Singh et al., 2021).

Underdeveloped Academic Abilities in Children

This aims to understand how the pandemic has affected pupils' academic abilities and explores the various factors contributing to this decline, such as disruptions in schooling, remote learning challenges, social isolation, and mental health impacts. Participants exchange ideas on potential solutions, supportive strategies, and the importance of adapting teaching methods to mitigate the impact on pupils' education. Participant 2 stated:

> "…The struggles pupils face are largely due to the pandemic's impact. They've had difficulty learning fundamental skills like reading, writing, and numeracy. With the return to face-to-face classes, it's evident that their academic skills have significantly deteriorated." –RQ2P2

This theme implies the challenges of primary teachers in teaching some pupils with poor academic skills due to remote learning. The reopening of schools in the Philippines after the pandemic has seen concerning academic performance among pupils. The learning outcomes have shown poor results despite returning to face-to-face classes. This poses a significant challenge for the education system, highlighting the need for targeted interventions and support to enhance student learning in the post-pandemic scenario (Amora et al., 2023). Aguaded et al. (2023) stated that while learning loss occurred during phases of physical separation between teachers and pupils, the pandemic brought about an unforeseen shift where the gap between them became primarily digital.

Lack of Adequate Parental Support

There is inadequate parental involvement in supporting teachers with restoring and cleaning school facilities during the return to face-to-face classes. The conversation delves into the difficulties of insufficient parental support, including the strain on school resources, compromised hygiene standards, and limited maintenance efforts. Participants discuss the importance of parental engagement in ensuring a safe and clean learning environment, emphasizing shared responsibility and the role of community collaboration. As P3 stated:

"…I really took it as a challenge because only few helped me" –RQ2P3

This implies that primary teachers encountered difficulties in effectively contacting parents to request assistance with school-related issues. The reopening of classes for the 2020-2021 school year, amidst health risks and stringent protocols from concerned agencies, has emphasized the critical role of parental involvement in ensuring a safe and effective return to face-to-face learning. Samoy Jr. et al. (2021) highlight the necessity for parents to actively engage with schools to navigate the challenges posed by health measures, underscoring the collaborative effort required between families and educational institutions during this post-pandemic transition.

Dotterer and Wehrspann (2015) found that social and economic factors limit parental involvement in schooling. The study revealed that schools are often difficult for parents to reach. While there is consensus on the benefits of parental engagement, differing views exist on its purpose. Importantly, involvement in school activities serves social functions, but engaging parents in facilitating learning at home significantly impacts learning outcomes.

Filling Educational Gaps in Young Learners

This discussion aims to explore the specific learning gaps noticed in pupils following the pandemic. This focuses on identifying specific areas where pupils exhibit gaps in learning, whether in core subjects, social skills, or emotional development. Participants discuss potential reasons for these observed gaps, such as disrupted learning environments, varying access to resources, or emotional stressors. P7 specified:

"…So, in other words, learning gaps are the cause, and until now, they continue to be the pupils' problem." –RQ2P7

This theme implies the challenges primary teachers face in pupils' learning gaps after lockdown. Creating a love for reading and fostering a strong literacy culture among pupil's post-pandemic is the primary aim for schools. However, cultivating this culture among young learners poses challenges. Tabroni et al. (2022) emphasize the crucial role of parental involvement in building a child's literacy culture, highlighting the collaborative effort needed between

schools and parents to achieve this goal in the face of post-pandemic educational shifts.

Moreover, Alejo et al. (2023) outlined that addressing the disruptions caused by COVID-19 requires implementing five crucial rapid measures: Ensuring access to education for all pupils and maintaining their attendance; Regularly evaluating learning levels; Focusing on teaching fundamental skills; Enhancing the effectiveness of instruction; and cultivating psychosocial health and well-being.

Effective Strategies for Elementary Teachers in Preparing for In-Person Classes

Encourage Personal Determination to Overcome Challenges

Teachers can find motivation by focusing on their purpose: their impact on pupils' lives. Emphasizing small victories, like pupils' progress, can boost morale. Encouraging a growth mindset and viewing challenges as growth opportunities helps sustain motivation. Support networks and sharing success stories among colleagues can foster a sense of community, enhance motivation and ongoing professional development, and stay updated with innovative teaching methods, which can invigorate educators, offering fresh perspectives and renewed enthusiasm in navigating post-pandemic teaching challenges. As stated by participants 1 and 3:

> "…Motivation and going with the flow are crucial because, ultimately, I'm the one who must help myself. If I don't confront my problems, they won't resolve themselves. Self-motivation is key, and it's something I consistently rely on." –RQ3P1

> "…I faced all the tasks, despite the struggles and exhaustion, because there was no other option but to complete the work. Eventually, I managed to overcome those challenges. –RQ3P1

This theme implies the need to motivate oneself to overcome the challenges of primary teachers. Baiza (2022) highlights the importance of self-motivation to extend beyond personal needs and prioritize the well-being of pupils. This call to action underscores the crucial role of educators in not only meeting academic needs

but also fostering a supportive and caring environment for pupils. Emphasizing empathy, dedication, and a commitment to the overall welfare of pupils becomes essential as teachers navigate the challenges of the post-pandemic educational landscape. Amid the public health crisis of the COVID-19 pandemic, shifting from face-to-face to online modes of learning and teaching is deemed essential. It has been recognized that employing strategies to enhance motivation can assist in overcoming the associated challenges (Thu & Nguyen, 2021).

Fostering a Positive Outlook

This theme captures teachers' resilience, adaptability, and innovative strategies to navigate unprecedented circumstances and continue providing quality education to pupils amid the pandemic. It highlights the importance of their role in shaping not just academic growth but also pupils' emotional and psychological well-being during these trying times. Participant 2 stated:

> "…Simply be an optimistic, passionate, and consistently enthusiastic individual." –RQ3P2

This theme entails that maintaining a positive outlook could help overcome challenges. Amidst the challenges of the pandemic and the return to face-to-face teaching, teachers exhibited remarkable resilience, hope, and optimism. Their unwavering determination to navigate uncertainties, adapt swiftly to new teaching methods, and support pupils in tumultuous times reflects their resilience. Despite the adversities, their hopeful and optimistic outlook has been a guiding light, inspiring colleagues and pupils alike as they continue to navigate the complexities of the post-pandemic educational landscape (Josefsson, 2022). As per Finnegan (2022), the teaching practices most strongly linked to pupils' reported sense of hope were 1) acknowledging and accepting negative emotions and 2) sustaining a positive perspective.

Establishing Proper Channels of Communication With Parent/ Guardians

In this theme, communicating effectively with parents or guardians during the post-pandemic educational phase is critical for ensuring a smooth transition and addressing any concerns or un-

certainties. By keeping communication channels open, providing necessary information, and promptly addressing concerns, schools can foster a supportive partnership with parents to benefit the pupils' education and well-being. Participant 4 stated:

> "…Engage in a polite and respectful conversation with parents regarding cleaning the internal and external areas of the classroom for the pupils."–RQ3P4

This theme implies the significance of proper communication with pupils' parents/guardians. El Cid (2018) conducted a study aiming to comprehend the potential of teacher-initiated communication to foster student learning and improve connections between home and school. The study delves into the effects of this communication on the relationships between school and home, student academic achievement, and motivation.

A study discovered that both teachers and parents play crucial roles as the foremost educators. Parents, in particular, are responsible for guiding and cultivating their pupils' behavioral, mental, and emotional development, shaping them into well-rounded individuals. Their role involves motivating pupils to harness their abilities, fostering discipline, and nurturing confidence (Asmarani, 2022). Hence, the necessity for developing effective communication channels with parents becomes evident.

Addressing Challenges with Conscientiousness

Facing challenges responsibly involves overcoming obstacles and embracing opportunities for growth, innovation, and resilience. It is about ensuring the well-being of both educators and pupils while maintaining educational quality and support in a rapidly changing educational landscape. Participant 5 stated:

> "…Stay consistently responsible and don't dwell on problems or challenges, as they can be overcome. Embrace your profession with love and always strive to maintain happiness." –RQ3P5

This theme entails the continuity of education while facing challenges responsibly. The authors aim to shed light on responsible problem-solving. Sá & Serpa (2020) focus on providing insights into

the challenges and opportunities posed by COVID-19 for higher education. They advocate for rediscovering teaching approaches, leadership strategies, and communication channels within the digital landscape. This digital transformation is considered integral to advancing sustainable educational development, emphasizing the importance of adapting teaching practices to meet evolving needs and embracing innovation to drive positive change.

During crises, the dynamics of teaching and learning go through notable shifts. Whether it is natural disasters or human-made incidents, schools and colleges need resilience, adapting through innovative means to sustain teaching and learning activities. Consequently, ensuring the continuity of education stands as a significant challenge for educators (Chang-Richards et al., 2013).

Joint Cooperation Among Educational Staff

In this theme, the success of returning to face-to-face education hinges on the cooperation, collaboration, and support among all school personnel. It is about fostering a unified approach to create a safe, supportive, and enriching learning environment for pupils while ensuring the well-being of everyone involved in the educational process. Participant 6 stated:

> "...help each other; if there's no assistance from the president or Ma'am (the school head), my expenses might increase." –RQ3P6

This theme emphasizes the importance of collaboration among school personnel in addressing matters within the educational setting. The current landscape presents unprecedented challenges for school administrators in the Philippines and globally. A recent study investigates explicitly the correlation between school principals' leadership and management styles and the readiness of public schools for the academic year. Focusing on five schools in Laguna City, the research contributes to developing governance operations and contingency plans tailored to these schools. This study's findings aim to inform and guide these administrators in enhancing their leadership approaches and operational strategies, intending to bolster the preparedness of schools in navigating the complex challenges they currently face (Villar et al., 2021). Additionally, collaborative efforts between parents, teachers, and school personnel are essential in edu-

cational settings, particularly in the pandemic where online learning or schooling is prevalent (Elka Anakotta, 2022).

Conclusion

Based on the findings, this study concludes that elementary teachers' preparatory measures significantly impact the creation of effective learning environments for face-to-face classes. Actions such as fixing school equipment, transparent communication with parents, implementing COVID protocols, employing systematic teaching approaches, and focusing on self-equipped teaching development collectively contribute to fostering conducive learning settings. These measures are pivotal in establishing safe, organized, and engaging classrooms, emphasizing the importance of meticulous preparation and structured teaching methods for a successful transition to face-to-face classes.

Furthermore, the study highlights the crucial role of proactive measures in benefiting pupils' learning experiences. It emphasizes the need for continued emphasis on these preparatory measures to ensure a smooth and productive shift toward face-to-face instruction, highlighting their significance in enhancing the educational journey for both teachers and pupils.

Moreover, this study concludes that the challenges faced by primary teachers in the preparation of face-to-face classes include ensuring safe school environments, enduring personal financial sacrifices due to inadequate government support, addressing pupils' academic shortcomings, managing insufficient parental involvement, and bridging learning gaps among pupils. These challenges highlight the need for addressing these multifaceted challenges, which necessitate proactive safety measures, adequate resources, ongoing professional development, and prioritizing teachers' well-being to ensure conducive learning environments.

Therefore, this study affirms that the suggestions put forth by primary teachers present valuable perspectives for enhancing conducive learning environments in primary grades amid significant adjustments. These recommendations involve motivating oneself to confront challenges, upholding a positive perspective, establishing effective communication with parents/guardians, responsibly addressing obstacles, and promoting collaboration among school staff.

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YOU AND THE LAW

Golf Cart Liability

Thomas H. Sawyer

Introduction

A famous quote by Mark Twain, "golf is a good walk," inspired John Feinstein to write the highly acclaimed best-seller, *A Good Walk Spoiled*. What would Mr. Twain say today? The golf cart has eliminated most of the walking on golf courses and dramatically increased the revenue side of the ledger. The majority of golfers today now ride golf carts rather than walk the course.

Golf cart users, be "FORE!"-warned: The zippy means of transportation—no longer limited to golf courses—carries "considerable risk of injury and morbidity" to drivers and passengers of all ages, especially kids and older adults.

Golf carts have transcended their original purpose and become a ubiquitous sight in various settings beyond the golf course. From navigating residential communities to shuttling visitors around resorts, tourist destinations, and university campuses, these versatile vehicles have found their way into everyday life for many people.

Additionally, the increasing popularity of golf carts outside traditional golfing environments has highlighted the need for a better understanding of the laws and regulations governing their use. Whether you are a homeowner in a gated community, a vacationer exploring a resort, or simply someone intrigued by the phenomenon of golf carts on the road, it's crucial to grasp the legal framework surrounding these vehicles to ensure safe and compliant operation.

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How are Golf Carts Classified legally?

With the legal framework surrounding golf carts, it is essential to understand how these vehicles are defined and classified within the law. Unlike traditional automobiles, golf carts occupy a unique niche that varies in classification depending on the jurisdiction and specific use. At the federal level, golf carts are typically classified as low-speed vehicles (LSVs) or neighborhood electric vehicles (NEVs), based on criteria such as maximum speed, weight, and safety features. LSVs and NEVs are subject to federal regulations established by agencies like the National Highway Traffic Safety Administration (NHTSA), which sets safety standards and requirements for these vehicles.

LSVs are designed for use on public roads with speed limits typically not exceeding 25 miles per hour. They must meet specific safety standards, including features such as headlights, turn signals, mirrors, and seatbelts. NEVs, on the other hand, are similar to LSVs but are limited to a maximum speed of 25 miles per hour and are intended for use in residential neighborhoods and other low-speed environments.

However, it's important to note that while federal regulations provide a baseline for LSVs and NEVs, the specific classification and regulation of golf carts can vary significantly at the state and local levels. Some states may have additional requirements or restrictions on the operation of golf carts, such as mandatory registration, insurance, or age restrictions for drivers. Furthermore, the classification of golf carts may differ based on their intended use and features. For example, golf carts used exclusively on golf courses may be subject to different regulations compared to those used for transportation in residential communities or commercial settings. Ultimately, understanding the legal definition and classification of golf carts is crucial for ensuring compliance with relevant laws and regulations.

Golf Cart Laws and Regulations at the Federal Level

While golf cart laws and regulations primarily fall under the purview of state and local governments, there are important federal regulations that set standards for certain types of golf carts, particularly those classified as low-speed vehicles (LSVs) and neighborhood electric vehicles (NEVs).

The National Highway Traffic Safety Administration (NHTSA), a federal agency responsible for setting safety standards for motor vehicles, oversees regulations pertaining to LSVs and NEVs. These regulations are designed to ensure the safety of both occupants and other road users when operating these types of vehicles on public roads.

One of the key regulations enforced by the NHTSA is the Federal Motor Vehicle Safety Standard (FMVSS) for low-speed vehicles (FMVSS 500). This standard establishes safety requirements for LSVs, including specifications for lighting, mirrors, seatbelts, brakes, and other essential features. LSVs must meet these standards to be considered roadworthy and legal for operation on public roads, with speed limits typically not exceeding 25 miles per hour. Additionally, the NHTSA provides guidance on the classification and operation of NEVs, which are similar to LSVs but are limited to a maximum speed of 25 miles per hour and are intended for use in residential neighborhoods and other low-speed environments.

While federal regulations set baseline safety standards for LSVs and NEVs, it's important to note that compliance with these regulations does not necessarily guarantee legal operation of golf carts in all jurisdictions. State and local governments may have additional requirements or restrictions on the use of golf carts, including registration, insurance, and age restrictions for drivers. In essence, by understanding the federal regulations governing LSVs and NEVs, golf cart owners and operators can ensure that their vehicles meet minimum safety standards for operation on public roads. However, it's equally important to familiarize oneself with state and local laws to ensure full compliance with all applicable regulations. In the following sections, we'll explore how golf cart laws vary at the state and local levels and discuss best practices for navigating these regulations effectively.

State-Level Golf Cart Laws and Regulations

While federal regulations provide a foundation for the safety standards of golf carts classified as low-speed vehicles (LSVs) and neighborhood electric vehicles (NEVs), the specifics of golf cart laws and regulations are largely determined at the state level. Each state has its own set of statutes and regulations governing the registration, operation, and safety requirements for golf carts on public roads.

The variations in state-level golf cart laws can be significant, ranging from differences in registration and insurance requirements to restrictions on where golf carts can be operated. Some states may require golf cart owners to register their vehicles with the Department of Motor Vehicles (DMV) and obtain special license plates or decals, while others may not have such requirements. Additionally, states may impose age restrictions on those who can operate a golf cart on public roads, with some requiring drivers to be at least 16 years old and possess a valid driver's license. Certain states may also mandate the use of safety equipment such as seatbelts and headlights, regardless of whether federal regulations require them for LSVs and NEVs.

Furthermore, state laws may dictate where golf carts are permitted to operate, including restrictions on using them on highways, busy roads, or certain types of terrain. Some states may designate specific lanes or areas for golf cart use, while others may prohibit them altogether in particular locations. Golf cart owners and operators need to familiarize themselves with the particular laws and regulations governing their state to ensure compliance and avoid potential fines or penalties. This may involve consulting state statutes, contacting local law enforcement agencies, or seeking guidance from legal professionals with expertise in transportation law. Undoubtedly, by understanding and adhering to state-level golf cart laws and regulations, owners can ensure the safe and legal operation of their vehicles while navigating public roads and communities.

Local Ordinances and Municipal Regulations

In addition to federal and state laws, local governments play a significant role in shaping the regulations surrounding the use of golf carts within their jurisdictions. Local ordinances and municipal regulations often provide further guidance on where and how golf carts can be operated, taking into account the unique characteristics and needs of individual communities. These local regulations can vary widely from one municipality to another, depending on factors such as population density, infrastructure, and regional priorities. For example, a densely populated urban area may have stricter regulations on golf cart usage compared to a rural community with less traffic and congestion.

Common provisions found in local ordinances and municipal regulations pertaining to golf carts include:

- **Designated Routes:** Many municipalities designate specific routes or lanes for golf cart use, particularly within residential communities, parks, and recreational areas. These designated routes help ensure the safety of golf cart operators and other road users by providing clear guidelines on where golf carts are permitted to travel.
- **Speed Limits:** Local regulations may impose speed limits on golf carts to maintain safety and minimize the risk of accidents. Speed limits for golf carts are typically lower than those for traditional motor vehicles, reflecting their lower maximum speeds and reduced braking capabilities.
- **Prohibited Areas:** Some municipalities may prohibit golf carts from certain areas or roadways where they pose a safety hazard or disrupt traffic flow. These prohibited areas may include highways, busy intersections, and pedestrian-only zones.
- **Licensing and Registration:** Local governments may require golf cart owners to obtain permits, licenses, or decals for their vehicles, in addition to any state-level registration requirements. These permits may be subject to annual renewal and help local authorities track and regulate golf cart usage within their jurisdiction.
- **Safety Requirements:** Municipal regulations may mandate the use of safety equipment, such as seatbelts, headlights, and turn signals, on golf carts, regardless of whether they are required by state or federal law. These safety requirements are designed to protect both golf cart occupants and other road users.

Essentially, golf cart owners and operators need to familiarize themselves with the specific local ordinances and municipal regulations governing their area to ensure compliance and avoid potential fines or penalties. Local law enforcement agencies and city or county government offices can provide guidance and clarification on these regulations, helping golf cart users navigate the legal landscape effectively. By adhering to local ordinances and municipal regulations, golf cart operators can contribute to the safe and responsible integration of these vehicles into their communities.

Safety Considerations and Best Practices

Operating a golf cart, whether on the golf course or public roads, requires a commitment to safety for both the driver and passengers. While golf carts may seem innocuous compared to traditional vehicles, they still pose risks if not operated responsibly. Here are some key safety considerations and best practices to keep in mind.

- **Wear Seatbelts:** Just like in a car, wearing seatbelts can significantly reduce the risk of injury in the event of a collision or sudden stop. Ensure that all passengers in the golf cart are buckled up before setting off.
- **Obey Speed Limits:** Pay attention to posted speed limits and adhere to them at all times. Golf carts are designed for low-speed operation, and exceeding speed limits can lead to loss of control and accidents.
- **Use Signals and Lights:** Signal your intentions by using turn signals when turning or changing lanes. If driving at night or in low-visibility conditions, ensure that your headlights and taillights are switched on to increase visibility to other road users.
- **Be Mindful of Terrain:** Golf carts are not designed for rugged terrain or steep inclines. Avoid driving on uneven surfaces, hills, or slopes that may pose a risk of tipping over or losing control of the vehicle.
- **Yield to Pedestrians:** Always yield the right of way to pedestrians, cyclists, and other non-motorized users of the road. Exercise caution when approaching crosswalks and intersections to ensure the safety of vulnerable road users.
- **Avoid Overloading:** Golf carts have weight limits that should not be exceeded. To ensure stability and maneuverability, avoid overloading the vehicle with passengers or cargo.
- **Stay Alert and Sober:** Avoid distractions while driving, such as using a mobile phone or engaging in conversation that takes your focus away from the road. Additionally, never operate a golf cart under the influence of alcohol or drugs, as impaired driving can have serious consequences.
- **Maintain Proper Maintenance:** Regularly inspect your golf cart for any signs of wear or mechanical issues. Ensure that

brakes, tires, and steering components are in good working condition to prevent accidents due to equipment failure.

By following these safety considerations and best practices, golf cart operators can significantly minimize the risk of accidents and ensure a safe and enjoyable experience for themselves and others on the road. Remember that safety is everyone's responsibility, and taking proactive measures can help prevent injuries and protect lives.

Golf Cart-Related Injuries

Watson et al. (2008) reviewed 1990-2006 data from the National Electronic Injury Surveillance System (CPSC, 2025). Findings show that an estimated 150,987 people received emergency room treatment for golf cart-related injuries, and the annual total number and rate of such injuries remained relatively unchanged throughout the study period. The average rate of traumatic brain injuries among kids who sustained golf cart-related injuries was 1.6 per 100,000—more than three times the rate incurred by adults (0.5 per 100,000) and around 46% greater than that of older adults (1.1 per 100,000). The overall injury rate among older adults climbed to nearly 8.1 per 100,000 in 2006 from approximately 4.8 per 100,000 in 2023—a 67.6% increase.

Golf carts traditionally lack safety features such as safety belts, doors, mirrors, and lights. The author noted that golf cart-related injuries can range from lacerations and strains to fractures and traumatic brain injuries. Some injuries have even been fatal. Despite the high rate of injuries there have been no meaningful changes in golf cart design or legislation to reduce the overall burden of these injuries.

Common Golf Cart Accident Injuries

Golf cart accidents typically cause soft tissue injuries; however, severe accidents can be fatal. Between 2001 and 2014, the Bureau of Labor Statistics and the Consumer Products Safety Commission (CPSC) reported 33 fatalities involving carts on golf courses alone. Other injuries associated with golf cart accidents include:

- Cuts, lacerations, and bruises
- Fractured/broken bones
- Brain injuries
- Concussions

- Subdural hemorrhage

The most common type of golf cart injury is soft tissue damage (bruising). Since there is no side protection, bone breaks and fractures can easily occur. Also, this lack of protection can lead to severe brain damage if a person is thrown from a golf cart at high speed. Concussions and even fatalities are a possibility in golf cart accidents. Rollovers are the single most significant risk of serious injury. Golf courses are often characterized by hills.

Golf is such a challenging sport that mere negligence in hitting the ball often does not give rise to liability. However, negligence in driving a golf cart will sustain a complaint. Golf course managers/owners need to be aware of the liability attached to golf carts and develop policies and procedures for the use and maintenance of golf carts.

What is the Problem?

Golf carts bring all the fun of driving a car without any of the rules of the road. While this combination usually makes for a carefree day on the links or a quick cruise through a retirement community, golf cart accidents can lead to serious injury. Golf carts were meant for just that: golf. However, their expanded use has led to an increase in injuries across the United States.

Although golf carts are often used as a substitute for cars in certain settings and can reach speeds of up to 40 MPH, they are not intended for use on roads and are not required to meet the same rigorous safety standards as other vehicles. The Federal Motor Vehicle Safety Standards (FMVSS) do not even require golf carts to have seat belts. These lax requirements have resulted in many golf carts being built with low safety standards.

How do Golf Cart Accidents Occur?

In cases where the vehicle's design or maintenance may be to blame, golf cart accidents can be caused by:

- Tip-overs: Due to their lightweight design and small tires, golf carts can easily tip over. Additionally, they are often used off-road or on uneven terrain, which can cause them to become unbalanced.
- No restraints: Most golf carts do not come equipped with seatbelts or restraints. This increases the risk that the driver

or passengers may fall out, the most common cause of injury and death in golf cart accidents.
- Open sides: Golf carts are designed without doors, making them easy to get in and out of. However, this feature also allows occupants to be thrown from the vehicle.
- Lack of maintenance: Many companies that own and operate golf carts do not have a vehicle maintenance system in place. As a result, crucial parts such as brakes, seats, and engines may become worn out and contribute to accidents.

In cases where the driver is at fault, golf cart accidents may result from:

- Reckless driving/joyriding
- Underestimating the cart's power/abilities
- Inattentiveness, distraction, or negligence
- Uneven ground (potholes, hills, or rocks)
- Drinking and driving

Golf Cart Safety Fundamentals

The Golf Course Managers Association (GCOA), Golf Course Superintendent Association of America (GCSAA), National Golf Course Owners Association (NGCOA), United States Golf Association (USGA), and United States Consumer Product and Safety Commission and others have suggested that drivers of golf carts would benefit by brushing up on the following safety fundamentals:

- Never drive recklessly or joyride. Drive courteously.
- Obey all vehicle traffic laws and rules of the road.
- Never drive intoxicated or under the influence of any drug or narcotic.
- Avoid distractions while operating the golf cart, just as you would in an automobile.
- Be safe and attentive—avoid talking, texting, or reading while driving, reaching for objects, applying makeup, or eating.
- Golf carts should be equipped with seatbelts for the driver and all passengers.
- The driver and all occupants should always use the available seatbelts when the vehicle is in use.
- Only carry the number of passengers for whom there are seats.

- Drivers and all passengers should keep all body parts (arms, legs, and feet) inside the cart while the vehicle is in motion, except when signaling a turn.
- Do not allow anyone to ride standing in the vehicle or on the back platform of the vehicle. Do not put the vehicle in motion until all passengers are safely seated inside the vehicle.
- Operate the vehicle from the driver's side only.
- Always use hand signals to indicate your intention to turn, as the small size and limited visibility of the turn signals on a golf cart can make them difficult to see.
- Check blind spots before turning. When making a left-hand turn, yield to the through traffic lane and merge into that lane before turning left.
- Never make a left-hand turn from the golf cart lane.
- Carefully turn and look behind the golf cart before backing up.
- Avoid sharp turns at maximum speed, and drive straight up and down slopes to reduce the risk of passenger ejections and/or rollover.
- Avoid excessive speed, sudden starts, stops, and fast turns.
- Reduce speed due to driving conditions, especially hills or other inclines or declines, blind corners, intersections, pedestrians, and inclement weather.
- Do not leave keys in the golf cart unattended, and make sure the parking brake is set.
- Always yield to pedestrians and be cognizant of motor vehicles.
- Use extreme caution in inclement weather. Although a golf cart may shield you from the rain, it may not protect you from a lightning strike.

Conclusion

Compliance with relevant golf cart laws and regulations is crucial for ensuring the safety of both golf cart occupants and other road users. By familiarizing yourself with the specific requirements and restrictions governing golf cart operation in your area, you can navigate the legal landscape with confidence and peace of mind.

In addition, understanding the legal framework surrounding golf carts is essential for ensuring safe and compliant operation. This

article has explored federal regulations governing low-speed vehicles (LSVs) and neighborhood electric vehicles (NEVs), as well as the nuances of state-level laws and local ordinances that shape the use of golf carts in different regions.

So, as the popularity of golf carts continues to grow, it is essential to stay informed about changes in laws and regulations that may impact their use. Whether you are a homeowner in a gated community, a resort guest exploring new surroundings, or simply someone intrigued by the sight of golf carts on the road, knowledge of golf cart laws empowers you to make informed decisions and enjoy a smooth ride.

Lastly, hopefully, this article has provided valuable insights into the world of golf cart laws and regulations. Remember to prioritize safety, respect the rules of the road, and enjoy the convenience and freedom that golf carts offer responsibly.

The Last Word

Golf carts were designed for golf. They are recreational vehicles to be driven at a slow speed, away from traffic, along grassy paths. With poor brake assembly, no seatbelts, and a lack of other safety features, they do not include the normal crash protection that an automobile employs. The open-air design makes it very easy for a passenger to fall out, as was the case recently when a young child tragically lost her life from such a fall. Some vehicles are being upfitted these days to make them "road legal," but those often-seen cruising through the neighborhood are not typically so equipped. And most have not been maintained in the way people would normally attend to an automobile.

Finally, the majority of successful golf cart injury cases involve golf cart passengers. Which means suing the driver who is typically a good enough friend to be out on the golf course with you playing a round of golf, right? This often means suing that friend. Does this mean your friend is going to have to pay you out of his pocket? Generally, the kind of cases like this that lawyers take involve defendants with insurance, so you are suing your friend in name only. But will your friend still be your friend once you sue him/her?

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The Physical Educator

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