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Original Research

Exploring the Impact of Soccer Camp on Social Identity for Youth with Cerebral Palsy

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ABSTRACT

Background: The purpose of this study was to explore the impact of an exclusive, residential cerebral palsy (CP) soccer camp on social identity for youth with CP. Using a basic qualitative methods approach, the aim of this study was to explain the six-day CP soccer camp experience from the campers' perspective, guided by the three processes of Social Identity Theory (SIT), to determine if a CP soccer camp setting impacted the development of the participants' social identity. **Methods:** Semi-structured interviews were collected online through video software from 13 participants who were purposefully sampled between the ages of 10-18. Qualitative data was initially analyzed through a deductive coding lens, then further analyzed through an inductive coding process. **Results:** Findings suggest that participation in an intentionally designed, exclusive, residential CP soccer camp supported two of the three processes in SIT and provided opportunities for youth with CP to feel connected and similar to others with disabilities. Participants enjoyed being around other individuals with CP in a supportive sport environment. **Conclusion:** This study indicated that CP soccer camp assisted in the campers' social identity development in two of the three processes of SIT. Future research implications are discussed.

EXPLORING THE IMPACT OF SOCCER CAMP ON SOCIAL IDENTITY FOR YOUTH WITH CEREBRAL PALSY

Cerebral palsy (CP) has been diagnosed in approximately 17 million individuals worldwide and is identified as the most common motor disability in youth (Cerebral Palsy Alliance, n.d.). Medically, CP influences an individual's ability to control motor functioning due to delayed or damaged development of the brain (Centers for Disease Control and Prevention, n.d.). Consequently, although one in three persons with CP are unable to walk due to their level of delayed motor function (Cerebral Palsy Alliance, n.d.), there are individuals with this diagnosis who walk with an assistive device or have the ability to ambulate independently.

For individuals with primarily neurological or visual impairments, or physical disabilities such as CP or amputations, adaptive sports are often referred to as Para sports meaning parallel to Olympic style sports. In Para sports, the rules of the sport itself may slightly change depending on individuals' functional abilities, such as sight, balance, range of motion, and strength. Modifications are also often made to best accommodate the ability level of a person with a disability (PWD). Examples of Para sports would be activities like 7-a-side CP soccer, wheelchair basketball, or goalball.

Keywords: cerebral palsy; Para sports; camp; social identity theory; disability

Researchers have found that individuals' involvement in Para sports has provided competence in skill development (Groff & Kleiber, 2001), a sense of normalcy (Lundberg et al., 2011), and a sense of connectedness (Shapiro & Martin, 2010). Blinde and McClung (1997) also indicate that Para sports have the ability to impact PWD by increasing confidence to try new activities, redefining physical capabilities, and assisting with the initiation of social interactions, often leading to a greater sense of overall ability. In so doing, such beneficial growth opportunities can lead to positive identity and self-image.

Identity development occurs by having personal perceptions of the self, then engaging in social interactions to determine if the perceptions of others validate that self-identity (Zabriskie et al., 2005). Social identity theory (SIT) helps us understand this further because as individuals view themselves as a member of a specific group, they place their value and emotional significance within that group. In doing so, these individuals believe that they belong to a social category through this identification. Since there is limited research on SIT specific to youth with disabilities, the purpose of this study was to explore the impact of an exclusive, residential CP soccer camp on social identity for youth with CP.

Cerebral Palsy (CP)

CP is a life-long, non-progressive condition that is considered to be the most common physical disability in youth (Cerebral Palsy Alliance, n.d.). It occurs before, during, or shortly after birth and is caused by delayed development of the brain or damage to the outer layer of the brain that controls posture and muscle movements throughout the body (Cerebral Palsy Foundation, n.d.; Cerebral Palsy Alliance, n.d.). Overall, CP limits range of motion and results in muscle weakness, which often affects fine and gross motor functioning. Beckung and Hagberg (2002) identify that impaired motor functioning is a precursor for restrictive participation in societal activities for individuals with CP because programs often do not make adequate accommodations to allow participation. While there may be a lack of research that identifies barriers specific to individuals with CP, researchers have found that intentional attitudinal or social barriers have prevented individuals with physical disabilities, including those with CP, from participating in recreational programs (Úbeda-Colomer et al., 2019).

Barriers

In order to create positive recreation environments and effective exercise opportunities for youth with disabilities, it is important for parents, health professionals, and teachers to recognize why there is limited participation in physical activity, and if possible, how to decrease the controllable barrier(s). Shields et al. (2012) completed a systematic review with 14 articles that identified four main barriers to physical activity for youth with disabilities: (a) personal, (b) environmental, (c) social, and (d) program. Personal barriers include but are not limited to PWD's lack of physical and social skills, fear, and lack of knowledge or awareness about the exercise. Environmental barriers encompass inadequate facilities (e.g., geographic location of facility, inaccessible facility, lack of adaptive equipment), and lack of transportation. Barriers that involve parental actions, unsupportive peers or lack of friends, or negative societal attitudes are considered social barriers. Program barriers can also prevent PWD from participating in physical activity or recreation. These include the scarcity of appropriate physical activity programs, lack of staff capacity, negative staff attitudes, and participation cost (Shields et al., 2012). Wingo et al. (2020) also identified barriers largely related to a lack of resources or opportunities that might exist for sport and recreation. One such example might be when the built environment is not adequately modified to allow for maximum participation (Wingo et al., 2020).

Para Sport

Groff and Kleiber (2001) found that Para sports play an important role for youth with disabilities. Specifically, they found sport is used as a tool for self-perception development, group identity facilitation, an expression outlet, and a decrease in awareness of disability.

For the purpose of this paper, the authors have chosen to use the term Para sport versus adaptive sport for two reasons. First, there are some cases, such as goalball, where there is no non-disabled equivalent sport and thus adaptive sport does not adequately describe the activity as it would not have been adapted from anything else. Second, the authors felt that Para sport more closely aligns all sport for PWD by providing parallel activities that can encourage ownership of their sport rather than the notion that a sport for a PWD is a modification of a sport that is not their own. For example, 7-a-side soccer, or CP soccer, is one of the Para sport opportunities for individuals with CP who can walk independently. CP soccer has minor adjustments to accommodate PWD who qualify for the game such as being able to take a throw-in by rolling the ball into play (International Federation of Cerebral Palsy Football, n.d.).

Although athletes who have experienced a traumatic brain injury, stroke, or other neurological impairments qualify to

play CP soccer at all sport levels, sport participation with individuals who have similar experiences provides non-sport related benefits also. For example, participation in sport allows athletes an opportunity to develop their personal identity, unite and experience acceptance by peers (Cass, 1984), as well as develop relationships (Pensgaard & Sorensen, 2002; International Federation of Cerebral Palsy Football, 2019). Participants who engage in Para sports with others who have a similar disability have an opportunity to experience connectedness in a social context such as camp (Shapiro & Martin, 2010).

Camp

Camp opportunities span a variety of categories, and may focus on outdoor adventure, health or fitness, or sports skills. Depending on the design of the camp, youth have options to attend a day camp for a few hours over several days, or they can participate in a residential camp with involvement during all hours of the day for a week or more (Garst et al., 2011). Residential camps tend to be readily accessible, and the camp experience is known to promote independence, self-esteem, and new skill development (Klee et al., 1997). The residential setting creates opportunities for campers to increase their independence and confidence by separating themselves from their parents for an extended amount of time (Garst et al., 2016; Richmond et al., 2019). While being surrounded by individuals like themselves in a program setting for multiple days (e.g., residential camp), participants have the ability to explore how they perceive themselves belonging to a group (e.g., PWD) in a social context (Hall et al., 2018).

While there are several camp opportunities for typically developing youth, there are fewer opportunities for those with disabilities (Devine & Dawson, 2010). Camps for PWD can be classified into various structural types, such as exclusive or inclusive camps (D'Eloia & Price, 2018). Inclusive camps provide programming for individuals with and without disabilities together. These camps are similar to integrated school classrooms, seeking to provide an environment where everyone feels welcomed and incorporated into society in a least-restrictive environment (D'Eloia & Price, 2018). However, researchers have found that PWD who attended inclusive camps have experienced rejection from peers without disabilities, which can lead to feelings of isolation, restricted socialization, and exclusion (Blinde & McCallister, 1998; Taub & Greer, 2000). Furthermore, when inclusive camp activities are competitive and focus on skill (i.e., sport camps), negative attitudes and perceptions can be produced towards PWD (Devine & Wilhite, 1999). Thus, it is important that PWD have an opportunity to attend camps with others who are experiencing equivalent life situations such as the camp identified in this study.

Garst et al. (2011) noted that one of the important elements of camp is experiencing various aspects of life together or group living (i.e., eating, playing, and sleeping). During residential camps, time is allotted for rest or relaxation in between activity sessions or in the evenings. The downtime, or unstructured time together, provides a unique opportunity for campers to interact socially, with conversation about personal experiences and common interests between peers (D'Eloia & Price, 2018). For youth with disabilities attending exclusive camps, these conversations have the potential to steer toward topics about similarities in lifestyles or past experiences and identity.

Social Identity Theory

Social Identity Theory (SIT) is defined as "that part of the individual's self-concept which is derived from their knowledge of their membership of a social group (or groups) together with the value and emotional significance of that membership" (Tajfel, 1978, p. 255). In reference to the previous definition, researchers describe a social group as a membership where individuals feel a belonging to and perceive themselves as a part of a group, and those individuals are acknowledged by others as a member of that group (Tajfel & Turner, 1979; Trepte, 2006).

Within a social group, individuals have shared prosocial attitudes, beliefs, and values (Arthur-Banning et al., 2007; Woolf & Lawrence, 2017). A person goes through three important processes in order to form their social identity. The first process is called social categorization where an individual classifies or categorizes himself/herself in relation to social categories (Stets & Burke, 2000). These social categorizations are cognitive tools used to "segment, classify, and order the social environment," (Tajfel & Turner, 1979, p. 40) that indicate a person's place in society. The second process is social identity, which is a self-evaluation component where the individual differentiates himself/herself from members of other groups (Tajfel & Turner, 1979). This process consists of an individual's self-image, which could be positive or negative, that results from the social category in which he/she identifies himself/herself belonging. When an individual feels that they are similar to other group members, they believe they are part of the in-group. The in-group members will then compare themselves to the out-group, which is the process of social comparison, the third identified process (Tajfel & Turner, 1979). The acceptance of others who are already part of the in-group is the strongest way to confirm that an individual is a member of

the group (Stets & Burke, 2000).

In order to further understand the context of SIT for the purpose of this study, it is important to understand the multiple elements that the influence of intergroup differentiation has as it relates to social settings. As part of the individual's self-concept, he/she must identify with the in-group and internalize that group's membership. Second, there must be a social situation for the group to compare and evaluate themselves, and third the out-group comparability, such as similarity and proximity, is a relevant comparison (Tajfel & Turner, 1979).

Identity and People with Disabilities

Identity formation occurs when the individual can freely explore and choose alternate identities. However, some youth with disabilities already have their identity assigned because of the label of their disability based on aspects of themselves that cannot be disregarded or modified (Groff & Kleiber, 2001). Jeffress and Brown (2017) suggest that this label or stereotype is often a challenge, as individuals tend to treat them differently; however, this alternate identity is often an opportunity to remove some of the stereotypes and create bonding moments with friends. This opportunity to demonstrate athletic talent and prowess allows identity formation to perhaps differ from that of a PWD alone, as athleticism is an avenue for social capital to be built and a sense of normalcy to develop, particularly for youth engaged in sport trying to highlight their ability (Jeffress & Brown, 2017). For this reason, when similar sport interests are explored through activity participation, it provides an opportunity for an individual to relate and discover similarities between themselves and other participants. The more engagement one has with an activity, the more the person may incorporate that sense of identity (Groff & Kleiber, 2001). This provides opportunities for verification and acceptance from others who are already in the desired in-group (Woolf & Lawrence, 2017).

By working together and feeling connected to other youth with disabilities (Goodwin & Staples, 2005), researchers found that individuals were able to understand themselves better and identify with a group by using their performance from sport participation (Goodwin & Staples, 2005; Groff & Kleiber, 2001). This is perhaps why sport is documented as a context of recreation that is seen to facilitate and impact the development of personal and social identity, often positively (Groff & Kleiber, 2001; Kleiber & Kirshnit, 1991; Shaw et al., 1995). Pica (2003) found that PWD who develop a sense of identity through sport at a young age are more likely to participate in physical activity as adults. SIT may help explain how youth achieve their identity based on the belonging and acceptance through social interactions the participant might experience in a Para sport setting. In particular, exclusive residential camps have demonstrated opportunity for positive identity development due to the unique interaction and bonding opportunities they provide (Fenton, 2018). Therefore, the purpose of this study was to explore the impact of an exclusive, residential CP soccer camp on social identity for youth with CP.

METHODS

This study was qualitative in nature, exploring participants' summer camp experience from their own perspective (Creswell & Poth, 2018). The research team sought to describe the commonalities between the participants who shared the same lived experiences (i.e., summer camp for individuals with CP), and in so doing, allowing the researchers to develop a collective description of that experience compiled from the individual perspectives (Creswell & Poth, 2018). Data were collected through interviews to better understand their experiences, with a particular focus on the impact of the exclusive, residential soccer camp on their social identity.

Program Description

A not-for-profit entity located in the Northeastern United States hosted its inaugural, six-day residential soccer camp in the summer of 2018 for youth with CP. Per suggestions from Shields et al. (2012), this camp sought to intentionally plan the physical, social, and programmatic elements of camp in order to achieve the intentional SIT outcomes desired. For example, as part of a program partnership, the camp was located at a university campus in Southeastern United States, which provided on-campus housing and dining for the participants, coaches, and volunteers. This allowed for the campers to interact with one another both socially and within the camp setting in a more intimate environment. It also encourages participants to socially surround themselves with kids just like them as few of them had even met others with similar disabilities, and certainly not been in camp with them for an extended period of time. The coaches provided supervision, instructional programming, and overall support for the participants. All coaches and camp volunteers had experience working with youth with CP prior to camp. The campers' soccer experience ranged from being new to the sport to already playing competitively. Although soccer was the focus, the camp provided structured and unstructured time where the campers were able to participate in a variety of other activities: watching FIFA World Cup soccer matches, hiking in a nearby forest, visiting a local dessert shop, reading a book, and socializing with peers in the dorms. In

addition to these other activities, some camp time was devoted to identity development and disability awareness such as a session in which participants discussed having CP and the similarities or different experiences each one faced. Furthermore, during this time the intentionality behind the different elements of the physical on-field sessions was also discussed. They were specifically designed to work on skills an athlete with CP may need to train differently due to their physical abilities, such as balance or limb spasticity.

Participants

Using a purposive sampling strategy (Creswell, 2007) participants were invited to participate in this study if they met the following criteria: (a) were at least 10 years of age or older at the start of camp and (b) attended the entire six days of camp. Out of the 16 participants who attended camp, one did not meet the age requirement and two did not attend each day of camp, leaving 13 eligible participants who were contacted and agreed to participant in this study. Participants ranged in age from 10-18 with a mean age of 13.54 years old, 12 were male, and 1 was female.

Following Institutional Review Board approval, the primary researcher sent campers' parents an electronic letter via email that invited their child to voluntarily participate in the study. The letter described the purpose of the study, why their child was identified as a possible study participant, the expected interview process (i.e., length of interview, request to audio and video record interviews), and included the parent consent and child assent forms for the youth under 18 years old. All communication for participation in the study was done through the primary researcher and the parents. Those who were under 18 required a parental signature on the consent form in addition to assent, and the 18-year-old was required to verbally consent prior to participation in the study. For those parents who did not respond to the first point of contact, a follow-up email was sent after two weeks. A phone call was made by the researcher to initiate the last contact for the remaining two parents who did not respond to either email.

Positionality

The following statement is provided given the importance of understanding the social significant dimensions of the researcher in this study. The researcher was a female graduate student who has not lived with any of the disabilities identified in the participant population. She has a bachelor's degree in recreational therapy and has played soccer for over 20 years, thus understands the nature of both the population and the recreational context of the camp. Additionally, the researcher was a volunteer staff member of the camp supporting all elements of the management team and worked with the study participants daily throughout their camp experience. Thus, it was important that the data collection process reflected the participants' lived experiences and not that of the researcher. However, the relationship that was already established likely helped the study participants be more forthcoming about their experiences.

Data Collection

Semi-structured interviews took place eight months after camp. Although Erikson (1959) does not give a specific timeframe on the age when individuals' identity becomes the focus of development, individuals use information gathered from the self and the environment to evaluate their identity, then use that evaluation to determine if that label is appropriate (Anderson, 2004). Once identity alternatives have fully been explored, individuals can make a commitment towards their options to achieve their truest identity (Shaw et al., 1995). In the case of this study, the participants had an opportunity to partake in a diverse set of social and physical experiences with peers with disabilities, then return home to a setting that potentially challenged them to choose how they perceived themselves and how they presented themselves to others. Therefore, it seemed appropriate to provide eight months for the participants to evaluate themselves in a separate environment to determine if the soccer camp had lasting effects.

After the researcher obtained verbal or written consent and assent from the youth participants, a semi-structured interview was scheduled via Zoom, an online video software, between the researcher and the participant. Ten participants discussed their responses individually in a separate room away from their parents. Upon request, one parent from three separate participants sat in on their children's interview. Interviews lasted between 15-50 minutes and were recorded through a digital recording device. The Zoom software was used as a secondary device for audio and video recording. There were 31 semi-structured questions, with identity-related questions developed based on the SIT (i.e., social categorization, social identity, social comparison) to allow the campers to discuss their soccer and camp experience. Probing questions were used when necessary, in an effort to obtain further explanation from participants regarding their thoughts and ideas (Creswell, 2016).

Data Analysis Plan and Methodological Rigor

Prior to analysis, interviews were transcribed verbatim, and deidentified by the primary researcher. Pseudonyms were

used to protect the confidentiality of the participants. A second member of the research team, a critical friend (Smith & McGannon, 2018) who was not part of the data collection or camp was then introduced to assist with data analysis.

To begin analysis, the researchers sought to follow Braun and Clarke's (2006) phases of thematic analysis. Prior to coding, the primary researchers thoroughly read through interview transcriptions twice to familiarize themselves with the data. The researchers initially used deductive analysis to code interview content related to one of the three processes of SIT: social categorization, evaluation of social identity, and social comparison (Tajfel & Turner, 1979). After deductive coding, the researchers reviewed the transcripts for a third time to identify possible emerging themes that were not related to SIT through an inductive coding process. The researchers then reviewed all transcripts to identify the common themes across all interview data that resulted from deductive and inductive analysis. A research committee was also consistently involved to act as a sounding board in the critique, reflection, interpretation, and assumptions of the data and themes with the researcher. This provided opportunities for reflection on how the data had been understood and challenged, as well as how themes were developed. In an effort to reduce bias, two researchers analyzed the interviews independent of one another. After completing the analysis, the researchers met to determine levels of agreement regarding qualitative themes and findings. After discussing the definitions of the predetermined SIT categories used for deductive analysis and subsequent codes and themes from deductive and inductive analysis, the researchers deliberated initial thoughts, discussed, and subsequently reached 100% agreement regarding the final qualitative themes. Although Smith and McGannon (2018) suggested that inter-rater agreement is a problematic element of rigor partly due to a lack of threshold of agreement, the research team was able to come to complete agreement on final themes after discussion.

RESULTS

All of the camp participants had CP, were ambulatory, and represented 10 different states throughout the United States. As one of the many goals of camp was to gain independence, additional goals such as building self-esteem and making new friends with other kids while CP identity formation and development were built into the many of the elements of camp. Findings from the deductive analysis supported two of the three processes of SIT: social categorization and self-evaluation through social identity. Social comparison was not well represented within the data. There were three subthemes that emerged under social categorization: (a) disability, (b) sport generalized, and (c) soccer specific. Self-evaluation through social identity was supported with two subthemes: (a) individuals without disabilities and (b) in-group comparison. Inductive analysis revealed two additional themes separate from SIT: personal identity and group cohesion.

Deductive Results

Disability

Each of the 13 campers demonstrated their awareness of having a disability and understood that it was an element that qualified them to attend this specific camp. By setting aside specific times within the sport camp and allowing for down time where campers could be social, there was intentionality in encouraging discussion about their disabilities and their common differences. Although all camp participants had CP and were ambulatory, there were three campers who reported they had never been around a group of individuals who all had a disability before. Even the participants who had experience interacting with other individuals with a disability prior to camp discussed the disconnect in society, where there are not enough opportunities provided for groups of PWD to come together continue to develop their identities. This is one of the main reasons why the camp, in its program design and development, had opportunities such as team building or social conversations around disability built into the camp itinerary. For example, Liam expressed his fear about how individuals in society may treat him differently because of his disability, saying: "I [was] scared if some people said some bad things to me like 'Hey what's wrong with your hand?' or 'What's wrong with your speech?'." However, Logan expressed that "camp helped me identify people with disabilities and you can like 'Oh, he has a disability, but he still might be able to play soccer' and that helps."

Similarly, campers at CP soccer camp had different types of CP, which was clearly recognized by a number of campers who expressed the value of simply interacting with or having conversations about CP in camp with others who have CP to gain greater understanding with those like you. For example, Oliver mentioned he was aware of the range in severity and the location of limbs that are impacted. He stated: "We obviously all had disabilities, but some of us had one side. Like William has both legs and some people have both arms, but some of us have just one side, like I do." Campers indicated feeling more at ease with their disability because they could relate to their peers at camp and had the opportunity, both on the field or in other social events, to engage with other campers and talk about their

experiences. For example, James shared: "It made me feel happy to not be the only one struggling with this process and have other people that I can talk to about different things and go through with them; not just you having to go by yourself." It also allowed for Elijah to understand and accept his disability by being around and talking with others with CP through the formal discussion in the dorm or informally (social categorization): "It made me feel more at ease with CP, and I got to understand it a little more in depth." Finally, Ethan explained his camp experience with this example: "…you didn't feel any different, you felt included, you were no different from anyone else…you felt you belonged in the group because everyone had their own difficulties, and everyone shared their experiences."

Sport Generalized. Nine out of the 13 participants acknowledged their participation in sport, their love for sports, or their struggle with having a disability and participating in sports. Prior to camp, Noah was already involved in a sport club through his school. He gave this example: "I'm part of the ski club at school, so we go up every Friday to the mountain, snowboard for four hours." Another participant, James, discussed how he participates in various sports at the recreation level: "I just play soccer, but also play basketball in my back yard, and I also play lacrosse with my friends." Liam discussed he had participated in track before camp: "I run the 100 and 200 meters, and I broke two junior national record." Oliver had experience in a few other sports, "I play lots of sports. I play basketball, soccer, and skiing." However, Emma described her struggle with her disability and sport participation but also how the camp sport programming was able to help her see others like her and understand herself more fully:

I think what's been hard about sports and having a stroke and CP is they're two different worlds. The really hard thing, which I think CP Soccer really helped me with, was trying to find that bridge if you want to call it that. So that it can really be "These are kids that have CP that really enjoy sports and are passionate about that" because that's what I was. Before CP Soccer there was no bridge, and that's the thing that was lacking. I just didn't feel complete in the world of playing sports and being with a disability. (Emma)

These generalized sport elements lay the groundwork for the beginning of the social identity of the young participants, moving from a PWD to an athlete and allowing the sport camp program to shape their self-identities in positive ways by making comparisons to others around them (Tajfel & Turner, 1979).

Soccer Specific. Ten participants expressed their love for soccer, whether it was their favorite sport or their reason for coming to camp. As there was a definite passion for the sport amongst the participants, Alexander highlighted his reasoning on why he continued to play after camp, stating: "Why do I still play? Ah because I love soccer. It's my favorite past time, it's what I love doing the most. I love playing soccer." Benjamin acknowledged how he currently categorizes his involvement in the sport itself, sharing: "…I do soccer more than a sport, more than for fun, I do it competitively."

Self-Evaluation through Social Identity

People without Disabilities. There was a strong representation of the participants defining themselves as different from people without disabilities. Amongst the group that participated in the study, the majority of them perceived themselves as being a member of a group with disabilities (self-identity). This group membership was acknowledged within the camp setting; however, campers' comparisons between themselves and people without disabilities were not within the camp context. With relation to the soccer experience where participants felt similar to their group membership of PWD, camp provided an opportunity for Mason to feel like the physical playing environment was more equal at camp as compared to his playing environment at home with friends:

I just like playing soccer. It is more matched because my other friends were faster than me because of my disability. I can't really run as well with my left foot, so I was matched up with speed I guess, so it is a lot fairer. (Mason)

Two separate participants commented on their soccer experience outside of camp: Benjamin said, "I train with regular kids," and Oliver shared, "we all have that experience if you're on another team, of kids not passing to you because they want to win, and they call you bad because you have a disability."

In-Group Age Difference. All participants classified themselves as having a disability through the social categorization process. Although they identified as being a member of that group, the majority of the participants also acknowledged the age difference when discussing their camp experience. Some individuals enjoyed the different age group structure of the camp, and the ages of other participants did not impact their experience. Noah for example, was more excited to be surrounded by a group of similar individuals rather than being impacted by the age difference. "It felt good to help kids and talk to some of the younger ones who are similar to me because I really haven't met anyone else with cerebral palsy before. So that was

pretty cool." Alexander followed in suit when elaborating on what they wanted to get out of camp without worrying about the age difference:

I went to camp with that mindset as well, where you know it doesn't matter if a kid's 9 or if he's 8 or just someone that's 18. You know the goal is to just have fun. It doesn't matter what age, it's just to enjoy yourself, help others have fun, and be comfortable with themselves. (Alexander)

In contrast, however, Lucas mentioned why the age difference negatively impacted his camp experience: "Just about the age difference, just with the little kids. Because they don't really like get it. This seemed like a game for them, but it really wasn't, it was serious."

In-Group Soccer Ability Level. The group of participants that attended camp ranged in soccer ability levels. One camper had never played soccer prior to coming to camp, while other campers were familiar with the sport based on past experience from recreational and travel teams. Of the participants that commented on ability levels, none of them mentioned that it negatively impacted camp. In fact, Logan enjoyed the varying abilities when talking about the difference in soccer experience between the campers: "…it was good because you could adapt to their skill level. It teaches you to play with different people." Elijah did not care about the difference in the campers' soccer experience: "It didn't really feel any different really. It was normal." Four out of the 10 individuals who discussed the ability levels as a difference between their in-group members mentioned disability as being a factor contributing to skill levels. Liam said:

Of course, the kids did not have as good skill as me. They may have more challenges or stronger CP than me, or they have stronger soccer skills than me or less challenges or less disability than me. So, you know, I don't really care about that. (Liam)

Benjamin commented on how everyone's disability provided an equal playing field between teams throughout camp: "You can make competitions kind of even. I'm a very competitive person. Well we both have CP and we both have challenges."

Inductive Results

Personal Identity

Personal identity was evident amongst the majority of the campers when asked to describe themselves by use of character traits or hobbies. Each camper acknowledged his/her disability through their life struggles or as an identifier for attending this specific camp, recognizing thus having cerebral palsy and demonstrating their own social identity dimension. However, when asked to describe themselves, 12 out of 13 individuals did not mention their disability. Individuals described themselves using other identifiers. For example, Logan shared, "I try to have a little fun every now and then, so. Pretty outgoing I guess I could say." Alexander described himself as more reserved: "I'm a little bit shy when you first meet me but once I get to know you, I'm quite open." Noah expressed himself using a variety of personal characteristics, "I have kind of an odd sense of humor. I enjoy all types of music. I like action movies and romantic movies. I really like computer science." A few participants shared their interest in sports when describing themselves. For example, William said: "I'm a happy human being, I like sports… I want people to be treated the way that they should." Finally, Lucas shared: "I like to play soccer, I like other things. I work out."

Group Cohesion

As the camp was intentionally designed for individuals with CP to play soccer and be social, their CP camper experience was important to ascertain. Eight campers supported the group cohesion theme as a result of camp with phrases that contained the words unity, comradery, connected, and similar. For example, James indicated enjoyment in being around others with disabilities: "I really liked how you… could just talk and everyone… would get it. You could just talk about your struggles and everyone would connect to it. I just think that was a cool part of camp." Oliver described the group at camp as a family:

I think it was really cool to be around people that you could relate to. It was like having a bunch of brothers and sisters around you because they'd be like "Awe yeah, that happens to me too." (Oliver)

While the majority of the group mentioned the sense of community as it related to their disability, Emma specifically gave an example of how soccer was used to connect the group during the unstructured time at camp:

We were all watching the South Korea x Germany game for the World Cup. We were all huddled around Michael's phone. That really like summed up the camp for me. It showed the unity and the community but yet there was still a point of "oh my gosh, we're in the real world, and like soccer!" (Emma)

DISCUSSION AND PRACTICAL IMPLICATIONS

Individuals with CP who attended camp have be negotiating this disability their entire lives. It is difficult to suggest that one week at camp can alter their entire notion of what is disability. Still, the thought was the camp would give them a view of their own disability in a positive light by intentionally planning the social, physical, and programmatic elements of camp (e.g., discussion sessions about CP, organizing sport skills and drills on the field that specifically target CP development; Shields et al., 2012) and encouraging social interaction and discussion about their experiences as a person with CP. All but one camper described themselves by the things they liked to do or by their character traits instead of discussing their disability. Each individual acknowledged having a disability in some way, but it was not an identifier in the way they presented themselves. Similarly, Logeswaran et al. (2019) described that individuals with disabilities tend to distance themselves from the label of disability in an effort to feel a part of the world without disability. This was the case even though by virtue of their disability and the attendance of the camp, their disability was a necessary criterion. This may, in fact, support a social comparison process not within a disability context but rather as an athlete. It could be argued that it is positive that the participants do not use disability as a key identifier in how they present themselves and instead, as a result of attending this camp, they now feel more identified with being an athlete. Thus, their social comparison is not as an athlete with a disability but simply as an athlete.

Nonetheless, disability was a prominent theme within the social categorization process as a result of campers' participation at camp. This aligns with previous literature when discussing exclusive camps for PWD. Researchers have found that when youth with disabilities have the opportunity to interact with other youth with disabilities in the camp context, they are able to learn more about their disability and share common stories with others (Goodwin & Staples, 2005). Although the participants had not reached a point of what Darling (2003) terms "disability pride" where participants establish positive disability identity, it is important to note that neither did they see their disability alone as being a main negative element of their identity (Raver et al., 2018). This is encouraging, particularly for younger athletes such as Logan, Noah and Alexander who used personal characteristic identifiers to describe themselves rather than the physical traits that might be seen as part of their disability.

Over half of the participants in this study mentioned previously participating in sports prior to attending camp. However, these programs and activities were primarily in inclusive settings with people with and without disabilities. This contradicts past literature in reference to the multiple barriers (i.e., fewer opportunities, lack of skill, negative societal attitudes, and lack of transportation) that PWD experience when participating in physical activity (Shields et al., 2012). Perhaps PWD are finding more opportunities to be active and engaged in sport programs both within their communities and in travel programs such as this camp. It is also possible that individuals with mild forms of their disability are better able to integrate into the community programs as a result of the limited severity of their disability and needing fewer modifications (Farmer et al., 2019). One also might assume that the experience was positive, but this may not be the case. Participation by a PWD in a sporting event does not always imply a positive experience. Particularly for youth, the need to have an identity at least based partly in sport is strong and this connection to participation may have been relevant in this study (Shapiro & Martin, 2010). Practitioners should be aware of the barriers that past literature suggests, but it is clear with comments from a number of participants that these can be overcome with proper programming, opportunities for social interaction, and the prospect of demonstrating their ability as seen in this camp.

In a previous study of youth with physical disabilities participating in an adaptive sports program, Groff and Kleiber (2001) found that almost all of their participants felt connected to their peers with disabilities. In a similar way, campers involved in this study felt connected to and included by others because they were surrounded by other PWDs, a good demonstration of self-identity. It is clear in this study and further supported by Groff and Kleiber (2001) that programs internationally designed for individuals with similar disabilities to connect with one another and share similar experiences can have positive impacts on identity.

Campers highlighted their self-evaluation toward people without disabilities, who are different than those in their determined in-group (e.g., PWD) supporting thus the demonstration of self-identity. This is supported by Goodwin and Staples (2005) and Groff and Kleiber (2001), who found that the social interaction between similar participants provided opportunities for individuals to talk about their disability with others and socialize with other PWD during sports. This was the reason for an intentional, formal discussion about CP with the group while at camp and why specific sport training skills were put in place. This allowed all athletes to see each other being challenged whereas normally, the athlete with CP may be the only one struggling with a particular skill.

A sense of belonging and connectedness that was also discovered through group cohesion in this study has been present in past literature (D'Eloia & Price, 2018; Groff & Kleiber, 2001). This group cohesion was likely as a result of stated intentional opportunities to train with other athletes who have CP or to engage in the discussions, both formally or informally, about having CP and the challenges that athletes with CP face. Exclusive residential camps provide PWD the potential to associate positively with other PWD connecting with and feeling a sense of belonging to their peers at camp. Individuals in this study discussed the challenges they faced growing up with CP or playing sports on mainstream teams with people without disabilities. These conversations took place during unstructured times, which is a benefit of residential camps that foster elements of shared understanding and provide youth with disabilities a chance to discover common interests (D'Eloia & Price, 2018; Tiemens et al., 2007).

It was mentioned that in previous camps some participants had more negative types of experiences where, for example, their teammates without disabilities would not pass them the ball. Wilhite et al. (1999) found that PWD refrained from participating in certain mainstream activities when they did not feel like they could participate successfully, limiting opportunities for this population. There is perhaps a balance in having PWD attend exclusive camps where they can build their confidence and skillsets with others who have similar disabilities and encouraging PWD to attend mainstream camps or activities so that they are then able to utilize their skills and be more confident in their self-identity as an athlete. As Liam discussed: "Like it doesn't really matter who's better or not, I'm just there to get better." This camp program allowed for each player to improve in a more comfortable environment with peers. Therefore, programming staff need to be aware and alert to the potential differences in ability, speed, mobility or desire for different equipment and to be ok with providing an alternative social environment for a number of athletes with similar disabilities to participate together and also compete in a more mainstream environment.

All the participants commented on the age component of camp. Although some did not care about the age gap, two of the older participants mentioned that it was an opportunity to be a role model. Due to the smaller nature of camp (less than 20 participants in total), it was easier to program for participant physical and social interactions in a way that encouraged SIT formation or reflection, leadership opportunities and skills expression, as well as development through on field sessions. Researchers acknowledge that these elements of camp could be beneficial for PWD to relate to each other and discuss similar experiences (D'Eloia & Price, 2018; Tiemens et al., 2007). However, this recognition of the age difference caused some identity confusion for a few of the participants as it created a challenge between feeling part of the CP in-group and recognizing that the participant may not be an ideal fit in this group (Stets & Burke, 2000). Sport can provide more opportunities than simply the physical activity element, yet programmers need to provide age-appropriate activities while still allowing for the potential for mentoring to take place.

LIMITATIONS

Although all the campers who met the criteria for voluntary participation agreed to be involved in the study, there were still several limitations that should be addressed. Primarily, interviews were completed online through video software due to all the participants being in separate locations during the time of data collection. The researcher was in a quiet office while the participants were in their home. Even though this possibly offered a comfortable environment for the interviewee, distractions were not able to be controlled or monitored. This also provided space for the parents to be included in the interview process. Three parents requested to sit in on the interview, and all three parents contributed to the interview conversation. When the researcher asked the participants a question, and they were slow to answer on an occasion, two of the parents interjected which provided the participants an answer to the question due to the prompting from their parents. Although it is clear the parent was simply trying to provide information and input to the study, this detracted from the lived experience of the camp participant and rather was a different perspective than given from the athlete. As such, these comments were not included in the data analysis.

There were times when participants did not fully remember elements of camp and the researcher needed to provide some prompting, or minimal contextual clues for the participant to give an honest answer as it related to the question. Since this was eight months post-camp, this was certainly understandable. Similarly, most questions corresponded to the SIT constructs which could have influenced the results of final themes due to this study being guided by the theory. Finally, the researcher was also a counselor at the camp, which could provide a closer connection to the campers but also must be recognized as potential response bias in the answers from participants. Still, as discussed, multiple additional researchers provided input on data analysis in an effort to mitigate any interpretation bias.

FUTURE DIRECTIONS

The purpose of this study was to explore the impact of an exclusive, residential CP soccer camp on social identity of youth athletes. Using SIT, the participants clearly identified two of the three tenets, social categorization, and social identity in their lived experience of camp. Although mentions of social comparison were made, it was not clear how participants were consistently expressing that element. Given the exploratory nature of the study, using this camp-based experience to assist in continuing to shape a Para athlete's identity appeared to be an encouraging environment in which positive growth and development can occur.

Future research is suggested to further the understanding of social identity for PWD and more specifically individuals with CP. These findings provide foundational knowledge into the scope of an exclusive soccer camp for this population, which should be elaborated on utilizing SIT as a guide into how PWD perceive themselves in other exclusive camp environments. Although the third process of SIT (social comparison) was not well supported in these findings, it is suggested to provide a social setting where youth with CP can compare themselves to the out-group to fully understand SIT for this population. More specifically, the social situation must allow for intergroup comparisons and the out-group must be perceived as relevant by similarity and proximity for comparison (Tajfel & Turner, 1979). This study did not provide the perceived relevant out-group (i.e., people without disabilities) for comparison within this camp context. Due to the nature of the interview questions, participants primarily shared their perspectives towards the physical differences between themselves and peers with and without disabilities. Future research should focus on understanding how or in what ways youth with CP perceive themselves from a psychosocial perspective.

Finally, although this camp was a soccer-specific program, it is important to acknowledge the benefits of socialization, physical ability levels, and identity development were also witnessed as a result of participating in this camp exclusively for youth with CP. Exclusive camp settings have been shown to facilitate group cohesion, which is beneficial for a population who can be limited and left out of recreation and sport opportunities.

REFERENCES

Anderson, C. B. (2004). Athletic identity and its relation to exercise behavior: Scale development and initial validation. *Journal of Sport and Exercise Psychology, 26*(1), 39-56. https://doi.org/10.1123/jsep.26.1.39

Arthur-Banning, S. G., Paisley, P., & Wells, M. S. (2007). Promoting sportsmanship in youth basketball players: The effects of referees' prosocial behavior techniques. *Journal of Parks & Recreation Administration, 25*(1), 96-114.

Beckung, E., & Hagberg, G. (2002). Neuroimpairments, activity limitations, and participation restrictions in children with cerebral palsy. *Developmental Medicine and Child Neurology, 44*(5), 309-316. https://doi.org/10.1111/j.1469-8749.2002.tb00816.x

Blinde, E. M., & McCallister, S. G. (1998). Listening to the voices of students with physical disabilities: Experiences in the physical education classroom. *Journal of Physical Education, Recreation & Dance, 69*(6), 64-68. https://doi.org/10.1080/07303084.1998.10605578

Blinde, E. M., & McClung, L. R. (1997). Enhancing the physical and social self through recreational activity: Accounts of individuals with physical disabilities. *Adapted Physical Activity Quarterly, 14*(4), 327-344. https://doi.org/10.1123/apaq.14.4.327

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101.

Cass, V. C. (1984). Homosexual identity formation: Testing a theoretical model. *The Journal of Sex Research, 20*(2), 143-167. https://doi.org/10.1080/00224498409551214

Centers for Disease Control and Prevention. (n.d.). *What is cerebral palsy?* Retrieved May 10, 2021, from https://www.cdc.gov/ncbddd/cp/facts.html.

Cerebral Palsy Alliance. (n.d.) *Causes of cerebral palsy*. Retrieved May 10, 2021, from https://cparf.org/what-is-cerebral-palsy/causes-of-cerebral-palsy/.

Cerebral Palsy Foundation. (n.d.). *Fact sheet.* Retrieved May 10, 2021, from https://www.yourcpf.org/fact-sheet-library/.

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2nd ed.). SAGE.

Creswell, J. W. (2016). *30 essential skills for the qualitative researcher*. SAGE.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design: Choosing among the five approaches* (4th ed.). SAGE.

D'Eloia, M. H., & Price, P. (2018). Sense of belonging: Is inclusion the answer? *Sport in Society, 21*(1), 91-105. https://doi.org/10.1080/17430437.2016.1225819

Darling, R. B. (2003). Toward a model of changing disability identities: A proposed typology and research agenda. *Disability & Society, 18*(7), 881-895. https://doi.org/10.1080/0968759032000127308

Devine, M. A., & Dawson, S. L. (2010). The effect of a residential camp experience on self esteem and social acceptance of youth with craniofacial differences. *Therapeutic Recreation Journal, 64*(2), 105-120.

Devine, M. A., & Wilhite, B. (1999). Theory application in therapeutic recreation practice and research. *Therapeutic Recreation Journal, 33*(1), 29-45.

Erikson, E. H. (1959). *Identity and life cycle: Selected papers*. International Universities Press.

Farmer, T. W., Hamm, J. V., Dawes, M., Barko-Alva, K., & Cross, J. R. (2019). Promoting inclusive communities in diverse classrooms: Teacher attunement and social dynamics management. *Educational Psychologist, 54*(4), 286-305. https://doi.org/10.1080/00461520.2019.1635020

Fenton, L. (2018). 'You can see their minds grow': identity development of LGBTQ youth at a residential wilderness camp. *Leisure/Loisir, 42*(3), 347-361. https://doi.org/10.1080/14927713.2018.1535276

Garst, B. A., Browne, L. P., & Bialeschki, M. D. (2011). Youth development and the camp experience. *New Directions for Youth Development, 130*, 73-87. https://doi.org/10.1002/yd.398

Garst, B. A., Gagnon, R. J., & Whittington, A. (2016). A closer look at the camp experience: Examining relationships between life skills, elements of positive youth development, and antecedents of change among camp alumni. *Journal of Outdoor Recreation, Education & Leadership*, 8*(2)* 180-199.

Goodwin, D. L., & Staples, K. (2005). The meaning of summer camp experiences to youths with disabilities. *Adapted Physical Activity Quarterly, 22*(2), 160-178. https://doi.org/10.1123/apaq.22.2.160

Groff, D. G., & Kleiber, D. A. (2001). Exploring the identity formation of youth involved in an adapted sports program. *Therapeutic Recreation Journal, 35*(4), 318-332.

Hall, A., Peden, J., Kropp, J. J., & Matthews, D. (2018). Program outcomes at a resident camp for youth with serious illnesses, disabilities, and life challenges. *Camping Magazine*, 18-21. https://digitalcommons.georgiasouthern.edu/ecology-facpubs/119

International Federation of Cerebral Palsy Football. (n.d.). *Modification to the laws of the game.* Retrieved May 10, 2021, from https://www.ifcpf.com/rules.

Jeffress, M. S. & Brown, W. J. (2017). Opportunities and benefits of powerchair users through power soccer. *Adapted Physical Activity Quarterly, 34*(3), 235-255. https://doi.org/10.1123/apaq.2016-0022

Klee, K., Greenleaf, K., & Watkins, S. (1997). Summer camps for children and adolescents with kidney disease. *ANNA Journal, 24*(1), 57-61.

Kleiber, D. A., & Kirshnit, C. (1991). Sport involvement and identity formation. In L. Diamant (Ed.), *Mind-body maturity: Psychological approaches to sport, exercise, and fitness* (pp. 193-211). Hemisphere.

Logeswaran, S., Hollett, M., Zala, S., Richardson, L., & Scior, K. (2019). How do people with intellectual disabilities construct their social identity? A review. *Journal of Applied Research in Intellectual Disabilities, 32*(3), 533-542. https://doi.org/10.1111/jar.12566

Lundberg, N. R., Taniguchi, S., McCormick, B. P., & Tibbs, C. (2011). Identity negotiating: Redefining stigmatized identities through adaptive sports and recreation participation among individuals with a disability. *Journal of Leisure Research, 43*(2), 205-225. https://doi.org/10.1080/00222216.2011.11950233

Pensgaard, A. M., & Sorensen, M. (2002). Empowerment through the sport context: A model to guide research for individuals with disabilities. *Adapted Physical Activity Quarterly, 19*, 48-67. https://doi.org/10.1123/apaq.19.1.48

Pica, R. (2003). *Your active child: How to boost physical, emotional, and cognitive development through age-appropriate activity.* McGraw-Hill.

Raver, A., Murchake, H., & Chalk, H. M. (2018). Positive disability identity predicts sense of belonging in emerging adults with a disability. *Psi Chi Journal, 23*(2), 157-165. https://doi.org/10.24839/2325-7342.JN23.2.157

Richmond, D., Sibthorp, J., & Wilson, C. (2019). Understanding the role of summer camps in the learning landscape: An exploratory sequential study. *Journal of Youth Development, 14*(3), 9-30. https://doi.org/10.5195/jyd.2019.780

Shapiro, D. R., & Martin, J. J. (2010). Athletic identity, affect, and peer relations in youth athletes with physical disabilities. *Disability and Health Journal, 3*(2), 79-85. https://doi.org/10.1016/j.dhjo.2009.08.004

Shaw, S. M., Kleiber, D. A., & Caldwell, L. L. (1995). Leisure and identity formation in male and female adolescents: A preliminary examination. *Journal of Leisure Research, 27*(3), 245-263. https://doi.org/10.1080/00222216.1995.11949747

Shields, N., Synott, A. J., & Barr, M. (2012). Perceived barriers and facilitators to physical activity for children with disability: A systematic review. *British Journal of Sports Medicine, 46*(14), 989-997. http://dx.doi.org/10.1136/bjsports-2011-090236

Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology, 11*(1), 101-121. https://doi.org/10.1080/1750984X.2017.1317357

Stets, J., & Burke, P. J. (2000). Identity Theory and Social Identity Theory. *Social Psychology Quarterly, 63*(3), 224-237. https://doi.org/10.2307/2695870

Tajfel, H. (Ed.). (1978). *Differentiation of social groups: Studies in the social psychology of intergroup relations*. Academic Press.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In S. Worshel & W. G. Austin (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Brooks-Cole.

Taub, D. E., & Greer, K. R. (2000). Physical activity as a normalizing experience for school children with physical disabilities. *Journal of Sport and Social Issues, 24*(4), 395-414. https://doi.org/10.1177/0193723500244007

Tiemens, K., Beveridge, H. L., & Nicholas, D. B. (2007). Evaluation of a therapeutic camp program for adolescents with a facial difference. *Social Work with Groups, 30*(2), 57-71. https://doi.org/10.1300/J009v30n02_06

Trepte, S. (2006). Social Identity Theory. In J. Bryant & P. Vorderer (Ed.), *Psychology of Entertainment* (pp. 255-271). Routledge.

Úbeda-Colomer, M., Devís-Devís, J. & Sit, C. H. P. (2019). Barriers to physical activity in university students with disabilities: Differences by sociodemographic variables. *Disability and Health Journal, 12*(2), 278-286. https://doi.org/10.1016/j.dhjo.2018.11.005

Wilhite, B., Devine, M. A., & Goldenberg, L. (1999). Perceptions of youth with and without disabilities: Implications for inclusive leisure programs and services. *Therapeutic Recreation Journal, 33*(1), 15-28.

Wingo, B.C., Yang, D., Davis, D., Padalabalanarayanan, S., Hopson, B., Thirumalai, M. & Rimmer, J. H. (2020). Lessons learned from a blended telephone/e-health playform for caregivers in promoting physical activity and nutrtion in children with a mobility disability. *Disability and Health Journal, 13*(1), 1-8. https://doi.org/10.1016/j.dhjo.2019.100826

Woolf, J., & Lawrence, H. (2017). Social identity and athlete identity among CrossFit members: An exploratory study on the CrossFit Open. *Managing Sport and Leisure, 22*(3), 166-180. https://doi.org/10.1080/23750472.2017.1415770

Zabriskie, R. B., Lundberg, N. R., & Groff, D. G. (2005). Quality of life and identity: The benefits of a community-based therapeutic recreation and adaptive sports program. *Therapeutic Recreation Journal, 39*(3), 176-191.

Original Research

The Contribution of Sport to the Sustainable Development Goals: Insights from Commonwealth Games Associations

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ABSTRACT

The United Nations Sustainable Development Goals (SDGs) are hailed as a common language to unite a global commitment towards a change of trajectory regarding social, economic, and environmental development issues. Although not overtly cited within the SDGs or their related targets, sport has been widely accepted and promoted as an enabler of social change and a mechanism through which to strategically map and measure commitments to sustainability. However, despite the numerous case study examples of specific sport-based programs that have demonstrated the potential of sport to contribute to the SDGs, there is limited knowledge about the currency and value that the SDGs hold for key sport stakeholders in development, and a shortage of concrete evidence to assess the uptake and integration at the level of national policy. In an attempt to address this shortage, this paper presents insights from the analysis of secondary data collected by the Commonwealth Games Federation from 62 Commonwealth Games Associations (CGAs) in relation to their perspectives on the contribution of sport to the SDGs. The paper provides examples of specific areas of strength, or those in need of further development, to present a baseline for the current state of play in understanding the contribution from individual CGAs to the SDGs.

THE CONTRIBUTION OF SPORT TO THE SUSTAINABLE DEVELOPMENT GOALS: INSIGHTS FROM COMMONWEALTH GAMES ASSOCIATIONS

The advent of the United Nations (UN) Sustainable Development Goals (SDGs) was welcomed as a catalyst to address manifold social, economic and environmental issues. Hailed as a common language to unite a global commitment towards a change of trajectory regarding development issues (Spangenberg, 2017), the UN 2030 Agenda outlined 17 Sustainable Development Goals and 169 related targets to provide direction for national development plans and international development cooperation (United Nations General Assembly, 2015). Although not explicitly mentioned within the Goals or related targets, Paragraph 37 of the UN 2030 Agenda recognized the potential of sport as an enabler of sustainable development. Furthermore, sport has been widely acknowledged as a global mechanism through which to strategically map and measure commitments to sustainability (Guilianotti et al., 2018; Lemke, 2016; Lindsey & Darby, 2018).

The vocal support and advocacy from global organizations, such as the UN, for sport as a means to address several targets contained within the SDGs has prompted large numbers of organizations (both private- and state-funded) to

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integrate sport as a cultural vehicle to contribute to their attainment (Collison et al., 2017, Guilianotti et al., 2018). Furthermore, numerous case study examples of sport-based programs have been presented, analysed and championed to demonstrate the potential of sport to contribute to the SDGs (e.g. Burnett, 2019; Lemke, 2016; Mojtahedi & Katsui, 2018; Oby & Egaga, 2018; Otterbein, 2020). Yet, several years after their inauguration, little is known about the currency and value that the SDGs hold for key sport stakeholders in development. Moreover, there is little concrete evidence of uptake and integration at the level of national policy, despite the high level of political endorsement of sport's transformative potential (Svensson & Loat, 2019; Svensson & Woods, 2017).

Therefore, in an attempt to address the shortage of empirical insights at a sport policy level, this paper presents findings from an analysis of secondary data collected by the Commonwealth Games Federation (CGF) from 62 of the 71 Commonwealth Games Associations (CGAs) in relation to their perspectives on the contribution of sport to the SDGs. Building upon work conducted by the Commonwealth Secretariat, which has benchmarked the measurement of sport's contribution to development objectives (cf. Dudfield & Dingwall-Smith, 2015; Kay & Dudfield, 2013; Lindsey & Chapman, 2017), the paper provides insight into specific areas of strength, or those in need of further development, to present a baseline for the current state of play in understanding the contribution from individual CGAs to the SDGs. In doing so, the findings may act as a foundation to facilitate future policy, strategic direction and resource allocation for global sport policy makers in considering their contribution to the sustainable development goals.

Our central intention is to present much needed empirical insight into the perceived contribution of (inter)national sport organizations towards the SDGs (Svensson & Woods, 2017; Whitley et al., 2019). Following Svensson and Woods (2017), we contend that providing a more detailed understanding of the practical landscape is critical to ensure that theoretical perspectives on development are representative of sport for development practice and provide important insights which might help to shape capacity-building. In addition, we anticipate that the baseline insights presented in this paper will provide a foundation for future research (Svensson & Woods, 2017). As such, in offering these empirical insights, we seek to invite theoretical developments in relation to the role of sport as a tool for sustainable development, whilst constructing a foundation to facilitate strategic direction and resource allocation for global sport policy makers in considering their contribution to the sustainable development goals.

The Sport for Development and Peace Movement and Sustainable Development

Since the turn of the millennium, sport has become an increasingly mainstream feature of policy and development agendas across the world. Often attributed to Nelson Mandela's speech at the Laureus Sport for Good Awards in 2000, the notion that sport has the power to change the world gained traction in domestic and international policy discourse. Today, it serves both as a principal site through which to foster inclusive cultural norms and societal values, as well as a tool for addressing the myriad discontents which impinge on the social, economic and environmental development of societies across the globe (Coalter, 2007; Darnell, 2012). This conviction in the power of sport is evidenced in a vast assemblage of social problem oriented interventions. These include health, education and community initiatives, environmental protection campaigns, humanitarian and human rights programs, peace and reconciliation schemes, while a trend towards corporate social responsibility has fuelled the expansion of elite sporting foundations and charitable arms (Coalter, 2010; McGee, 2018).

Academic research has generally kept pace with this feverish uptake of sport, which as Kidd (2008) observes, originated through efforts by international actors such as UNESCO and the International Olympic Committee's Olympic Solidarity Commission, who reinvested revenues into a range of programs to assist sports development in disadvantaged regions of the world. In the 1990s, the advent of a revolution of non-governmental organizations (Fisher, 1997) saw sport become popularized as a low-cost high impact tool in development practice culminating in the UN's publication of the Millennium Development Goals in 2000 (Levermore, 2008). Before long, a distinct Sport-for-Development and Peace (SDP) Movement (Guilianotti, 2011; Kidd, 2008) saw the rapid emergence of international non-governmental organizations who pioneered partnership working with nation-state governments, transnational corporations and sporting stakeholders in multiple lower income countries (Black, 2010).

As the growth of this movement continued apace, academic critique has centred on several issues, most notably the unequal geopolitics which shape the development relationships, which are often top down interventionsimposed by Euro-American organizations in formerly colonized regions of the world (Black, 2017). As Darnell (2010) and Darnell and Hayhurst (2012) have argued, this raises questions about the hegemonic power relations underpinning the SDP movement, and the extent extent to which it represents merely a neo-colonial

extension of Global North-Global South inequalities. Amid mounting critiques of this international SDP movement, and its apparent mission drift (Coalter, 2007), the launch of the UN Sustainable Development Goals (SDGs) in 2015 was welcomed as an opportunity to empower nation-state integration of sport in social, economic, and health policy.

As an ambitious "blueprint for shared prosperity in a sustainable world" (United Nations, 2019, p. 2), the SDGs proposed a more universal, integrated and indivisible framework for action. Foremost was the active pursuit of cross-cutting elements (United Nations General Assembly, 2015) as part of a strategic shift towards policy coherence deemed lacking in the discrete and limited purview of the Millenium Development Goals (Lindsey & Darby, 2018). In theory, this meant addressing complex issues such as health and wellbeing, education, inequality, and empowerment in a more holistic manner (Chawansky et al., 2017), acknowledging the need for implementation methods that have support across the pillars of sustainable development—namely, the economic, socio-political, and environmental sectors.

As noted above, although sport is not directly noted within the goals or targets of the UN 2030 Agenda, Paragraph 37 of the agenda acknowledged how sport can be an "important enabler of sustainable development and peace" (United Nations General Assembly, 2015, p. 10). This includes contributions to tolerance and respect, the empowerment of women, young people, and communities, and to projects focused upon health, education, and social inclusion. In response, the Sixth International Conference of Ministers and Senior Officials Responsible for Physical Education and Sport (MINEPS VI) held in Kazan (July 2017) created an Action Plan of which Action 2 was focused on developing common indicators for measuring the contribution of physical education, physical activity and sport to prioritized SDG targets. Critically, the Kazan Action Plan recognized that the full potential of sport to contribute to the achievement of the SDGs will only be realized if a broad range of state and non-state stakeholders are mobilized through new partnerships and platforms. Otherwise, "at national and international levels, there is a high risk that SDG-oriented policy interventions in and through sport will be neglected, ineffective and/or insufficiently recognized" (MINEPS VI, 2017, p. 19).

The messages contained within the Kazan Action Plan serve as an invitation to sports organizations to corral a collective effort towards demonstrating the contribution of sport to the attainment of the SDGs. As an inter-governmental organization that coordinates and undertakes work on behalf of 54 associate countries representing 2.4 billion people (Commonwealth Secretariat, 2020), the Commonwealth Secretariat has been recognized as being instrumental in guiding the emergence of policy and strategy to enhance sustainable development through sport (Lindsey & Chapman, 2017). Moreover, Commonwealth countries have been noted as being at the forefront of sport-based initiatives for development (Guilianotti, 2014). More specifically, the Commonwealth Secretariat has published various documents which have progressively sought to provide support to stakeholders seeking to strengthen their contribution to the SDP movement (Kay & Dudfield, 2013), offer policy guidance, technical assistance or assist capacity building processes (Dudfield & Dingwall-Smith, 2015), or recommend evidenced and balanced policy options to support effective and cost-efficient contribution to SDG attainment (Lindsey & Chapman, 2017).

This body of work has focussed upon the contribution of sport to six identified SDGs—ensuring healthy lives and promoting well-being for all (SDG 3); ensuring inclusive and quality education for all and promoting life-long learning (SDG 4); achieving gender equality and empowering all women and girls (SDG 5); promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (SDG 8); making cities inclusive, safe, resilient and sustainable (SDG 11); and promoting just, peaceful and inclusive societies (SDG 16) (United Nations, 2019). In addition, it has identified the need for alignment with SDG 17 (sustainable development through global partnerships) to enable configurations of various SDP stakeholders to be formed as an effective means of implementation for these identified SDGs (Lindsey & Chapman, 2017; Lindsey et al., 2020).

However, despite this substantive work, there remains a dearth of evidence to measure the progress of sporting organizations towards SDG targets (Collison et al., 2018; Lindsey & Chapman, 2017; Svensson & Loat, 2019; Svensson & Woods, 2017). A lack of pragmatic, yet sophisticated, methods to capture the contribution of sport-based interventions to the SDGs has been noted as an impediment to strengthening this evidence base, as has the absence of national systems of data collection (Lindsey & Chapman, 2017). Consequently, space exists to explore how (inter)national sports organizations are contributing to the attainment of the SDGs and adopting roles as key policy actors and partners to facilitate action towards these goals.

Sport within the Commonwealth Movement

The CGF is a transnational institution which represents a constituency of affiliated national Commonwealth Games

and for selecting the host city for each event (Byrne, 2014). Although distinct from the operations of the Commonwealth Secretariat, which predominately works in conjunction with governments, the CGF promotes itself as a progressive leader in sport and social change efforts (Commonwealth Games Federation, 2015) and has been noted as an early adopter in efforts to align sport policies and sport development projects with the aims, imperatives and objectives of the SDGs. Given that the CGF's staging of the Commonwealth Games is the most tangible and visible expression of efforts to raise global awareness of the aims and intentions of the Commonwealth Secretariat, collaboration between the two organizations in relation to sport and sustainable development is frequent.

Although the CGF has a detailed and complex history (Byrne, 2014; van der Westhuizen, 2004), the publication of the CGFs Transformation 2022 strategic plan (Commonwealth Games Federation, 2015) signalled a step-change in their focus away from a sole concern with performance in sport towards a "transformational leap … to performance impact in the Commonwealth" (p. 11). Consequently, Transformation 2022 and associated strategic documents have outlined the CGF's intention to harness the potential of sport to enable social change at an individual, community and global level (Commonwealth Games Federation, 2020).

As constituent members of the CGF, the primary purpose of CGAs is to oversee their nation's participation within the Commonwealth Games. Although their main focus is at high-performance level, CGAs are often at the forefront of broader sport development promotion within their respective countries. However, following the lead of their affiliated body, CGAs have more recently acknowledged their responsibility as pivotal contributors to the development of national sport policy and consultants within efforts to position sport as an instrument for social and economic development. In some nations, in particular the less economically developed countries of the Commonwealth, CGAs enact a significant role in public affairs and often their work is combined with that of the National Olympic Committee (Robinson & Minikin, 2014). In more economically developed nations, the CGA is typically a stand alone association with limited policial influence.

METHODOLOGY

Research Design

The CGF and Commonwealth Secretariat are key stakeholders and early adopters in efforts to benchmark the contribution of sport to the attainment of the SDGs. In order to continue this work and illuminate the contribution of CGAs to the SDGs, it was imperative that the research design enabled all CGAs participating at the General Assembly of the CGF to provide data in as efficient a manner as possible. Due to these practical imperatives, it was deemed that a questionnaire was the most appropriate method to adopt. However, the methodological benefits of quantitative research, such as anonymity, reduction in bias, and logical structuring of data (Rubin & Rubin, 1995; Ryen, 2008) were equally important factors in the choice of a questionnaire.

The research instrument used was a questionnaire designed by the CGF and the Commonwealth Secretariat in order to broadly investigate the contribution of CGAs to the sustainable development goals (see Appendix A). However, it was also important that the questionnaire design provided the opportunity to allow respondents to provide more open, unstructured responses. Therefore, the use of an open-ended question was also incorporated into the questionnaire design in order to provide rich qualitative data on the topic and allow for the triangulation of data to enhance understanding and meaning.

The quantitative element (8 items) investigated the experiences and perceptions of representatives from the CGAs via a self-report questionnaire. Items 1, 2, 3, 4, and 6 utilized a 5-point Likert Scale to assess topics including CGA familiarity with the SDGs, CGA collaboration with relevant Government bodies, strategies for the inclusion of people with a disability, and reflection on ten indicators identified as relevant to the SDGs[1] . Two items (Items 5 and 8) required respondents to consider specific policies that were in place which related to the safeguarding of various participants of sport and/or protecting the integrity of sport. The remaining item (Item 7) elicited information relating to the gender breakdown of CGA Board Members. In the interests of transparency, the current paper reports on items 1, 2, 3, 6, and 7. The qualitative element of the research comprised analysis of a ninth item contained within the questionnaire (an open-ended question), which enabled respondents to describe specific sport, physical activity and physical education activities that their CGA was currently engaging with that had direct relevance to the 17 SDGs.

Although the choice and design of the questionnaire had the potential to reduce bias in its broadest sense (for example, by controlling for extreme, neutral, acquiescence and dissent biases as well as decreasing the number of excluded and non-responding participants), it should be highlighted that the completion of the questionnaire by the CGA impart response bias on the data collected in unintended ways.

Examples of this unintended, accidental response bias—largely linked to the manner in which the questionnaire was administered—would be demand and social desirability biases whereby the CGA representatives could feel influenced to respond in a manner more positively aligning their CGA to the SDG agenda. Strictly adhering to the ethical parameters of the data collection (for example, assuring anonymity for each CGA) mitigated as much as possible the impact of the accidental biases on the data collected.

Ethical Considerations

The CGF were responsible for the ethical approval process for the data collection which indicated that any public reporting of the responses of individual CGAs would not identify the CGA concerned and that reporting would be of aggregate data either by region or by the collation of overall responses of CGAs, thus assuring anonymity for each CGA. The completion of the questionnaire was voluntary, and respondents were assured that the management of their data would be in strict accordance with the CGF's data management policy. The data received by the authors from the CGF were handled in strict accordance with their University's code of good practice in research integrity, paying particular attention to the institutional research data policy to ensure that the researchers fulfilled their legal and ethical obligations regarding research data management.

Research Setting and Participants

The questionnaires were completed by CGA Representatives who attended a meeting of the General Assembly[2] of the CGF held in 2019. In total, 68 CGAs attended the General Assembly , and 62 completed Items 1-8 of the questionnaire (91% response rate). Response rate for the open-ended question (Item 9) was lower with 40 of the 62 (65%) CGAs completing this item and offering more detailed insights into their sport, physical activity and physical education provision. At a regional level, questionnaire response rate ranged from 79% (Caribbean) to 100% (Oceania and Asia). Regional response rate to the open-ended question ranged from 20% (Americas and Asia) to 91% (Caribbean) [see Table 1].

Data Analysis

Cognisant of the seven decades of debate surrounding the appropriate analysis of rating scales (Carifio & Perla, 2008; Jamieson, 2005; Pell, 2005) the Likert Scale responses derived from this questionnaire were analysed in a manner sensitive to the ordinal, discrete, and limited range of the data associated with this mode of data collection. As there was no attempt to combine responses across the questions, each question was therefore stand-alone, analysed independently, and the resultant data analysed in accordance with what Clason and Dormody (1994) identify

Table 1: Regional response rate (based on CGA attendance at CGF General Assembly, 2019).

Region	Number of responses by CGAs in attendance (Item 1-8)	Response rate	Open-ended responses by CGA to Item 9*	Response rate
Africa	18/19	95%	12/18	67%
Americas	5/6	83%	1/5	20%
Asia	5/5	100%	1/5	20%
Caribbean	11/14	79%	10/11	91%
Europe	9/10	90%	4/9	44%
Oceania	14/14	100%	12/14	86%

* based on number of CGAs who completed Items 1-8.

as Likert-type items. Appropriate statistical procedures for Likert-type items utilized in this paper are modes, medians, and frequencies.

The qualitative data obtained from the open-ended item were coded, managed and organized manually, and were subjected to analysis in four stages (Giorgi & Giorgi, 2008). First, the open-ended responses were transcribed verbatim (by the first author) and read in full to obtain a broad overview of the data. This entailed the first and second author reading the transcripts in full, individually and independently, to gain an overview of the data and familiarize themselves with the vast array of responses from the CGAs. Second, the responses were coded and indexed according to indicators contained within the SDG targets. This stage again involved the first and second author analysing the transcripts independently to capture the analytically significant features of the data and improve the systematicity, communicability, and transparency of the coding process (O'Connor & Joffe, 2020). Third, the identified codes were clustered into a number of over-arching topics before being organized into generic themes, which form the basis of the qualitative findings presented in this paper.

Having completed the first two stages independently, the latter two stages were undertaken jointly with first and second authors combining to reflect on the qualitative data set. Acknowledging the cautions of Smith and McGannon (2018) and Braun and Clarke (2013), we avoided member checking or any form of inter-code agreement (even those considered subjective inter-coder agreement: Guest et al., 2012). Instead, our reflection consisted of conversations framed by the existing literature pertaining to the contribution of sport to the SDGs as a way of refining and confirming our themes.

RESULTS AND DISCUSSION

The Role of CGAs as a Strategic Partner in SDG Delivery and Policy

An initial finding pertinent to the role of CGAs in contributing to SDG delivery was the perceived extent to which CGAs engaged with, or were engaged by, relevant Government departments and agencies in their country for the betterment of sport, physical education, and physical activity. With the exception of one CGA from the Oceania region, all CGAs responded positively (either "strongly agree" or "agree") that they enjoyed a collaborative and positive relationship with their respective national Government.

Findings from the qualitative responses underlined the complementary nature of relationships that were evident between CGAs and national Government departments, to reinforce the centrality of CGAs as key stakeholders within the structure of sport in their respective countries. For example, a large proportion of CGAs in Oceania, the Caribbean, and in Asia indicated that they enacted a central role as consultants with a range of national Government Departments in areas as diverse as sport, health, education, and environmental matters.

Our CGA has been engaged with government to cooperate in all aspects of sport [and] we aim to consolidate a memorandum of understanding with our government in regards to sport development (Oceania CGA).

The CGA coordinates with the Ministry of Education and Ministry of Youth and Sport to coordinate physical education in our schools both at primary and secondary level (Caribbean CGA).

Our CGA works closely with the National Sports Council, the Ministry of Education, Ministry of Health, Department of Environment initiating programs as well as giving support to them in relation to SDGs in sports (Africa CGA).

As Lindsey and Bitugu (2018) observe, such relationships between sport organizations and government departments is not uncommon, especially in the diffusion of policies related to sport or in circumstances where sport could be used instrumentally towards broader policy objectives. To reinforce this point, CGAs in these same regions outlined how they frequently adopted an advisory role in the creation of national sport policy. Similar sentiments were expressed by several CGAs in Europe, most pertinently in respect of their active involvement as a strategic partner on sport policy development. Responses ranged from European CGAs adopting roles as "part of the Government Sports Council" to being "a member of a functioning All Party Group on sport" in their specific country.

CGAs also reported on their familiarity with the SDGs and the importance of their contribution to achieving relevant SDG targets. Overall, 81% of CGAs responded positively ("strongly agree" [18%] and "agree" [63%] responses combined) that the leadership of their CGA was familiar with the SDGs and their relevance to sport, physical education and physical activity. However, this broadly positive message masked some interesting inter-regional variations and it was evident that the Americas region, where 44% of CGAs responded positively, did not have as positive a perspective on the familiarity of leadership with the SDGs ("strongly agree" [20%] and "agree" [20%]) as all the other regions (Range 67% [Europe] to 95%

[Africa]).

Finally, CGAs were asked to reflect upon their perceived level of responsibility for the attainment of relevant SDG targets within their respective countries. Overall, 89% of CGAs responded positively ("strongly agree" [25%] and "agree" [64%] responses combined) to this item, to indicate a broad, general agreement with this statement. However, this broadly positive message again masked some important inter-regional differences, with "strongly agree" responses ranging from a lower level of 0% for the Americas and Asia regions to 44% for Africa. Furthermore, it was evident that Europe did not have as positive a perspective on the engagement and contribution of CGAs to achieving relevant SDGs (55%) as the other regions (Range 80% [Americas] to 100% [Asia, Oceania, and Africa]).

These findings reveal that the extent to which individual CGAs regarded their strategic value as a partner in SDG-related projects and programs was based on their perceived position within the often over-crowded sport policy landscape (Hayhurst, 2009; Morgan, 2013). Indeed, as Lindsey and Chapman (2017) have observed, there is significant diversity across Commonwealth countries with regard to the location of sport within national government structures, and Lindsey and Bitugu (2018) have warned of the challenges inherent within differentiated policy landscapes. Accordingly, in low- and middle-income countries or less economically developed countries, where CGAs often doubled as the country's national Olympic committee, the influence of the CGA as a strategic partner was much more significant than that of CGAs in more developed countries, where competition from a broader assortment of competing sport policy actors was apparent (Hayhurst, 2009). Indeed, qualitative responses offered further insight into this variance. For instance, in some cases, the intent and involvement of CGAs in contributing to SDG delivery and targets was highly tangible. As an example, one CGA from the Oceania region noted:

[Our] CGA has been charged by the Government to create a National Sports Policy that will detail how the country will address its contribution to sustainable development goals.

Although none of the CGAs noted explicitly that SDG targets were too difficult to address or were beyond their current capacity, some reported that their contribution to the SDGs was more incidental than founded on considered, intentional program design. For example, a different CGA from the Oceania region revealed:

Our CGA does not currently engage in activities with the SDGs in mind. [However], our promotion of sports and physical activity does so indirectly and includes the objectives of the SDGs.

Other CGAs, in particular those located in the Caribbean, highlighted the necessity for alignment with the SDGs to be an emerging feature of future programming and strategic intent. For instance, one CGA from the Caribbean observed how they "will redefine the SDGs with Government agencies and work to strengthen the [related programs] which exist", while another acknowledged that:

The CGA tends to play a supportive rather than an advocacy role in the [SDG] areas under consideration. There is, however, an increased awareness and urgency to become more vocal, strategic and active among the Directorate of the CGA who must now seek the buy-in from its constituents (Caribbean CGA).

The overall picture in relation to the importance of CGA involvement in contributing to the SGDs was best exemplified by one, further, Caribbean CGA who reported that their intentions were to:

Broaden the reach and tentacles of the organization and show the impact of sport beyond just "playing the game". The SDGs are centrefold for our organization and we have secured training to enable us to begin the transformation process.

Clearly, both the quantitative and qualitative findings highlight that CGAs recognize their centrality in contributing to the achievement of SDG targets. As such, it would appear that CGAs acknowledge their potential to align with the intentions of SDG 17 (Strengthen the means of implementation and revitalize the global partnership for sustainable development) and act as pivotal actors to enhance policy coherence for sustainable development (Lindsey & Darby, 2018).

Areas of Significant Contribution to the SDGs

Analysis revealed that there were several areas related to the SDGs where CGAs were utilising sport to make a significant or tangible contribution to identified targets. Perhaps unsurprisingly, the areas most evident in this respect were those that had been identified as the focus for the Commonwealth Secretariat's contribution of sport to the SDGs (Dudfield & Dingwall-Smith, 2017; Lindsey & Chapman, 2017). As such, CGAs reported significant contribution and involvement in relation to (a) advancing gender equality; (b) raising levels of physical activity (and (and thus improving physical and mental health); and (c)

developing the provision of physical education within the primary and secondary curriculum.

Advancing gender equality was the area which all CGAs perceived there to be the most regular involvement. In keeping with SDG 5 (Gender equality), CGAs were able to outline how they considered themselves accountable for commitments made to women's rights (United Nations, 2019). Specifically, 86% of CGAs reported that they were currently involved in programs or projects that intended to advance gender equality (44% regularly; 42% irregularly). Qualitative findings further supported this view, with a host of CGAs highlighting specific initiatives that were designed to promote gender equality and demonstrate how sport can be utilized to challenge gender ideology (Collins & Kay, 2014). Furthermore, the findings illustrated the importance attached to enhancing the experiences of women as a key component of many SDP programs (Collison et al., 2017). Many responses emphasized the implementation of delivery-level initiatives to inspire female participation in sport or support specific programs designed to enable women to be more centrally involved in sports leadership. These findings illustrate a general awareness of gender-based empowerment as a key component of many SDP programs (Collison et al., 2017), and may serve as tentative evidence of the effectiveness of coordinated efforts, across national and international policy agendas, to promote gender equality. As one example, a CGA from the Oceania region remarked:

[Our] CGA advocates equality and inclusion. At the recent Pacific Games, [our] women athletes won gold medals for the first time. These athletes have been giving inspirational speeches at schools [and] at sports promotions for all.

Similarly, in the Caribbean, one CGA noted that it "has forwarded opportunities for women in coaching, women in education (scholarships) and women leadership programs", while another reported how they had "focussed on [the delivery] a specific project called Future is Female over the last quadrennial".

Other responses identified more structural imperatives such as the development of "a Women in Sport Commission" (Oceania CGA) or measures to ensure that "the rights of gender equality are enshrined in the [National Olympic Committee/CGA] Constitution" (Caribbean CGA). Similar good governance in relation to gender equality was reported by an African CGA, who listed a variety of initiatives including:

… constitutional minimum representation [on the CGA Board]; equal opportunities in education (trained 600 female sports administrators out of 1074 administrators in 6 years); key appointments for women in medical and technical commissions; all Chef de Mission at Olympics, All Africa Games, [and] Commonwealth Games are women.

Despite the apparent wave of initiatives aligned to gender equality and female empowerment across many CGAs, literature has highlighted how initiatives with this focus often lack substantive weight (Sen, 2014) or provide solutions that offer limited permanence (Eden & Wagstaff, 2021). Indeed, there was no evidence from this study to indicate how or if these various initiatives were impacting positively towards the attainment of targets within SDG 5. However, a commitment to gender equality appeared to be a central consideration for all CGAs, and of the remaining 14% of CGAs who reported that they were not currently undertaking projects to advance gender equality, all reported that they were at least considering the necessity to engage in such projects. This was exemplified by a concession from an African CGA, who responded:

Gender equality has not been too good in our CGA activities because we have very few women involved in sports but from 2019 there is now a sustainable effort to get more women into sport.

Although the measurement of sustainability remains a topic of debate among researchers, policy makers, and other stakeholders (Miola & Schiltz, 2019), it is evident that robust monitoring and evaluation of ongoing efforts to address gender inequality will be vital to a deeper understanding of how the aforementioned commitments reported by CGAs translate into tangible action and impact.

CGAs also reported on the gender identity of their CGA Board Members. Gender identity was indicated as either Male, Female or Other (see Table 2). Aggregate data from the 62 CGAs indicated that there was a total of 586 Board Members, of which 391 were identified as male, 192 as female, and 3 as other. As an overly simplistic measure of female representation (Nhamo et al., 2018), these data highlight a disparity between male and female CGA Board Members, resulting in a gender ratio of 2.04:1 (Male: Female). Although qualitative responses noted how some CGAs were making a concerted attempt to balance representation on their Boards, the data also revealed some pertinent regional differences, with female representation most prevalent in Oceania (39%) and least prevalent in Asia (23%). Of the 62 individual CGAs surveyed, only three constituted more female Board Members than male, while a further three reported an equal distribution of male and female Board Members.

Table 2: Gender identity of CGA Board Members

	Overall	Americas	Asia	Caribbean	Europe	Oceania	Africa
Male CGA Board Members	391	34	38	69	44	68	138
Female CGA Board Members	192	20	12	35	23	45	57
Other CGA Board Members	3	0	2	0	0	1	0
Total	586	54	52	104	67	114	195

Despite the proportion of female Board Members being comparatively low, overall the findings highlight that CGAs recognize their responsibility to contribute to gender equality strategies in their country (SDG 5), and specifically SDG Target 5.C (Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels). In addition, it is clear that CGAs acknowledge a commitment to meeting SDG Target 5.5.2 (increasing the proportion of women in managerial positions) and SDG Target 16.7.2 (increasing the proportion of population who believe decision-making is inclusive and responsive by sex, age, disability and population group).

A second area related to the SDGs where CGAs perceived that they were making a difference through sport-based approaches was in promoting and supporting participation in physical activity and healthy lifestyles (SDG 3). Although the targets related to SDG 3 are broad and far-reaching in scope, Target 3.4 is specifically concerned with the growing burden of non-communicable diseases (United Nations, 2019), a feature that aligned specifically with several of the responses from CGAs. Evidence from our data highlighted how CGAs recognized their obligations in contributing to the prevention of non-communicable diseases, including the promotion of mental health. Indeed, 76% of CGAs reported that they were currently involved in programs to promote and support participation in physical activity or projects designed to improve physical and mental health (32% regularly; 44% irregularly). Furthermore, only 2% of CGAs indicated that they were not involved and not considering involvement in such programs.

Although explicit examples of these specific programs were limited in the qualitative data, several CGAs across all regions reported that they were often advocates or advisors on physical activity programs. For example, one CGA from the Americas region noted that they "enjoy a very high profile in the community and contribute substantially to health and well-being [programs]", while a CGA from Oceania explained that they were:

> *… very active in advocating sport and physical activity to address the high incidence of non-communicable diseases in [their country] due largely to inactivity.*

Data indicated that the majority of projects reported were concerned with enhancing physical health. However, 43% of CGAs expressed that they were currently involved in programs or projects that were aligned to improving mental health and wellbeing, either for athletes and/or the general population (7% regularly; 36% irregularly). Importantly, where tangible provision for this aspect of health was not yet evident, 48% of CGAs indicated that they were considering programs with a specific accent on mental health, with only 9% of CGAs reporting that they are not involved and not considering involvement in such programs. This represents a notable point of diversification from traditional development-centred agendas that have tended to prioritise action on epidemics of AIDS and malaria to a broader concern with the prevention of non-communicable diseases and the holistic promotion of health and wellbeing (Buse & Hawkes, 2015).

The third area where the data inferred that there was regular sport-based involvement from CGAs was in relation to the development of quality physical education and sport in schools. Drawing parallels with Paragraph 7 of the UN 2030 Agenda and the necessity to provide universal access to quality education as an example of how sport can be an "important enabler of sustainable development and peace" (United Nations General Assembly, 2015, p. 10), 63% of CGAs reported that they were currently involved in programs or projects to enhance the quality of physical education and sport in schools (24% regularly; 39% irregularly). Furthermore, only 10% of CGAs indicated that they were not involved and not considering involvement in such programs.

Although there were some minor inter-regional differences, the qualitative responses indicated that initiatives related to quality education revolved around three main areas. First were initiatives designed to utilize physical education and

and sport to educate young people about the SDGs and sustainable development more generally. Aligning with SDG Target 4.7 (ensure that all learners acquire the knowledge and skills needed to promote sustainable development), several CGAs expressed that they had initiated a "values through sport" project in schools. For example, one CGA outlined how their project consisted of "curriculum related resources and an Olympic Ambassador program" (Oceania CGA), while another had instigated "collaboration with the Ministry of Education and UNESCO for a value based education in [their country's] primary schools" (Africa CGA). The second area involved advocating for physical education to become a more visible or statutory element of both the primary and secondary school curriculum. CGAs across the Caribbean, Africa, and Oceania indicated that their most important role in relation to quality education was to advocate for the inclusion of physical education in the curriculum. For example, one CGA (Oceania) reported:

We are trying to put PE back into primary schools and promote sports in schools. We are also trying to insert PE in the curriculums to make sure students [can] pursue careers in sports.

Although such findings may demonstrate the value of physical education in fostering a healthy and active lifestyle (Dyson, 2014) and a commitment to providing a quality education, the lack of basic sport development infrastructure within many Commonwealth nations may signify a challenge to ensure the sustainability of such advocacy in schools Keim & Coning (2014). As such, some CGAs saw their role as one of promoting and supporting educational opportunities through sport. Often this involved the CGA working in collaboration with Government agencies and departments. For instance, in one Caribbean CGA, it was reported that:

We are actively working with the Ministry of Sport and [Ministry of] Health to implement a physical literacy and long-term athlete development program in pre-school and primary schools.

Embracing the spirit of SDG Target 4.3[3], CGA involvement in supporting quality education concerned the provision of access to further and higher education, or vocational training for sport-related careers. As example, a Caribbean CGA mentioned that they supported "several teachers colleges that prepare physical education teachers that all are engaged/employed in the school system", while an African CGA reported that they:

… were and are part of the sport administration courses at local Higher Learning Institutions. We also facilitate and offer post-graduate courses in sport administration.

Clearly, the data highlights and reinforces the potential for sport-based interventions to contribute to educational outcomes (Bailey et al., 2009) and supports the findings of previous sport-for-development research, which is replete with examples which illustrate the educational worth of SDP projects (Coalter, 2010; Dudfield & Dingwall-Smith, 2015; Lemke, 2016). Moreover, as the United Nations (2019) observes, quality education is critical to enabling upward socioeconomic mobility and a pivotal factor to escaping poverty. Furthermore, given that disparities in educational opportunities and outcomes are reported in sub-Saharan Africa, parts of Central and Southern Asia, and the Caribbean (United Nations, 2019), it is clear that CGAs can make a significant contribution to SDG 4 and ensure inclusive quality education for all and promote lifelong learning opportunities.

SDG Target Areas of Less Significant Contribution

As noted, CGAs were asked to reflect on several other aspects related to SDG priority areas. Despite some notable outliers, many areas appeared to be more difficult for the CGAs to provide regular and sustained engagement through sport-based approaches. In relation to several of the SDG priority areas, CGAs reported how they had previously been involved in projects but were no longer able to sustain this involvement. Although the available data did not enable our analysis to make assertions as to why this was the case, more stark was the concession that many CGAs were not even considering how sport and physical activity could contribute to some of the SDGs. Of these, initiatives designed to facilitate migrant inclusion (SDG Target 10.7)[4] were the least considered by CGAs, with 43% reporting that they were not contemplating involvement in programs related to this aspect of the SDGs. That said, qualitative data highlighted how individual CGAs were delivering initiatives that focused on inclusion, to align with the principles of SDG 10 (Reduced Inequalities) or SDG 16 (Peace, Justice and Strong Institutions). In some cases, the focus of sport-based projects was on reducing inequality in a broad sense. In others, the focus was more specific and sought to assist with the assimilation of migrant populations or the active promotion and integration of indigenous culture within their country (Stewart-Withers et al., 2017). For instance, a CGA from Oceania reported that they hosted an annual Refugee Sports Day, while another from the same region indicated that they had been central in "supporting the implementation of a Reconciliation Action Plan" in their country. A third CGA from Oceania outlined how they utilized sport to assist in the promotion of a peaceful and

inclusive society though indigenous and traditional games (Dudfield & Dingwall-Smith 2015):

Every two years, [our country] has its national games … This activity is instrumental to promoting island and national pride, and respect and sportsmanship is promoted throughout the games (Oceania CGA).

Other SDGs where some contribution of sport-based projects in relation to relevant targets was reported were sustainable consumption and production (various Targets related to SDG 12), where 22% of CGAs reported involvement; and job creation, innovation and entrepreneurship (SDG 8—Target 8.3[5]), where 23% of CGAs reported a contribution. Interestingly, where CGAs expressed that they were involved in projects or had considered the contribution of sport to meeting one of these SDG targets, there was often a pertinence of the SDG area with a notable concern within their region or country. For example, to align with targets noted within SDG 16 (Peace, Justice and Strong Institutions) several CGAs indicated that they were engaged in sport and physical activity projects that focussed on reducing violence and diverting young people away from anti-social behaviour. As one Caribbean CGA noted:

Our CGA has conducted workshops and engaged a number of stakeholders and community groups across the island to enhance their knowledge base in the delivery of programs geared towards trouble youths.

An aspect of the SDGs that was notable for its varied response by CGAs was SDG 13 (Climate Action). With growing concerns surrounding the urgent need to combat climate change and its impacts (United Nations, 2019), a third of CGAs (33%) indicated that they had been involved in a project to mitigate climate change. However, 23% of CGAs reported that they had not considered nor had such projects in place, with the Americas, Asian, and European CGAs reporting the least consideration of sports-based programs to facilitate climate action. Although the reasons for this limited engagement in environmental projects are unclear, it would appear that this finding corresponds with research that has observed that the physical environment has been somewhat neglected by SDP stakeholders and that environmental issues are often afforded marginal status in comparison to issues related more directly with social and economic imperatives (Guilianotti et al., 2018; Millington & Darnell, 2020).

Where some consideration of climate action was evident, often this was restricted to ensuring that CGAs complied with their international obligations in respect to climate change, akin to what Miller (2017) has described as green-washing. For example, a CGA in Africa outlined how they are conscious to "use environmentally friendly initiatives in our operating environment" to underline how CGAs often gave the appearance of environmental responsibility but, in reality, did little to advance environmental sustainability (Guilianotti et al., 2018).

That said, there was some limited evidence of a deeper engagement with climate issues. For example, a small number of CGAs reported how climate action involvement consisted of working in concert with Government to provide support, advocacy, or act as identified partners on environmental projects in their country (SDG Target 13.2[6]). For example, one CGA in Asia outlined how they had collaborated with Government and non-governmental organizations on projects to mitigate animal extinction in their country. In another example, a CGA from Africa explained:

[The] Ministry of Tourism and Environment works with our CGA on environmental issues such as protecting the environment, air, water and other related sustainable initiatives.

In other cases, CGAs were centrally involved in specific projects to educate or raise awareness of climate change issues (SDG Target 13.3[7]). For example, a CGA from Oceania highlighted a specific project (Go Green Values) which utilized athletes to promote and support activities to alleviate climate change and reduce carbon footprint, while several other CGAs indicated involvement in tree planting initiatives. As an African CGA noted, involvement in such initiatives often helped to raise the profile of their organization:

Our tree planting exercise with our sponsors all over the country has been hailed as the way forward for a sustainable climate growth.

However, despite these isolated examples, data indicated that there were a number of SDG areas that CGAs needed to consider more closely, or work to investigate the barriers to continuing activity. In addition, a more co-ordinated and strategic approach to integrating SDGs as the basis for project design and policy outcomes will be required if CGAs are to assume a leadership role in the sector. As a point of departure, individual CGAs could be encouraged to identify which elements of the SDGs are most relevant to the needs of either their country or CGF region, before moving towards the creation of focussed sport-based programs that align with the shared priorities of other national or regional stakeholders.

Conclusion

The inauguration of the SDGs provided a blueprint to enable concerted action towards addressing a range of critical challenges related to social, economic and environmental development (Spangenberg, 2017). There is extensive acceptance that sport may act as a cultural vehicle through which the SDGs may be tackled (Lemke, 2016). However, aside from small-scale evaluations of local projects that have championed the role of sport to contribute to the SDGs, there are limited empirical studies to evidence the commitment of national or global sporting organizations towards the SDGs (Svensson & Loat, 2019). To address this shortfall, this paper has sought to provide insights into the policy and practice contributions of 62 CGAs to present a baseline for current policy action towards the SDGs and provide a foundation for future strategizing.

The findings infer that there is widespread acknowledgement among CGAs that they have a pivotal role to adopt in contributing to local, national and international commitments related to the SDGs. Furthermore, there is evidence to indicate that there are considerable and noteworthy projects in place to address some SDGs, in particular concerning the advancement of gender equality, improving physical and mental health, and developing education provision. Given the constraint of space, we have applied a 'broad brush' approach to presenting these data and depicted an outline of current endeavours within the Commonwealth to connect sport with the SDGs. As such, although this article has purposefully avoided a detailed comparison of CGF regions and is limited by its width of focus in charting the current landscape, the prominent role of CGAs in many Commonwealth countries would suggest that they are well-positioned to design policy and co-ordinate strategic action in relation to sport's contribution to the SDGs at a local or national level. However, more critically, it would appear that this contribution is only focussed on a limited number of SDG areas, and that the contributions are often piecemeal or incidental rather than the result of co-ordinated, sustained involvement.

Although the use of sport to contribute to all of the SDGs would appear impractical or divert resources away from the existing work that has demonstrated considerable positive impact, there is clear potential for CGAs, and (inter)national sports organizations more broadly, to re-think previous strategic responses and establish coherent and better co-ordinated policy approaches to delivering on SDG obligations. Existing research has noted the urgent need to identify novel and evidence-based solutions to mobilize stakeholders and resources in sport for development projects (Lindsey et al., 2019; Svensson & Loat, 2019), and Lindsey and Darby (2018) have outlined the specific challenges associated with instigating mutually and coherently agreed policy objectives. However, the identification and focus upon six of the SDGs by the Commonwealth Secretariat (Dudfield & Dingwall-Smith, 2015) provides a strategic platform for CGAs to direct attention and demonstrate their contribution to global imperatives beyond the narrow confines of sport.

Although progress towards the attainment of these six SDGs will meet with inevitable contestation from stakeholders, as they project their own interests and respond to the differing power relations of local, national and international partners (Lindsey & Darby, 2018), the findings presented in this paper provide a vital embarkation point for basing future collaborative efforts for sport to demonstrate its contribution to the SDGs. As noted, the lack of a granular level analysis of these data, to highlight noteworthy trends or differences between CGF regions or variance between high-income or low-to-middle-income nations, is a limitation of the current study, and would appear to be a logical direction for future research. Furthermore, if we assume the critical importance of partnership as the 'enabling driver' for the attainment of the SDGs, an essential next step in terms of research will be to continue to address the dearth of empirical knowledge on the perceptions of key stakeholders, and identify the extent to which partnerships are integrated as part of a wider strategic action plan on sport and sustainability.

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NOTES

1 The ten indicators identified by the CGF were Enhancing quality physical education and sport in schools; Promoting and supporting participation in physical activity and healthy lifestyles; Mental health and wellbeing for athletes and / or general population; Advancing gender equality; Reducing and address violence and anti-social behaviour; Citizenship education and education for sustainable development; Job creation, innovation and entrepreneurship; Inclusion of migrants, refuges and asylum seekers; Sustainable

consumption and production; Climate change mitigation, adaptation, impact reduction and early warning.

2 Three of the 71 CGAs that comprise the CGF did not attend the General Assembly meeting.

3 SDG Target 3.4: ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education.

4 SDG Target 10.7: Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.

5 SDG Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.

6 SDG Target 13.2: Integrate climate change measures into national policies, strategies and planning.

7 SDG 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

REFERENCES

Bailey, R., Armour, K., Kirk, D., Jess, M., Pickup, I., Sandford, R., & BERA Physical Education and Sport Pedagogy Special Interest Group (2009). The educational benefits claimed for physical education and school sport: An academic review. *Research Papers in Education, 24*(1), 1-27. https://doi.org/10.1080/02671520701809817

Black, D. R. (2010). The ambiguities of development: Implications for 'development through sport'. *Sport in Society, 13*(1), 121-129. https://doi.org/10.1080/17430430903377938

Black, D. R. (2017). The challenges of articulating 'top down' and 'bottom up' development through sport. *Third World Thematics: A TWQ Journal, 2*(1), 7-22. https://doi.org/10.1080/23802014.2017.1314771

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. Sage.

Burnett, C. (2019). Framing a 21st century case for the social value of sport in South Africa. *Sport in Society, 24*(3), 340-355. https://doi.org/10.1080/17430437.2019.1672153

Buse, K., & Hawkes, S. (2015). Health in the sustainable development goals: Ready for a paradigm shift? *Globalization and Health, 11*(13), 1-8. https://doi.org/10.1186/s12992-015-0098-8

Byrne, C. (2014). Relationship of convenience? The diplomatic interplay between the Commonwealth Games Federation and the Commonwealth Games host city. *Sport in Society, 17*(9), 1204-1219. http://dx.doi.org/10.1080/17430437.2013.856592

Carifio, J., & Perla, R. (2008). Resolving the 50-year debate around using and misusing Likert scales. *Medical Education, 42*(12), 1150-1152. https://doi.org/10.1111/j.1365-2923.2008.03172.x

Chawansky, M., Hayhurst, L., McDonald, M., & van Ingen, C. (2017). Innovations in sport for development and peace research. *Third World Thematics: A TWQ Journal, 2*(1), 1-6. https://doi.org/10.1080/23802014.2017.1374208

Clason, D. L., & Dormody, T. J. (1994). Analyzing data measured by individual Likert-type items. *Journal of Agricultural Education, 35*(4), 31-35. https://doi.org/10.5032/jae.1994.04031

Coalter, F. (2007). *A wider social role for sport: Who's keeping the score?* Routledge.

Coalter, F. (2010). The politics of sport-for-development: Limited focus programs and broad gauge problems? *International Review for the Sociology of Sport, 45*(3), 295-314. https://doi.org/10.1177%2F1012690210366791

Collins, M., & Kay, T. (2014). Sport and social exclusion (2nd ed.). Routledge.

Collison, H., Darnell, S. Giulianotti, R., & Howe, P. D. (2017). The inclusion conundrum: A critical account of youth and gender issues within and beyond sport for development and peace interventions. *Social Inclusion, 5*(2), 223-231. http://dx.doi.org/10.17645/si.v5i2.888

Collison, H., Darnell, S. Giulianotti, R., & Howe, P. D. (Eds.). (2018). *Routledge handbook of sport for development and peace*. Routledge.

Commonwealth Games Federation (2015). *Transformation 2022*. The Commonwealth Games Federation Strategic Plan 2015–2022. CGF.

Commonwealth Games Federation (2020). *Transformation 2022 Refresh: Strategic Plan 2019–2022*. CGF.

Commonwealth Secretariat (2020, June 22). *The Commonwealth.* www.thecommonwealth.org/#blogs-news-and-events

Darnell, S. C. (2010). Power, politics and "sport for development and peace": Investigating the utility of sport for international development. *Sociology of Sport Journal, 27*(1), 54-75. https://doi.org/10.1123/ssj.27.1.54

Darnell, S. C. (2012). *Sport for development and peace: A critical sociology*. Bloomsbury Academic.

Darnell, S. C., & Hayhurst, L. (2012). Sport for decolonization: Exploring a new praxis of sport for development. *Progress in Development Studies, 11*(3), 183-196. https://doi.org/10.1177%2F146499341001100301

Dudfield, O., & Dingwall-Smith, M. (2015). *Sport for development and peace and the 2030 agenda for sustainable development.* The Commonwealth.

Dyson, B. (2014). Quality physical education: A commentary on effective physical education teaching. *Research Quarterly for Sport and Exercise, 85*(2), 144-152. https://doi.org/10.1080/02701367.2014.904155

Eden, L., & Wagstaff, M. F. (2021). Evidence-based policymaking and the wicked problem of SDG 5 gender equality. *Journal of International Business Policy, 4*, 28-57. http://dx.doi.org/10.1057/s42214-020-00054-w

Fisher, W. (1997). Doing good? The politics and antipolitics of NGO practices. *Annual Review of Anthropology, 26*, 439-464. https://doi.org/10.1146/annurev.anthro.26.1.439

Giorgi, A., & Giorgi, B. (2008). Phenomenology. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 25-50). Sage.

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied thematic analysis*. Sage.

Giulianotti, R. (2011). The sport, development and peace sector: A model of four social policy domains. *Journal of Social Policy, 40*(4), 757-776. https://doi.org/10.1017/S0047279410000930

Guilianotti, R. (2014). Sport for development and peace: Policy options in the Commonwealth. In O. Dudfield (Ed.), *Strengthening sport for development and peace: National policies and strategies* (pp. 10-21). The Commonwealth.

Guilianotti, R., Darnell, S., Collison, H., & Howe, P. D. (2018). Sport for development and peace and the environment: The case for policy, practice, and research. *Sustainability, 10*, 1-15. https://doi.org/10.3390/su10072241

Hayhurst, L. M. C. (2009). The power to shape policy: Charting sport for development and peace policy discourses. *International Journal of Sport Policy and Politics, 1*(2), 203-227. https://doi.org/10.1080/19406940902950739

Jamieson, S. (2005). Use and misuse of Likert scales: Commentary reply. *Medical Education, 39*(9), 971-972. https://doi.org/10.1111/j.1365-2929.2005.02238.x

Kay, T., & Dudfield, O. (2013). *The Commonwealth guide to enhancing development through sport.* Commonwealth Secretariat.

Keim, M., & de Coning, C. (Eds.). (2014). *Sport and development policy in Africa: Results of a collaborative study of selected country cases*. Sun Press.

Kidd, B. (2008). A new social movement: Sport for development and peace. *Sport in Society, 11*(4), 370-380. https://doi.org/10.1080/17430430802019268

Lemke, W. (2016). The role of sport in achieving the sustainable development goals. *UN Chronicle, 53*(2), 6-9. https://doi.org/10.18356/7260830a-en

Levermore, R. (2008). Sport: A new engine of development. *Progress in Development Studies, 8*(2), 183-190. https://doi.org/10.1177%2F146499340700800204

Lindsey, I., & Bitugu, B. (2018). Distinctive policy diffusion patterns, processes and actors: Drawing implications from the case of sport in international development. *Policy Studies, 39*(4), 444-464. https://doi.org/10.1080/01442872.2018.1479521

Lindsey, I., & Chapman, T. (2017). *Enhancing the contribution of sport to the sustainable development goals.* The Commonwealth.

McGee, D. (2018). Youth, re-inventive institutions and the moral politics of future-making in postcolonial Africa. *Sociology, 53*(1), 156-173. https://doi.org/10.1177%2F0038038518772773

Miola, A., & Schiltz, F. (2019). Measuring sustainable development goals performance: How to monitor policy action in the 2030 agenda implementation? *Ecological Economics, 164*, 1-10. https://doi.org/10.1016/j.ecolecon.2019.106373

Miller, T. (2017). *Greenwashing culture*. Routledge.

Millington, R., & Darnell, S. (Eds.). (2020). *Sport, development and environmental sustainability*. Routledge.

MINEPS VI (2017, July 13-15). *Kazan action plan* [Ministers meeting]. International Conference of Ministers and Senior Officials Responsible for Physical Education and Sport, Kazan. https://unesdoc.unesco.org/ark:/48223/pf0000252725

Mojtahedi, M. C., & Katsui, H. (2018). Making the right real: A case study on the implementation of the right to sport for persons with disabilities in Ethiopia. *Sport in Society, 21*(1), 40-49. https://doi.org/10.1080/17430437.2016.1225898

Morgan, H. J. (2013). Sport volunteering, active citizenship and social capital enhancement: What role in the 'Big Society'? *International Journal of Sport Policy and Politics, 5*(3), 381-395. https://doi.org/10.1080/19406940.2013.764542

Nhamo, G., Nhamo, S., & Nhemachena, C. (2018). What gets measured gets done! Towards an Afro-barometer for tracking progress in achieving Sustainable Development Goal 5. *Agenda, 32*(1), 60-75. https://doi.org/10.1080/10130950.2018.1433365

Oby, O., & Egaga, P. I. (2018). Functional strides to sustainable development goals (SDGs): The critical role of mobilizing Nigerian women for active participation in sport leadership. *International Journal of Physical Education, Sports and Health, 5*(2), 255-266.

O'Connor, C., & Joffe, H. (2020). Intercoder reliability in qualitative research: Debates and practical guidelines. *International Journal of Qualitative Methods, 19*, 1-13. https://doi.org/10.1177%2F1609406919899220

Otterbein, M. (2020). Physical activity and the sustainable development goals: A public health approach towards advancing the power of movement. *Journal of Emerging Sport Studies, 3*, 1-29.

Pell, G. (2005). Use and misuse of Likert scales. *Medical Education, 39*(9), 970. https://doi.org/10.1111/j.1365-2929.2005.02237.x

Robinson, L., & Minikin, B. (2014). Understanding the competitive advantage of National Olympic Committees. *Managing Leisure, 17*(2-3), 139-154. https://doi.org/10.1080/13606719.2012.674391

Rubin, H. J., & Rubin, I. S. (1995). *Qualitative interviewing*. Sage.

Ryen, A. (2008). Ethical issues. In C. Seale, G. Gobo, J. F. Gubrium, & D. Silverman (Eds.), *Qualitative research practice* (pp. 218-235). Sage.

Sen, G. (2014). Goal 5—Achieving gender equality and empowering women and girls: Is SDG 5 missing something? *UN Chronicle, 51*(4), 13-14.

Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology, 11*(1), 101-121. https://doi.org/10.1080/1750984X.2017.1317357

Spangenberg, J. H. (2017). Hot air or comprehensive progress? A critical assessment of the SDGs. *Sustainable Development, 25*(4), 311-321. https://doi.org/10.1002/sd.1657

Stewart-Withers, R., Sewabu, K., & Richardson, S. (2017). Rugby union driven migration as a means for sustainable livelihoods creation: A case study of iTaukei, indigenous Fijians. *Journal of Sport for Development, 5*(9), 1-20.

Svensson, P. G., & Loat, R. (2019). Bridge-building for social transformation in sport for development and peace. *Journal of Sport Management, 33*(5), 426-439. https://doi.org/10.1123/jsm.2018-0258

Svensson, P. G., & Woods, H. (2017). A systematic overview of sport for development and peace organizations. *Journal of Sport for Development, 5*(9), 36-48.

United Nations (2019). *The Sustainable Development Goals Report 2019*. United Nations. https://unstats.un.org/sdgs/report/2019/The-Sustainable-Development-Goals-Report-2019.pdf

United Nations General Assembly (2015, June 22). Transforming our world: The 2030 agenda for sustainable development.https://sustainabledevelopment.un.org/post2015/transformingourworld

van der Westhuizen, J. (2004). Marketing Malaysia as a model modern Muslim state: The significance of the 16th Commonwealth Games. *Third World Quarterly, 25*(7), 1277-1291. https://doi.org/10.1080/0143659042002812 76

Whitley, M. A., Farrell, K., Wolff, E. A., & Hillyer, S. J. (2019). Sport for development and peace: Surveying actors in the field. *Journal of Sport for Development, 7*(12), 1-15.

Original Research

Principles-of-action used by an eductrainer to create social bonds through sport in a psychosocial intervention program

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ABSTRACT

This article utilizes the theories of social bond and carnal sociology to analyze the role of the eductrainer in the sport-based intervention program DesÉquilibres. Methodologically, an action research study was carried out with three cohorts of adolescents. Our qualitative data collection was based on (a) interviews with 27 adolescents aged 14 to 17 years (cohorts 1 and 3), (b) a focus group of five eductrainers (paired with cohort 1), and (c) observant participation of cohorts 2 and 3. A thematic analysis revealed four principles-of-action constituting the social bond where risk-taking and its staging play an essential role: (a) a risky proposition to create the social bond, (b) recognition of the adult-in-the-making to anchor the social bond, (c) organization of the risky proposition to scaffold the social bond, and (d) physical commitment of the eductrainer to embody the social bond. Research has shown the potential of risk-taking to create and strengthen social bonds in the context of sports-based interventions.

PRINCIPLES-OF-ACTION USED BY AN EDUCTRAINER TO CREATE SOCIAL BONDS THROUGH SPORT IN A PSYCHOSOCIAL INTERVENTION PROGRAM

Although sport has long been used to address social problems (Gasparini, 2008), scientific literature is unclear regarding its impact on psychosocial development (Caillat, 2014). Indeed, psychosocial effects depend on contextual and intervention factors (Gasparni & Vieille-Marchiset, 2008). Moreover, some authors noted the lack of scientific literature concerning the mechanisms by which sport can foster participants' personal development (Green, 2008; Hartmann, 2003; Levermore, 2008). Consequently, this study aimed to identify the principles-of-action implemented by the eductrainer to create social bonds for the psychosocial development of young people. More specifically, this study focused on the notion of risk, which is central to the creation of social bonds.

Ambiguous Impacts of Sport

In the West, sport seems to be a common response to individual and collective malaise. Using sport for development is not new. The emergence of sport in English public schools in the 19th century presented sport as an educational lever for a society that is morally, physically, individually, and collectively healthy (Verchère, 2012). More recently, Sport for Development and Peace (SDP) has been defined as "the intentional use of sport, physical activity and play to achieve specific development goals in low- and middle-income countries and disadvantaged communities in high-income areas" (Richards et al., 2013, p.1) and included "all forms of physical activity that contribute to physical fitness, mental well-being and social interaction, such as play, recreation, organized or competitive sport, and indigenous sports and games"

Keywords: intervention; sport for development; coach; social bonds; psychosocial development; action research

(United Nations Inter-agency Task Force on Sport for Development Peace, 2003, p. 1). 2015).

Nowadays, in addition to remaining an educational tool, sport can be used as an instrument of psychosocial intervention with vulnerable youth. Researchers investigating SDP programs have described various benefits of sport participation, including individual development, health promotion and disease prevention, gender equality, social integration, peacebuilding or conflict prevention/resolution, and post-disaster/trauma assistance (Chawansky & Holmes, 2015; Kidd, 2008). According to Lyras and Peachey (2011), sport-based projects use sport as a medium "to exert a positive influence on public health, the socialization of children, youths and adults, the social inclusion of disadvantaged, the economic development of regions and states, and fostering intercultural exchange and conflict resolution" (p. 311). More specifically, from a psychological standpoint, participation in sport is a protective or even preventive factor (Pascoe & Parker, 2019). Some sports programs help develop self-confidence and self-esteem, as well as combat depressive disorders and suicidal ideation (Babiss & Gangwisch, 2009; Doré et al., 2015; Iannotti et al., 2009; Jerstad et al., 2010). On the social level, the practice of sport can provide safe spaces and reduce antisocial behavior among children belonging to minority groups (Stodolska et al., 2014). It can also develop citizenship, cooperation, leadership skills, mobility, social cohesion, community integration, and positive peer relationships (Edwards, 2015). In addition, it may encourage pro-social behavior (Carreres-Ponsoda et al., 2012) and broaden social horizons by linking participants with various institutional actors (Spaaij, 2012).

Despite the potential benefits of sport, these positive social impacts do not accrue automatically. Indeed, scientific studies also revealed negative impacts related to the practice of sport. On the psychological level, studies have shown that participation in sport can reinforce feelings of incompetence (Erickson & Côté, 2016; Leblanc, 2016), create dependence on the coach (Lévêque, 2015), and promote depression in the event of overtraining (Flore & Juvin, 2005). In addition, external pressure from parents, coaches, and teammates can be detrimental to psychological development and self-esteem (Gerbelli-Gauthier, 2019; Tofler & Butterbaugh, 2005) and can sometimes lead to the cessation of sports practice, described as sport drop-out by Leblanc (2016). On the social level, there are reports of increased rates of delinquency and aggression (Faulkner et al., 2007; Gardner et al., 2009; Lemieux & Thibault, 2011), behavioral and functional problems (Endresen & Olweus, 2005), and socially inappropriate attitudes reinforced by an authoritarian context (Wright, 2006).

Several hypotheses have been proposed to explain the ambiguous nature of these results. One hypothesis suggests an overestimation of sport's ability to respond to psychosocial issues (Coalter, 2015). According to Coalter (2015), this overestimation is linked to the weak theories on which studies are based on, and to the difficulty of systematizing an approach to intervention through sport given the wide range of contexts in which it is practiced. Another hypothesis is that there is a faulty postulate that sport naturally encourages positive values in response to social issues, such as inclusion and social cohesion (Caillat, 2014).

Sports' potential benefits require professional and socially responsible interventions that are adapted to the social and cultural context, prioritize developmental goals, and are carefully designed to be inclusive (Gardam et al., 2017; Hartmann & Kwauk, 2011; United Nations Office of Sport for Development and Peace, 2017). In addition, authors from the Sport for Development (SFD) field have called for greater integration of theory and practice to better understand the issues at stake (Gadais, 2019; Schulenkorf, 2017; Peachey et al., 2019). To do this, this study aimed to give participants a voice in describing how they experience the program and what they learn from it in relation to the crucial role of the facilitator. This approach is rarely used in SFD literature (Shin et al., 2020; Whitley et al., 2019). Finally, we noted a lack of consensus on the definition of the word sport. Coalter (2015) noted that it is often used in a generic manner that can lead to bias in both evaluations and the formulation of hypotheses.

Risky Social Bond as a Tool and Goal of the Psychosocial Intervention by Sport

Several works in psychology and in educational sciences define social interactions as a set of mutual influences exerted by the actors, on each other, engaged in a joint, conflictual, or cooperative action (Amade-Escot et al., 2007). Such works have shown that social belonging is a fundamental element of adolescents' motivation (Durand, 1987). These studies, which did not support the idea that sport was inherently positive, formalized the didactic principles that contribute to the psychosocial, interpersonal development of young people (Legrain & D'Arripe-Longueville, 2010; Zanna, 2015).

Within the related field of situated cognitive anthropology, studies have shown that the establishment of processes can systematize this type of relationship by developing social bonds between participants. Thus, Lave and Wenger (1991) showed that including individuals in a community of practice (a collective united by shared experiences) fostered

solidarity, mutual assistance, and common expectations among students. Saury et al. (2013) summarized this work in the field of school postulating that these principles would develop a collective of students united by a strong social bond. Several avenues to facilitate the establishment of a community of practice have been identified: to maintain stable group-teams over time (Siedentop, 1994), to propose ambitious collective projects (Ubaldi, 2004), and to cap the learning cycle with a significant event (Delignières & Garsault, 2004). The social bond, from these perspectives, becomes both the tool and the goal of intervention.

Considering two of the principles mentioned above (collective projects and significant events), the concept of risk is particularly important to promote the creation of social bonds between youths to develop their psychosocial behaviors. Indeed, ambitious collective projects with meaningful culminating events are likely perceived as risky and may evoke strong emotions, thus promoting the development of solidarity within the group (Crance et al., 2014; Delignières & Garsault, 2004; Ubaldi, 2004). Although the notion of risk is particularly difficult to define (Pesqueux, 2011; Petiot & Delignières, 2019), we define it in this article in its classic sense - that is, engaging in an action that could bring an advantage or a benefit, but which involves the possibility of danger. More specifically, we distinguish between an objective risk—also known as real risk, which is the result of rational analysis identifying and quantifying the risks associated with social situations to reduce or eliminate them—and a subjective risk, which is based on the interpretations of the individual in terms of their psychological characteristics. The subjective risk, with reference to the homeostatic theory initially forged by Wilde (1988) in the cognitivist paradigm, is itself situated at the confluence of preferential risk (i.e., the level of risk that the individual considers having to take in each situation) and the perceived risk, which refers to the dangerousness of the situation. Creating a social bond, decontextualized regarding studies on communities of practice, requires individuals to experience events that they perceive as risky, either physically (sleeping in the forest in negative temperatures; Gargano & Turcotte, 2018) or emotionally (performing a choreography during a show in front of a large audience; Crance et al., 2014). For example, Gargano (2020) showed that the presence of risk in the context of interventions through nature and adventure allowed for the development of several social skills, such as altruism, group cohesion, and the development of socialization techniques. In other words, the manipulation of risk as an educational variable is linked to the development of social skills. Social bonds and (objective and subjective) risks are at the heart of the didactic and pedagogical mechanisms of the DesÉquilibres program, located in the province of Quebec, Canada.

Variety of Stakeholders and Contexts of Sports Practice in Quebec

In the Quebec context, many stakeholders implement sports activities: coaches, specialized educators, facilitators, recreation technicians, etc. As a result, the varied purposes of sport (e.g., competition, recreation, training, and fitness), the many contexts in which it is practised (e.g., schools, associations, sports clubs, and public institutions), and the great diversity of participants and their recruitment methods (Morgan & Costas Batlle, 2019) make it difficult to view sport as a homogeneous whole (Lemyre & Trudel, 2004). Sport can, therefore, be perceived as a process for a coach whose team is registered in competition, but also as a psychosocial intervention tool for a specialized educator or as part of a recreational program for a day camp facilitator. In this study, we used the generic term sport participation and present the various activities used within the DesÉquilibres program. Finally, we postulated that a positive sports practice depended on the practitioner's ability to create social bonds between youths and between youths and adults.

The DesÉquilibres Institute and DesÉquilibres Program

The DesÉquilibres Institute, a Quebec non-profit organization, uses sports practice with the intention of psychosocial intervention, particularly for vulnerable youth[1] from urban environments by developing social bonds. Participants are generally between 15 and 21 years of age (though some are younger) and may be confronted with various problems related to mental health, school adherence and graduation rates, behavioral problems, etc.

In 2009, the DesÉquilibres Institute set up the DesÉquilibres sports program. This program works with groups of roughly twenty young people, with an ideal composition of 50% vulnerable youth and 50% youth with no issues. This mix (vulnerable and non-vulnerable youth) aims to promote social inclusion and to counter potential stigmatization (Plante et al., 2016), in the sense that young people are not grouped according to their problems. Voluntary recruitment is carried out in youth centers (Centres jeunesse)[2], youth houses, and schools. The DesÉquilibres program lasts 12 weeks and includes three trainings per week to work toward three challenges in total (https://youtu.be/4YzPie35elw).

Training[4] consists of invented or modified sports games aimed at achieving psychosocial (e.g., assuming leadership, developing confidence, and discovering others) and

physical (e.g., improving running time and muscular endurance) objectives. Every four weeks, youth participants attempt an outdoor sports challenge. In week 4, the team walks an entire night in the forest over 10 to 15 kilometers. In week 8, the team completes a bike ride of 100 to 200 kilometers in two days. Finally, in week 12, the young people complete a relay race of 200 to 300 kilometers lasting 24 to 48 hours nonstop. Relays are run alone or in pairs. The training and challenges are not competitive but take place in an organized setting that encourages collaboration and mutual aid among the young people. Participants are given clearly identified, well-defined, collective objectives in advance (i.e., completion of three challenges). For youth to see their progress, a Cooper test is conducted every three weeks. The results are confidential, and if there is no progress, the youth are met individually to ascertain the cause (e.g., lack of commitment, fatigue, or stress related to the test).

Coach or Educator? The Eductrainer

During the creation of the DesÉquilibres Institute and the DesÉquilibres sports program, the founders, Parlavecchio and Caillaud[5], felt that the term coach implied physical preparation and competition and could have a repulsive effect on non-athletic youth. Similarly, the term educator could be associated with authority and coercion[6]. Thus, the DesÉquilibres Institute decided to create the term eductrainer to refer to the dual role of educator and coach within the organization. On the one hand, the eductrainer, like a coach, must be able to plan, develop, and facilitate training sessions to prepare young people for sporting challenges. On the other hand, as an educator, the eductrainer creates a space for mediation (Rouzel, 2014)—a sport, in this context—which supports young people psychologically and socially as they encounter difficulties on the field. In addition, the eductrainer uses sport as a metaphor for daily life and supports the transfer of learning beyond the playing field (Barbier, 1998; Rioux, 2016). In Quebec, coaches outside the DesÉquilibres Institute have also begun to implement this approach (Camiré et al., 2011). In addition, since the early 2000s, researcher-practitioners have been interested in psychosocial intervention through martial arts (Hébert, 2011), and Quebec organizations have specialized in the use of sport to address psychosocial development issues among youth. Such organizations aim to train coaches in a humanistic approach (Falcão, 2018) or intervene directly with young people in the school setting in organized and competitive sports, such as basketball (Lapointe et al., 2012; Simard et al., 2014). The role of the eductrainer, as it bridges the roles of coach and educator, involves the creation and development of social bonds.

DesÉquilibres and the Social Bond

Plante (2014) noted that the desire to socialize is the main motivating factor that leads young people to enroll in the DesÉquilibres program (Plante et al., 2016). According to school staff, family, and eductrainers, young people's motivation to participate and complete the program is greater when the adults involved have a positive relationship with them, as demonstrated by works on pedagogical styles in educational psychology (Mosston & Ashworth, 2002) as well as those in critical philosophy of traditional education (Houssaye, 2014). However, promoting youth participation in psychosocial interventions remains a challenge that cannot be reduced to socialization alone (Anderson-Butcher, 2005; Bodilly & Beckett, 2005; Lauver et al., 2004).

If this socialization is linked to the desire to participate, it is also at the heart of DesÉquilibres program content. The study by Moreau et al. (2018) revealed that during training and challenges, eductrainers promoted four dimensions of social bonding to create a strong relationship with young people, in line with Hirschi's (1969) proposals[7]. First, the eductrainers positioned themselves as significant adults throughout the project. Second, they promoted social bonds among young people through training based on games and collective challenges. Third, they used daily follow-ups (e.g., involvement on the field, telephone check-ins, use of social media) to ensure that the project remains a priority for youth participants and program partners. Finally, they encouraged adherence to social values and rules by having the youth sign a commitment contract and by maintaining an operating framework throughout the project.

Moreau et al.'s (2018) work focused exclusively on the second element, the development of social bonds among young people. The authors showed that training and related challenges contribute to the establishment of a supportive climate that promotes cooperation strategies and the collectivization of performance. Consequently, the DesÉquilibres program supports Spaaij's (2012) proposal that the creation of social bonds must be a basic condition of sports intervention programs for vulnerable youth.

However, even though some studies have shown the positive impacts of the DesÉquilibres Institute's programs on youth (Filion, 2011; Moreau et al., 2014) and emphasized the importance of social bonds in the DesÉquilibres program specifically (Lévêque, 2015; Plante, 2014; Plante et al., 2016; Thibault-Lévesque, 2014), the eductrainer's practical role of fostering social bonds has only been partially studied (Chartrand, 2012). Therefore, we set out to explore this question in greater depth: How

can this social bond be initially established and subsequently strengthened?

Aim of the Research

This article, therefore, aimed to identify the principles-of-action implemented by the eductrainer to create social bonds for the psychosocial development of young people during DesÉquilibres program. More specifically, this study focused on the notion of risk, which is central to the creation of social bonds.

METHOD

The Research's Epistemological Stance

This study reports on a program-in-action that has its own epistemological approach, which is separate from our present research stance. The program-in-action draws on a positive stance (functionalist) by working from a psychosocial perspective, while our present research takes a constructivist perspective (Blumer & Riot, 2004). Our theoretical framework (symbolic interactionism) falls within this constructivist perspective. This epistemological gap between the program-in-action and the present research is due to the research team's desire to respect the posture of the eductrainers who claim a psychosocial approach.

Research-Action Partnership

The DesÉquilibres program was the subject of a partnership-based action research study conducted by Moreau et al. (2013) with three school-based cohorts of vulnerable and non-vulnerable youth aged 14 to 17 who present a diverse psychological and social profile. Action research gave primacy to participant-practitioner-researcher interactions (Rhéaume, 1982) and aimed at the emergence of new knowledge that would potentially (a) modify practice from one cohort to another and (b) enrich the knowledge of practitioners and researchers.

The partnership component of this research consisted of (a) the co-development (practitioner–researchers) of the research objectives; (b) the co-development of the research methodology, including types of interviews, questionnaire development, analysis process, and observant participation (Moeran, 2007); and (c) knowledge sharing before, during, and after the three cohorts (Fontan, 2010). This approach made it possible to combine expert and lay knowledge (Blais, 2006) and co-construct participant-practitioner-researcher research results. All of the scientific articles and research reports were thus co-authored (Moreau et al., 2013, 2018; Plante et al., 2016). Generally, partnership dimensions of research aim toward social transformation by developing new knowledge, changing practices, structuring the environment (through development of training), and potentially enriching public policies (Fontan, 2010).

Posture of the Practitioner-Researcher

As part of this study, the principal investigator, who was the founder of the DesÉquilibres Institute, also acted as an eductrainer. He adopted a practitioner-researcher posture defined as a professional and a researcher who conducts his research in his professional field, or in a field close to it, in a professional world with similarities or links to his environment or field of activity (De Lavergne, 2007). This posture generates a constant interaction between the research field and the professional practice field. Thus, beyond the question of research and the objectives sought, we wish to bring out an alternative understanding of the world of sport by witnessing from the inside while giving young people a voice in the research.

In this context, and to ensure methodological rigor, all team members interacted with each other during the different phases of the action research. This co-construction made each researcher a critical friend to the other (Smith & McGannon, 2018). Thus, the main author was regularly questioned on issues relating to the research, the results, and the youths even though we did not use a specific methodology as a bracketing technique (Tufford & Newman, 2012).

The principal investigator, like the other authors of this article, strongly believes in sport as a tool for psychosocial development. Although we acknowledge sport is not the silver bullet for all societal ills (Coalter, 2015), the fact remains that we commend sport for youth. Moreover, we believe that the body must play a more central role in social and psychosocial intervention, as well as in the field of the sociology of sport (Wacquant, 2015).

Data

This study complements previous studies on the modalities of youth recruitment (Plante et al., 2016) and the nature of the training and challenges of the DesÉquilibres program (Moreau et al., 2018). This action research is based on semi-structured interviews, observant participation, and a focus group.

Semi- structured interviews

We conducted 27 semi-structured individual interviews with youth, from which we obtained empirical data

saturation (Pires, 1997). All youth in cohort 1 were asked to participate in the interviews (n = 20), while only youth who had dropped out of the program in cohort 3 were interviewed (n = 7). Of the 27 youths interviewed, 14 had completed the program, and 13 had dropped out. The first author conducted the training and challenges with cohort 1 and did not attend the interviews with the 27 youth. The interviews were made available to the him once they were transcribed and anonymized. The recruitment of participants was carried out in two phases. First, during the last training session for the cohort, the research team orally solicited interview participation. Those who were interested signed up. Second, we scheduled meetings by texting or calling those who had agreed to participate. Interviews were conducted in schools (outside of school hours) or at the DesÉquilibres offices, depending on the youth's availability.

The individual interview frameworks were designed to pose general and open-ended questions, such as "Did this program do anything for you? Can you explain?" and "Have things changed for you (good or bad), with your friends or with others you know (school, family, neighbourhood or community)?" These open-ended questions came from an inductive stance because we had not initially chosen a specific theoretical framework. We adopted symbolic interactionism when coding and analyzing the data because this framework emerged. Thus, even though the eductrainers told us that they work in a social bonds perspective, we agreed together (practitioners and researchers) to maintain a inductive stance during the data collection.

Observant Participation

In cohorts 2 and 3, the research team made observant participation by taking part in training and challenges (Moeran, 2007). The goal was to favor a carnal sociology in which researchers would experience the program through the body in the same way as the young people in the program (Wacquant, 2015). We believe that participating personally and physically over a long period in this program allowed us to better understand the spirit and objectives of the program (Favier-Ambrosini, 2020), as well as what was not said (Quidu, 2014). This experiential and physical body-memory of our participation guided us throughout the research process and enabled us to (a) create strong social interactions with the young people and the eductrainers and (b) better understand the physical dimensions of young people's speech. During the observant participation phase facts and anecdotes were noted in an observation book in the evening after each session. We did not take any notes or recordings during training sessions and challenges so as not to give the impression of evaluating or analyzing the sessions and youths.

Focus Group

A focus group with eductrainers was held at the end of cohort 1 in order to better understand the psychosocial goals of the DesÉquilibres program and how the workouts were built. The recruitment of eductrainers to participate in the focus group was carried out in two stages. First, during action research preparation meetings, the researchers informally mentioned to the eductrainers the relevance of and our interest in a focus group following the first cohort. Second, an email was sent formally asking them to participate, to which all of the eductrainers agreed.

Data Analysis

The thematic analysis of the material (semi-structured interviews, focus group, and field notes) was part of the big Q (Braun, Clarke, & Weate, 2016), which meant we adopted a flexible approach that allowed us to build our theoretical framework. More specifically, we opted for a horizontal thematic analysis which sought thematic inter-interview consistency (Blanchet & Gotman, 2006) among the youths' interviews, as well as the different sources of data. In other words, we laterally compared data in order to identify commonalities. This type of thematic analysis develops a comparative and relational reading which identifies divergence and convergence between the discourse of youths and eductraineurs and the researchers' field notes. The data analysis was carried out in three stages: (a) inductive floating reading of all the data around the theme of the eductrainer allowing us to clarify our research question and develop our framework; (b) more deductive analysis of the corpus, coding the material from the perspective of social interaction; and (c) grouping data into themes and sub-themes in consultation among the researchers under the supervision of the first author, who made the final decisions.

Quality of the Data

Horizontal thematic analysis of data from the focus group, youths' interviews, and field notes allowed us to capture the complex web of social interactions that were conveyed across various modes of discourse. More specifically, the first author did the initial coding of the data (inductive floating reading). Then, the research question and the theoretical framework emerged during a series of meetings between the first author and the second and fourth authors. Deductive analysis of the corpus was also carried out by the first author. During this phase, the second and fourth

authors played a supporting role rather than a critical one (Smith & McGannon, 2018). Grouping data into themes and sub-themes involved numerous discussions between the four authors on methodological and epistemological issues, in particular the naming of the final categories. Ultimately, the rigor of such qualitative methodology derived from discussion between all authors more so than from objective validation. More specifically, we were very careful to respect and listen to the perspective of the first author, an outsider to academia who discussed and argued with three academics (including two professors) in an attempt to reduce the epistemic injustice between academics and practitioners (Fricker, 2007).

Ethics

This research received two ethics certifications, from University of Ottawa and from University of Québec in Montréal, according to the affiliation of the authors.

RESULTS

The results pointed to four risk-based principles-of-action to support social bonds. Principle 1: a risky proposal made to a collective that enables the creation of a social bond. Principle 2: the recognition of young people as adults-in-the-making and the achievement of extraordinary challenges that anchor them to the adult world. Principle 3: organization of the risky proposal and a clear framework within which social bonds are built. And Principle 4: the physical commitment of eductrainers that positions them as models who embody social bonds. Active ingredients and constituent values have been identified for each of these principles-of-action.

Principle-of-Action 1: A Risky Proposal Made to a Collective to Create a Social Bond

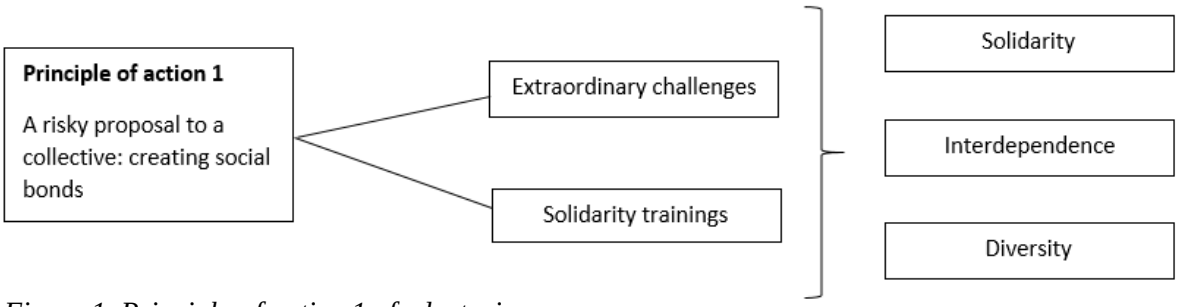

Figure 1. Principle-of-action 1 of eductrainer

When I saw the videos they showed us at the beginning of the year of DesÉquilibres [...] I didn't know they were going to invite us to do something similar. I thought they were showing us their program and that was it. So I was like, "Imagine if I did that, if I did something that incredible." (Kate)

Kate's comments implied that the eductrainer made a proposal that striked the imagination (Figure 1). This was a key component of the risky proposition that the eductrainer shared during the recruitment phase, thereby inviting young people to an adventure with an uncertain outcome. More precisely, the eductrainer played on the relationship between the preferential risk and the perceived risk of youths to solicit a commitment. It is also this same proposal that gave the eductrainer a pretext for the participants to create social bonds between themselves to overcome the challenges. Thus, the eductrainer supported the birth of a community of practice (Lave & Wenger, 1991) where risk-taking was a constituent element of the collective. Ludovic highlighted this characteristic while reflecting on a challenge[8]:

There were students who were throwing up, all that, but then we would encourage each other. We would say: go ahead, we'll make it, we'll make it. We supported each other, all that. It was extremely cold on the bus. [...] So we gave each other moral encouragement. We encouraged each other, as well. We said, we're going to make it, and every time someone finished, we congratulated each other, and it went really well.

This risky proposal included solidarity trainings and the realization of non-standard challenges in which the eductrainers bet on (a) solidarity, (b) interdependence, and (c) diversity.

Solidarity

We were going to go up a mountain [...] it was rougher than I thought. It was harder. There were times you really had to get down on all fours to get up there. That was it, I couldn't imagine that, when I got to you, I was like "Oh, I didn't plan that" [laughs]. I had to really [say] "Hey, give me your hand" and everybody had to ask for help. (Ramon)

Ramon's words, shared during a winter-night walk in the forest, revealed the need for the group to show solidarity in the context of a situation where the ratio between its perceived risk and its preferential risk is high. In order to prepare the youth for these situations, the eductrainer built training activities around invented or adapted games in which the young people have to rely on each other. For example, in the game The Daisy, one team had to physically remove the players of the other team from a square of cones. At the beginning, the players within the square could not touch each other. Later, contact was allowed, and all the players realized that it took much longer to remove them from the square:

And they taught us that when you're alone you're weak, but when we're all together we're strong. In the beginning we were all relaxed, alone in every corner, and it was easy to get us all out. But as soon as we got all hooked up and held together, it was more complicated [for the opposing team]. (Claude)

Interdependence

The solidarity necessary to meet the prescribed challenges was, therefore, developed during training and were based on interactions that promote interdependence.

Performing feats that you won't be able to do on your own later [about the final challenge]. We may think we can do it, but we won't be able to do it alone [...] We train as a team to be able to do it. All together, something that maybe we'll never be able to do again if we're on our own. (Steven)

As for Sergio, he mentioned feeling an obligation to persevere for the sake of his team. Through the achievement of extraordinary challenges, the eductrainer also fostered a bond of interdependence forged through necessity, a solidarity tied to successful completion of the adventure.

I almost felt obliged to come back and keep going [...]. Obliged to everyone, to the whole group, because if I said to myself: "ah, if I let go of him, they'll feel bad and they'll have more kilometers to run". (Sergio)

Diversity

Mixing seemed to be an important element for the eductrainer to create social bonds. It was worked on upstream of the project (i.e., during the recruitment phase) and throughout the project. Thus, during the recruitment phase, the eductrainer ensured that the groups are made up of vulnerable and non-vulnerable young people (Plante, 2014).

While training, the eductrainer worked on the mix within the group in order to create novel encounters. For example, the young people might be asked to form their own teams. This allowed the eductrainer to identify the people who group together by affinity and then force the creation of new social bonds between young people who know each other less by breaking up the teams that have just been formed. This mixing was a risk both for the eductrainers (who would find it easy to work with groups that already know each other) and for the young people, who had to start the socialization process again.

In the same vein, Sydney's comments seemed to imply that the different activities within the program facilitated interactions and supported the creation of bonds, even among people with no prior affinity. This seemed to allow the emergence of a community of practice (Saury et al., 2013) in which differences are accepted:

With DesÉquilibres, even if there were people you didn't like at first, you learn to appreciate them more because you spend a lot of time with them. [...] It was simple, it was good, there was no choice; you had to start to appreciate the other person. You just had to come to terms with it, you couldn't stay angry for long. [...] You learn to appreciate everything about people. [...] You end up having really no one you don't like. Then you learn to like people and not be prejudiced. (Sydney)

The eductrainer made a risky proposal to a collective, which relied on the achievement of extraordinary challenges and solidarity training. These challenges and trainings fostered the emergence of gestures of solidarity and situations of interdependence to support the creation of social bonds. This risk is necessary in the process of creating social bonds. The level of risk used by the eductrainer to create social bonds is a subtle balance between the preferential risk and the youths' perceived risk. To play on this mix, the eductrainer can dramatize (Visioli et al., 2015) the perceived risk and/or increase the level of real risk.

Principle-of-Action 2: The Recognition of the Adult-in-the-Making to Anchor the Social Bond

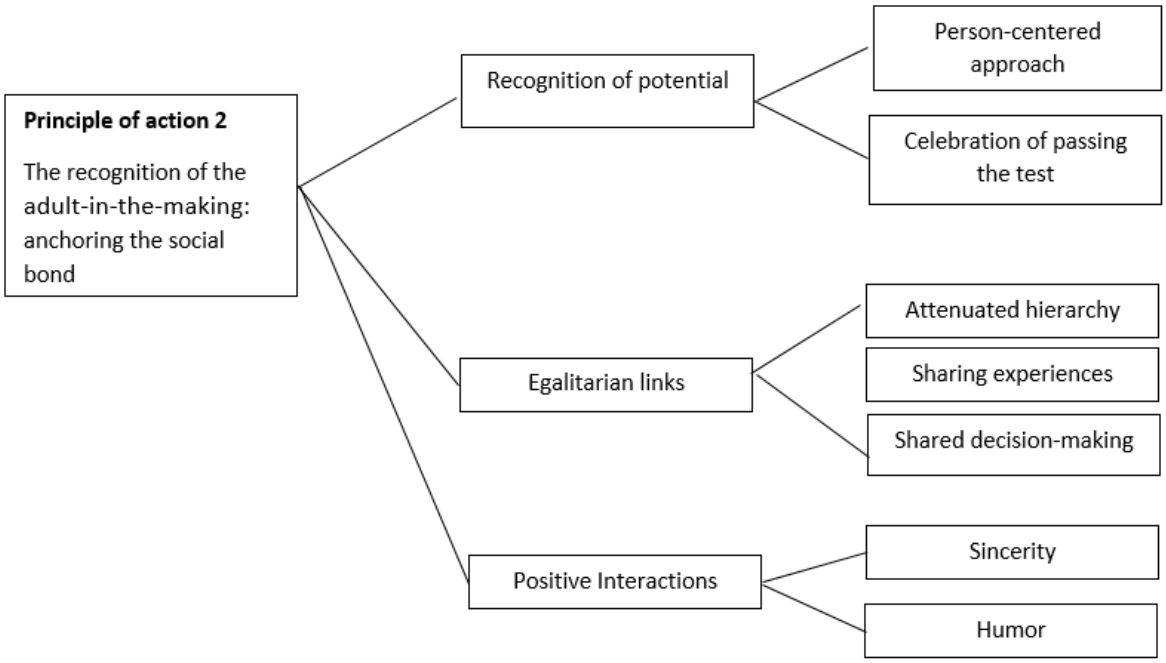

Figure 2. Principle-of-action 2 of eductrainer

Recognition of the adult-in-the-making was the second principle-of-action for which three active ingredients were identified (Figure 2): (a) recognition of potential, (b) egalitarian bonds, and (c) positive interactions. This positioning of the eductrainer toward youth was a risk in terms of intervention.

Recognition of Potential

The participants' comments underscored the importance of having their potential recognized. In other words, the eductrainer took the risk of believing in the success of young people, which created a strong social bond between young people and the eductrainer, as shown in the excerpt below: They never gave up on us. Not even once. They've always pushed us to the edge of our limits. Even worse, they push us to go even further, because they know that we are capable of more. (Steven)

This belief in individual ability focused on the youth's accomplishments and avoided comparisons with other team members, particularly in terms of athletic performance. For example, during physical tests, to ensure that the youth is committed to preparation, the eductrainer evaluated the youth's performance based on previous results and emphasizes progress, as Sydney notes: "(There) is no evaluation. [...] it's not to evaluate the tests we do, it's to see your progress. […] You were happy that you were going to improve."

This youth-centered recognition of potential and progress was celebrated at the end of the project into a rite of passage (Thibault-Lévesque et al., 2017). In a meal organized by the eductrainer after the final challenge, parents, partners, and sometimes local elected officials were invited to celebrate the success of the participants. Ricardo noted that:

It was in front of everyone when we went to sign the guestbook. He [my father] said that he was proud of all the people, of what they did, and that it was quite out of the ordinary. Then he was proud, and my mother was very happy. [...] Leaving his mark somewhere, especially in the city [...]. Leaving my mark at 16, I thought it was remarkable.

The celebration symbolically confirmed a change of status in the eyes of the community and the young person, but also in the school environment, according to Ludovic: "It helped me at school, too, because there are people who didn't believe in me. Now they say, 'OK, now I believe you can do it.'"

Extraordinary challenges were, therefore, a testament to the ability of young people to fulfill their potential in a context where the risk of not doing so is real. This achievement occurred outside competitive frameworks and is recognized by the community. This recognition of potential was supported by an egalitarian relationship between eductrainers and young people.

Egalitarian Links

The development of egalitarian links between young people and eductrainers was the second active ingredient identified in the eductrainer's interventions. This egalitarian bond was characterized by a reduced hierarchy and the involvement of the youth in project-related decision-making. From this perspective, Thibault-Lévesque et al.'s (2017) analysis, echoing Ricardo's testimony, suggested that the eductrainer transformed the project into a place of learning where young people were no longer under the authority of their parents. This change in context helped create egalitarian social bonds outside the usual social hierarchies and relationships (Segalen, 2009).

When he puts himself on the same level as you, you don't think of him as someone who will take you down and then lead you; you think of him more as someone who will teach you. [...] "We felt like we were our own adults. We were deciding, making our own decisions. Sometimes they told us: "If you have a problem or something, we're going to solve it with you because you're the adults of tomorrow, so it's going to start now." (Ricardo)

Eductrainers also seemed to strengthen the egalitarian bond by sharing details of their private lives while encouraging the young people to do the same, according to Franck:

Eductrainers, they're more comfortable with us. They share things with us; it's as if they were sharing their own personal lives with us. [...] Since we feel more comfortable, we feel more comfortable sharing our personal life with them too.

Positive Interactions

The third active component related to the eductrainer's ability to create positive interactions based on sincerity and humor.

When you play soccer, they're not going to tell you... They're [the coaches] going to tell you that you're capable but [...] it's not going to be sincere whereas they [the eductrainers] I thought it was more sincere than in a soccer team. Because me, I've been on club teams and so on. [...] You saw that it wasn't sincere. [...] While they see that it is sincere. [...] And they take you aside and talk to you. [...] You already see it in them, [...] when they push you, you see that it's sincere and that they want you to succeed, they'll never let you down [...]. (Olivia)

Olivia and Mike (below) suggested that the sincerity of the eductrainer allowed for the emergence of clear markers on which to build relationships. If this sincerity supported a climate of trust, it is likely that the use of humor created a social bond of complicity with the young person. In the context of the Alter-Action program, humor seemed to be a tool that promoted social bonds that helped the youth overcome the difficulties of training and challenges.

When I'm with them, we always laugh. [...] It feels good. It changes the mood. [...] I could have had a bad day, but I knew I had DesÉquilibres afterwards. [...] There were times when we had a breakdown. They'd tell us, "Oh, we're running outside," with a smile on our face. When we'd say, "Oh no, we're going to die if we do that," they'd say, "Do you want me to start crying?" [laughs] They'd smile right in our face, that's what made it fun. It was going well. (Mike)

In this way, the eductrainer seemed to recognize youths' potential, promote the development of an egalitarian bond, and rely on positive interactions. We assumed that these active ingredients contributed to an environment in which the young person is considered an adult who makes decisions without going through intermediaries, such as parents. Therefore, eductrainers took the risk of sharing their power to act with young people.

Principle-of-Action 3: The Organization of the Risky Proposal to Scaffold the Social Bond

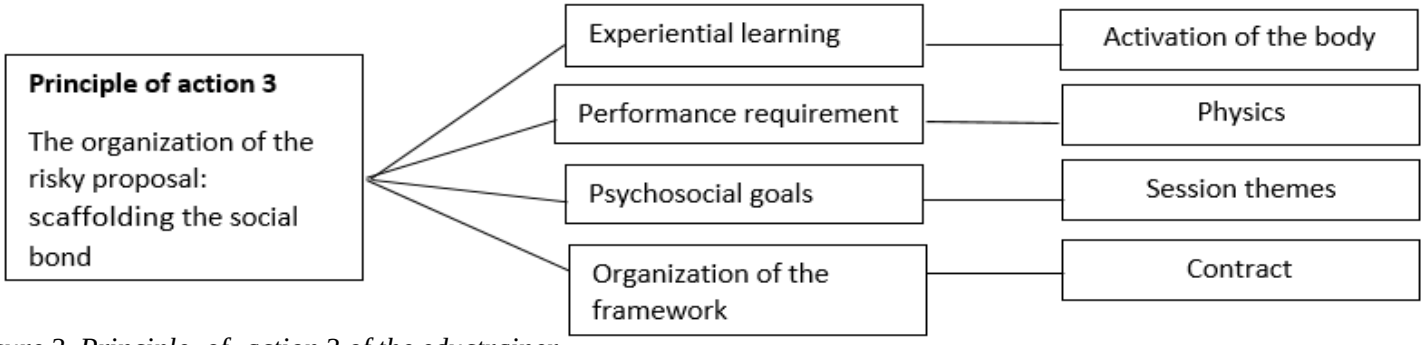

Figure 3. Principle- of- action 3 of the eductrainer

The third principle-of-action concerned the organization of the risky proposal (Figure 3). Namely, the eductrainer proposed a collective action in which interrelationships and interdependence were deliberately staged. Four active ingredients were identified: (a) experiential learning, (b) the performance requirement, (c) the integration of psychosocial objectives, and (d) the organization of the framework.

Experiential Learning

He [the eductrainer] would come in, he'd start forming the teams really quickly. [...] Then we'd go straight on board... Like, he'd quickly explain to us what the goal of the game was, and then we'd go on board. [...] For me, I learn faster when we play, because when someone explains it to me, I don't understand anything. [...] When I'm playing games, when I ask the person playing with me what to do, that's what I have to do, and that's when I learn. [...] The more interactive it is, the more I learn. (Alexander)

Alexander highlighted the experiential nature of the eductrainer's practice: eschewing lengthy explanations in favor of learning-by-doing promotes learning through physical action and social bonds.

Performance Requirement

According to Henrick, fast action during training seemed to be based on a performance requirement.

It's extreme, it's intensive. [...] You were coming, it was intensive, you know what you were doing. [...] It was well planned. It was like for serious people, who want to train for real. It was like a personal coach. (Henrick)

Moreover, this requirement seemed to have a rewarding effect on the young person, who pointed out that this level of preparation was usually intended for motivated ("serious") people who use private coaches.

Integration of Psychosocial Objectives

The third component was the integration of psychosocial goals into sessions and games and the establishment of game-play rules that support social bonds. To this end, the eductrainer filled out a session and a game form to set a psychosocial theme and sometimes to plan the types of psychosocial feedback that will be provided (Parlavecchio, 2015). For example, a session theme may address the importance of all the members of a team. The game related to the theme explored the notion of revolving leadership and proposed a mini relay race to highlight the contribution of each individual. In addition, these objectives were sometimes developed following a discussion with the school's stakeholders, who informed the eductrainer of the issues encountered by the young people (stress during exam periods, negative leadership, etc.)[9].

Organization of the Framework

At the beginning of the project, the eductrainer puts in place a framework based on the signing of a commitment contract specifying what was expected of the young person:

I, [DesÉquilibres of the participant], pledge to […]:
1. Train to the best of my ability;
2. Personally notify the eductrainer if I am unable to attend a training session.
3. Respect and apply the values of DesÉquilibres: Team spirit, commitment, surpassing oneself, sustainable future;
4. Believe in me and my team.

The eductrainer used many tools to organize actions within the framework. Although the use of tools such as a schedule, session sheet, and game sheet were the norm for a coach, this was generally less common for a social worker. Alternately, the integration of psychosocial objectives and mechanisms to achieve them seemed less common for a coach. Uniquely, the eductrainer used the coach's tools and enhances them by integrating psychosocial objectives. The eductrainer ensured a degree of physical preparation that allowed the challenges to be met, while at the same time mapping the targeted social bonds between the young people from a psychosocial development perspective. Here, therefore, risk-taking was prepared and calculated.

Principle-of-Action 4: The Physical Commitment of the Eductrainer to Embody the Social Bond

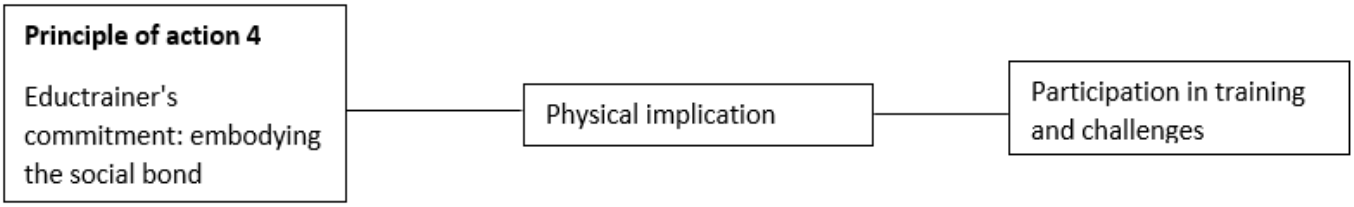

Figure 4. Principle-of-action 4 of the eductrainer

Finally, the fourth principle-of-action referred to the carnal involvement of the eductrainer in the risky proposal (Figure 4). This commitment was characterized by physical involvement during all project activities. Emma talked about the effects of this physical involvement on the motivation and inclusion of the eductrainer: "They did everything with us, they participated with us... And it was like being part of the group, but they were really involved as much as we were".

We proposed that the physical involvement of the eductrainer revealed a way of being connected to the other in a context where tensions emerged, especially during the realization of non-standard challenges. This physical involvement proved to be a major element in embodying the social bond. Indeed, the physical risks taken by the young people during training and challenges (i.e., to get hurt, to fail) were also taken by the eductrainers. The way in which the eductrainer reacted to this shared risk gave young people a model of social bonds and complemented the psychological commitment of the eductrainer (such as sharing experiences).

DISCUSSION

Our study has shown that risk-taking and its theatricalization seem to be the levers on which the eductrainer relies to support, anchor, organize, and embody the social bond. In this sense, four principles were identified (Figure 5): (a) a risky proposition that contextualizes the creation of the social bond; (b) the recognition of the adult-in-the-making to anchor the social bond to the adult world; (c) the organization of the risky proposition in order to scaffold the social bond; and (d) a physical commitment on the part of the eductrainer to embody the social bond.

Principle 1: A Risky Proposition to Create the Social Bond

The invitation to a collective and risky sports adventure allowed eductrainers to generate a context to create social bonds. With the DesÉquilibres program, eductrainers relied on adolescents' desire to socialize (Plante, 2014) and on their tendency to take risks to test their limits (Jeffrey, 2008). They invited young people to test their ability responding to extraordinary challenges with uncertain outcomes which prompt participants to question their physical (e.g., potentially being injured), psychological (e.g., finding themselves in a situation of failure), and social (e.g., not living up to the group's expectations) integrity. The physical stakes, the unpredictable nature of the adventure, and the partial loss of control of the situation reflect the elements of risk identified by Collard (1998, 2002). By creating a context that is out of the ordinary, the eductrainer called for risk-taking (individual risk) where social bonds between participants must be forged (collective risk) to overcome the risk. From this angle, this risky and out-of-the-ordinary proposal marked a break with the thinking of Hirschi (1969) which was the base of a study by Moreau et al. (2018). Moreau et al. suggested that engagement in conventional activities would be one of the constituent elements of the social bond. On the contrary, the non-standard dimension here seemed to be a way of making collaborative interaction between participants inevitable in their pursuit of a common goal. In addition, our results contrast with certain works in the field of SFD which recommend installing a safe and neutral framework in sport-based intervention programs (Beutler, 2008; Cárdenas, 2013; Peachey et al., 2015). Nevertheless, our results are in line with the concept of community of practice in sport where subjective risk is used to create social bonds between youths and between youths and teachers/coaches (Crance et al., 2014; Delignières & Garsault, 2004; Garsault, 2004).

In the context of the DesÉquilibres program, the eductrainer seemed to be, above all, an entrepreneur of the risk that constitutes the social bond that organize attitudes and behaviors. He seemed to rely mainly on the concept of subjective risk to stage and strengthen the social bond between young people and between young people and the eductrainer. The eductrainer added the notion of risk-taking to this subjective risk, which emphasizes the voluntary commitment of the subject in a situation where they retain control, as opposed to an imposed risk (Douglas, 2004; Raveneau, 2006). In this sense, the eductrainer sometimes played on a risk imposed on an individual, group, or organization, or a risk chosen by an individual, group, or organization (Petiot, 2019). Thus, risk-taking was staged by the eductrainer, who played on theatrics, as well as on young people's perception of the challenge and the relative control they have over it. With reference to the homeostatic theory of risk (Wilde, 1988), the eductrainer worked to subtly manipulate the relationship between the youth's preferential risk and perceived risk to encourage participation in the program. In fact, Wilde (1988) showed that, from a cognitivist perspective, the orientation toward risky behavior depends on a cognitive calculation weighing the perceived risk (subjective assessment of the dangerousness of the situation) against the preferential risk (acceptable level of risk which depends on its resources). If this relationship is in an optimal activation zone (specific to each person), it would be a source of positive emotions, but beyond this zone, it would cause significant anxiety, potentially a source of negative emotions and behaviors signifying repulsion (Lobrot, 1993). In this environment,

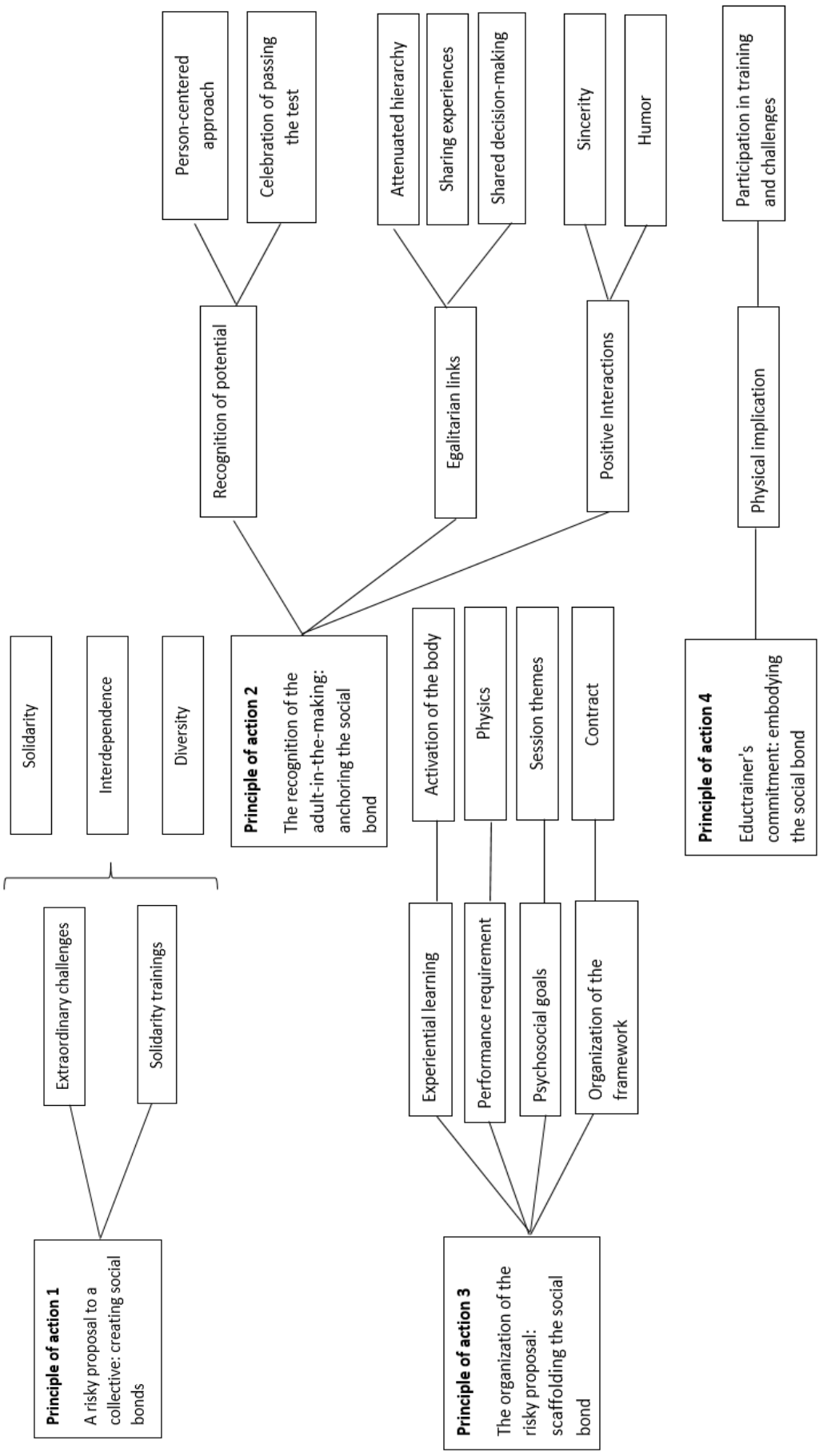

Figure 5. Principles-of-action implemented by the eductrainer to create social bonds during the Alter-Action programm

the atypical context of preparation (invented or highly adapted games) and challenges (in the wilderness, at night, and sometimes in winter) was an important element of the game due to the uncertainty that it raises (e.g., How do we play this game? What does it mean to walk at night in the forest? How are we going to react to sleep deprivation?). This uncertainty is like playing a sports game with incomplete information (Collard, 2002). Through this lack of information, the eductrainer created a context where individual and collective risk-taking is based on uncertainty and forces team members to act and interact in solidarity.

Principle-of-action 1 therefore suggests that the eductrainer should be seen as a risk entrepreneur, the social motor of interventions, to create a context favorable to the emergence of social bonds. We believe that the eductrainer must be able to rally young people, parents, schools, and community members around a proposal by finding a balance. This balance would be between the acceptable level of risk and the risk-taking necessary to create productive discomfort that will promote the psychosocial development of young people.

Principle 2: The Recognition of the Adult-in-the-Making to Anchor the Social Bond

The risk staged by the eductrainer supporting the creation of social bonds also seemed to be a lever for anchoring the young person to the adult world. To this end, the eductrainer recognized the individual and collective potential of young people and conferred on them an egalitarian adult status. This approach also differed from the thinking of Hirschi (1969), because the latter sought control and social conformity in a dominant/dominated relationship (Queloz, 1989). Of course, power relationships between eductrainers and youth did not disappear, but eductrainers were aware of this and tried to mitigate them as much as possible. In this sense, our results fed into the classic debate between traditional pedagogy and new pedagogy (Freire, 1970; Houssaye, 2014). Thus, non-hierarchical styles of pedagogical relation (Mosston & Ashworth, 2002; Sarrazin et al., 2006) would more effectively anchor the social bond. This egalitarian bond was important in the physical and mental ordeal of meeting non-standard challenges (Thibault-Lévesque et al., 2017) because it supported the creation of a communitas (Turner, 1990) outside of social hierarchies. This was illustrated by the desire to have an attenuated hierarchy between the eductrainer and participants. Although in the communitas, the egalitarian link between members prevails (Segalen, 2009). Marsac (2006) notes that the collective acceptance of individual risks related to an outdoor adventure is based on egalitarian relationships and positive interactions (Principle-of-Action 2) between participants. In our case, it was a question of social bonds between young people, but also between young people and eductrainers. Limiting actual risk implied similar responsibilities and benevolent links between members (Marsac, 2006).

Finally, the celebration organized by the eductrainer was a moment during which parents and community members recognized that the youth succeeded in passing a physical and mental test. To achieve this, youth took responsibility (e.g., by being asked to decide whether or not to keep a team member in the program) and demonstrated autonomy (e.g., by managing training equipment, managing rest time, and eating during challenges). Moreover, youth testimonials suggested that this recognition contributed to both their self-perceptions and the community's perceptions of them. It thus contributed to affirming a change in the youth's status, perhaps even more markedly in the case of vulnerable youth.

DesÉquilibres program was a physical and mental test recognized by adults, carrying a symbolic meaning, in which young people were given adult status by allowing them to assume responsibilities, develop their autonomy, and make the rules to working together. In addition to these five constituent elements of the rite of passage—the physical and mental test, the symbolic meaning of the activity, the change in status, the recognition of the change in status, and the appropriation of the rules of living together (Jeffrey, 2008; Thibault-Lévesque et al., 2017; Turner, 1990)—the eductrainer assumed the posture of the smuggler while also acting as an accompanist and facilitator (Jeffrey, 2008). This posture implied a staging specific to rites of passage (Lachance, 2012) and the establishment of a supervised space in which young people had the opportunity to question the meaning of their actions (Thibault-Lévesque et al., 2017).

Principle 3: The Organization of the Risky Proposal to Scaffold the Social Bond

The eductrainer organized the proposal by putting in place tools to scaffold risk-taking. This involved establishing the social bond by requiring that participants signed a commitment contract that supported the creation of a framework. In addition, the eductrainer used various tools to plan training sessions and challenges (e.g., session sheets, preparation of training sessions over a 12-week cycle, emergency plans for outings). Whether the risk constituting the social bond is real or subjective, we proposed for the eductrainer to use tools to place young people in situations that help them transform risk-taking into calculated risk[10], the three essential ingredients of which are physical

preparation, development of experience, and attention to others (Collard, 2002).

However, in addition to formalized rules and the implementation of procedures, subjective risk existed and had a regulatory effect as individual and selfish behaviors were harmful to the collective and jeopardized the achievement of shared objectives (Collard, 2002). Organizing and enforcing the collective framework allowed the eductrainer to maintain the chain of reciprocal interdependence (Elias et al., 1998) to create mutual aid and trust, thus allowing for compliance with group decisions and tacitly accepted social rules (Marsac, 2006).

This last point can lead to conformity because collective risk management encourages collaboration and adherence to formal or tacit rules governing the group. However, these rules with which the young people comply for the good of the group and to manage the risk did not emanate from the eductrainers alone via a hierarchical approach, because participants could be question eductrainers throughout the program. In this sense, the youth distanced themselves from the educational model of compliance through imposed rules. In a way, the eductrainer organized the risk to moderate the group. Risk became an element of cohesion that transformed the challenges of participating in a program into a collective practice (Marsac, 2006). This concept is in line with the educational proposals made as part of the communities of practice literature (Saury et al., 2013).

Principle 4: The Physical Commitment of the Eductrainer to Embody the Social Bond

The physical involvement of the eductrainer in DesÉquilibres program and its activities seemed to make the eductrainer a role model for young people. Importantly, the eductrainer physically shared risk-taking with the youth, which allowed for the embodiment of a form of carnal social bond in the specific context of the social intervention (Wacquant, 2015). Thus, Thibault-Lévesque (2014) noted that "it is then easier for young people to internalize the values of perseverance, mutual aid, teamwork, respect and equality since they are transmitted through the behavior of the educators." (p.84). Moreover, research in the didactics of Health and Physical Education showed that the physical engagement of the teacher in human motor situations was linked to the development of trust, as the student could simultaneously recognize the competence of their teacher as well as the embodiment of the values the teacher defends (Meyre, 2013; Sarrazin et al., 2006). In addition, the physical sharing of the risk-taking between the coach and youths could strengthen the empathy of each party. Indeed, Zanna (2015) showed that the shared student-coach experience of pain and fear in the sporting situation was likely to strengthen mutual empathy. Numerous works on the educational relationship in sport (Visioli, 2019) show that teachers, coaches, or supervisors who show empathy to participants set up an educational climate favorable to the construction of positive social bonds (Kozanitis et al., 2007; Liberante, 2012).

It thus seems that the eductrainer, by proposing an unconventional activity, generated risk-taking that had significant impact on the creation and character of the social bond animating the group. This risk-taking, shared by the eductrainer, was transformed into a physical and mental test, which is recognized by the community and has the effect of socially anchoring the young person to the adult world. The risk underlying the program seemed primarily subjective. According to Collard (2002), sportsmen and women who take risks "dramatize—as far as possible—their risky actions in the sense of respecting certain moral criteria" (p. 362). This dramatization seemed to be carried out by the eductrainer, who adopted different postures according to which principles-of-action are being implemented: leader (principle 1), smuggler (principle 2), project manager (principle 3), and model (principle 4). For this reason, we propose a model of the eductrainer's behaviors and attitudes as a tool to promote psychosocial development.

Finally, this research has enabled us to model the principles-of-action implemented by the eductrainer to use sport as a tool for psychosocial development among young people (Figure 6).

Limits of the Research

This research included a number of limitations. Firstly, verbalizations of participants were limited despite the bond developed between the youths and the researcher. Nevertheless, the speech was very positive regarding the effects of the program. Is this lack of criticism due to the quality of the program, or is it the consequence of social desirability? Do young people not want to disappoint the eductrainers (Moreau et al., 2014)? Second, our action research only focused on social bonds, not social structures. Our fight against structural inequity is, therefore, limited (Coalter, 2015), even though the DesÉquilibres program aims to develop young people's power to act, both individually and collectively.

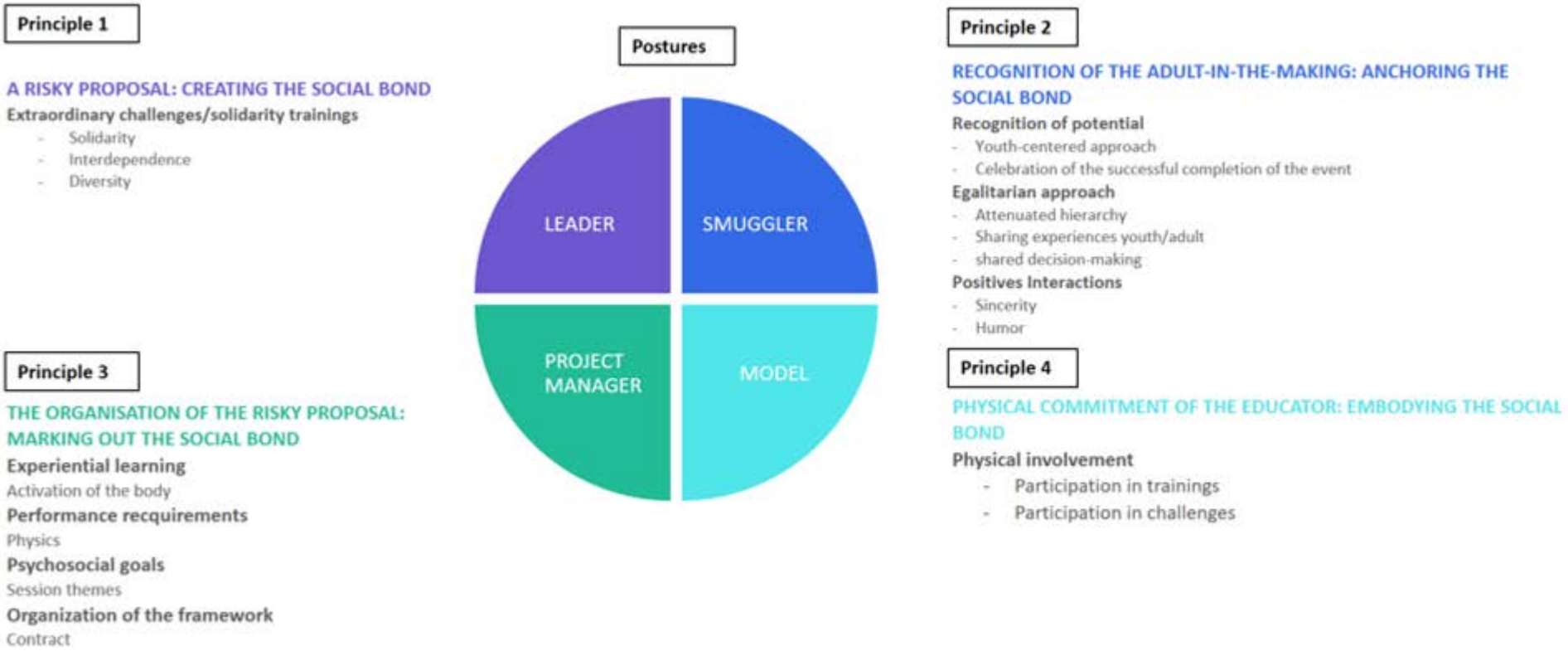

Figure 6. Model of the principles-of-action of the eductrainer

CONCLUSION AND FUTURE DIRECTIONS

The goal of this article was to deepen the SDP literature about intervention mechanisms to illuminate how sport (more specifically, the eductrainer) could have a positive impact on young people on the psychosocial level. To this end, we found four principles-of-action of the eductrainer: (a) a risky proposal made to a collective to create a social bond; (b) the recognition of the adult-in-the-making to anchor the social bond; (c) the organization of the risky proposal to scaffold the social bond; and (d) the physical commitment of the eductrainer to embody the social bond. These results allowed us to show that risk was an important factor in the creation of social bonds between youths and between youths and adults.

Epistemologically, the original contribution of this research lies in the use of primary data from the perspective of young people, an approach that is not often used in social intervention (Ouellet, 2009) or SFD (Gadais, 2019; Whitley et al., 2019) studies.

Moreover, in a context where young people sometimes say they are unable to engage in trial-and-error and share results with eductrainers (Poirier et al., 2007), it could be interesting, despite the "hyper-security" and "hyper-prevention" tendencies of our societies (Jeffrey, 2008), to give risk-taking a more important place in the formation of social bonds. In this context, the practice of sport seems to be a highly productive playing field. Several international (Spruit et al., 2016) and Quebec-specific studies (Moreau et al., 2014; Rioux et al., 2017; Simard et al., 2014) showed the positive impact of sports practice on the psychosocial development of young people under certain conditions. We add that while risk-taking by youth and eductrainers is necessary for the creation of social bonds, this risk is not an objective fact and oscillates between real risk, preferential risk, and perceived risk.

Previous work on communities of practice (Crance et al., 2014) and physical activity teaching (Petiot & Delignières, 2019) suggested that a coach must set up conditions such that the gap between the young person's perceived risk and their preferential risk level is optimal. Indeed, if the level of perceived risk too far exceeds the young person's desired level of preferential risk, the youth will not engage in the activity (Wilde, 1988), and the social bond will not develop. Therefore, the results of our study suggest the eductrainer should (a) adapt the level of risk offered to the group and (b) understand the social contexts in which young people can grow, to identify the optimal preferential risk that participants are willing to assume.

Consequently, this research could help legitimize the practice of sport in social interventions and support the development of training programs for professionals working in the health and social service fields. Finally, this research demonstrates the values of taking participants' experiences into account and truly listening their message, to build better SFD programs for future cohorts.

To conclude, this model is a first attempt to utilize a qualitative research approach. It could be interesting to replicate the study in different contexts (cultural, social, economic, environmental, etc.) and/or to subject the results to other research methodologies. This would help examine more deeply the relationship between the notion of risk and the creation of social bonds as a basis for psychosocial intervention via sport.

NOTES

1 Vulnerable young people refer to youth living with different problems (psychological or social) that do not allow them to "benefit from their contacts with social institutions [and] are mainly and recurrently confronted with the negative effects of these institutions [in our case school]" (Vettenburg, 1998, p. 194).

2 "The mission of the regional child and youth protection centers or Centres jeunesse is to offer services of a psychosocial nature, including social emergency services necessitated by a young person's situation under the law, as well as child placement, family mediation, child custody, adoption, and biological background research". Source: Department of Health and Social Services, https://m02.pub.msss.rtss.qc.ca/M02Lexique.asp

3 Each training program has customized objectives depending on the group dynamics.

4 The Cooper Test is a 12-minute test during which the participant must cover as many metres as possible. The test is designed to calculate the athlete's maximum aerobic volume (VO2 max).

5 The DesÉquilibres Institute was created in 2006.

6 This traditional representation of the term educator is not shared by everyone, especially according to Freire's perspective (Spaaij & Jeanes, 2013).

7 Hirschi (1969) defines social bonds by four dimensions: (a) affinity for involved individuals and institutions; (b) interpersonal attachment; (c) active cognitive involvement; and (d) acceptance of established social mores.

8 This challenge was a 271 km relay race between Sainte-Félicité and Gaspé in Québec, Canada, during the winter.

9 At the beginning of the program, the eductrainers and partners (i.e., principals and counsellors) agree on how the program will be run and define the frequency of meetings between eductrainers and counsellors to review the progress of the program and the development of the young people.

10 The calculated risk is a more accurate evaluation of the relationship between real risk, perceived risk, and preferential risk.

REFERENCES

Amade-Escot, C., Garnier, A., & Monnier, N. (2007). La dynamique contractuelle du processus didactique [The contractual dynamic of the pedagogical process]. In C. Amade-Escot (Ed.), *Le didactique* (pp. 31-48). Editions EP&S.

Anderson-Butcher, D. (2005). Recruitment and retention in youth development programming. *The Prevention Researcher, 12*(2), 3-6.

Babiss, L. A., & Gangwisch, J. E. (2009). Sports participation as a protective factor against depression and suicidal ideation in adolescents as mediated by self-esteem and social support. *Journal of Developmental & Behavioral Pediatrics, 30*(5), 376-384. https://doi.org/ 10.1097/DBP.0b013e3181b33659

Barbier, R. (1998). *L'éducateur comme passeur de sens* [The educator as a sense's facilitator]. [Paper presentation]. Congrès International sur la Transdisciplinarité at CIRET/UNESCO, Université Locarno, Suisse.

Beutler, I. (2008). Sport serving development and peace: Achieving the goals of the United Nations through sport. *Sport in Society, 11*(4), 359-369. https://doi.org/10.1080/17430430802019227

Blais, L. (2006). Savoir expert, savoirs ordinaires: Qui dit vrai? Vérité et pouvoir chez Foucault [Expert knowledge, ordinary knowledge: Who is right? Truth and power in Foucault's work]. *Sociologie et Sociétés, 38*(2), 151-163. https://doi.org/10.7202/016377ar

Blanchet, A., & Gotman, A. (2006). *L'entretien* [The interview]. Armand Colin.

Blumer, H., & Riot, L. (2004). Les problèmes sociaux comme comportements collectifs [Social problems as collective behaviours]. *Politix, Revue des Sciences Sociales du Politique, 67*(3), 185-199. https://doi.org/10.3406/polix.2004.1630

Bodilly, S. J., & Beckett, M. K. (2005). *Making out-of-school-time matter: Evidence for an action agenda*. Rand Corporation.

Braun, V., Clarke, V., & Weate, P. (2016). Using thematic analysis in sport and exercise research. In B. Smith & A. C. Sparkes (Eds.), *Routledge handbook of qualitative research in sport and exercise* (pp. 191-205). Taylor & Francis.

Caillat, M. (2014). *Sport: l'Imposture absolue: Idées reçues sur l'*« *ideal* » *sportif* [Sport: absolute deception: Misconceptions about the "ideal" sport]. Le Cavalier Bleu.

Camiré, M., Forneris, T., Trudel, P., & Bernard, D. (2011). Strategies for helping coaches facilitate positive youth development through sport. *Journal of Sport Psychology in Action, 2*(2), 92-99. https://doi.org/10.1080/21520704.2011.584246

Cárdenas, A. (2013). Peace building through sport? An introduction to sport for development and peace. *Journal of Conflictology, 4*(1), 24-33. http://dx.doi.org/10.7238/joc.v4i1.1493

Carreres-Ponsoda, F., Carbonell, A. E., Cortell-Tormo, J. M., Fuster-Lloret, V., & Andreu-Cabrera, E. (2012). The relationship between out-of-school sport participation and positive youth development. *Journal of Human Sport & Exercise, 7*(3), 671-683. https://doi.org/10.4100/jhse.2012.73.07

Chartrand, M. (2012). *Les impacts des comportements et des attitudes des éductraineurs de l'organisme DesÉquilibres chez les adolescents participant au programme Alter-Action* [The impacts of behaviors and attitudes of eductrainers from DesÉquilibres on adolescents participating in the Alter-Action program]. [Unpublished master's thesis]. University of Ottawa.

Chawansky, M., & Holmes, M. (2015). Sport, social development and peace. Sport in Society, 18(6), 752-756. https://doi.org/10.1080/17430437.2015.1050264

Coalter, F. (2015). Sport-for-change: Some thoughts from a sceptic. *Social Inclusion, 3*(3), 19-23. https://doi.org/10.17645/si.v3i3.222

Collard, L. (1998). *Sports, enjeux et accidents* [Sports, issues and accidents]. Presses Universitaires de France.

Collard, L. (2002). Le risque calculé dans le défi sportif [The calculated risk in the sporting challenge]. *L'Année Sociologique, 52*(2), 351-369. https://doi.org/10.3917/anso.022.0351

Crance, M.-C., Trohel, J., & Saury, J. (2014). Construction d'une oeuvre chorégraphique en collège et émergence d'une « compagnie de danse scolaire » [Construction of a choreographic work in high-school and emergence of a "school dance company"]. *Staps, 103*(1), 69-85. https://doi.org/10.3917/sta.103.0069

De Lavergne, C. (2007). La posture du praticien-chercheur: Un analyseur de l'évolution de la recherche qualitative [The posture of the practitioner-researcher: An analyzer of the evolution of qualitative research]. *Recherches Qualitatives, 3*, 28-43.

Delignières, D., & Garsault, C. (2004). *Libres propos sur l'éducation physique* [Free talk about physical education]. Revue EPS.

Doré, I., Pigeon, É., & Roberge, M.-C. (2015). *Bouger pour être en bonne santé... mentale!* [Move to be in good ... mental health!]. Institut National de Santé Publique du Québec. https://www.inspq.qc.ca/sites/default/files/publications/2037_bouger_sante_mentale.pdf

Douglas, M. (2004). *Comment pensent les institutions* [How do institutions think]. La Découverte.

Durand, M. (1987). *L'enfant et le sport* [Children and sport]. Presses Universitaires de France.

Edwards, M. B. (2015). The role of sport in community capacity building: An examination of sport for development research and practice. *Sport Management Review, 18*(1), 6-19. https://doi.org/10.1016/j.smr.2013.08.008

Elias, N., & Dunning, E. (1998). *Sport et civilisation: La violence maîtrisée* [Quest for excitement: Sport and leisure in the civilising process]. Fayard.

Endresen, I. M., & Olweus, D. (2005). Participation in power sports and antisocial involvement in preadolescent and adolescent boys. *Journal of Child Psychology and Psychiatry, 46*(5), 468-478. https://doi.org/10.1111/j.1469-7610.2005.00414.x

Erickson, K., & Côté, J. (2016). A season-long examination of the intervention tone of coach-athlete interactions and athlete development in youth sport. *Psychology of Sport and Exercise, 22*, 264-272. https://doi.org/10.1016/j.psychsport.2015.08.006

Falcão, W. R. (2018). *Development, delivery, and assessment of a humanistic coaching workshop and its impact on youth development* [Doctoral dissertation, McGill University]. eScholarship. https://escholarship.mcgill.ca/concern/theses/kd17cw46c

Faulkner, G. E., Adlaf, E. M., Irving, H. M., Allison, K. R., Dwyer, J. J., & Goodman, J. (2007). The relationship between vigorous physical activity and juvenile delinquency: A mediating role for self-esteem? *Journal of Behavioral Medicine, 30*(2), 155-163. https://doi.org/10.1007/s10865-006-9091-2

Favier-Ambrosini, B. (2020). *Émergence, construction et diffusion du sport-santé: Les réseaux sport-santé bien-être. D'une politique publique nationale aux ajustements locaux* [Emergence, production, and awareness of health-sport: Sport-health well-being networks. From public national policies to local adjustments]. [Doctoral dissertation. Université Paris-Est]. Tel. https://tel.archives-ouvertes.fr/tel-02936835v2/document

Filion, I. (2011). *L'impact de la pratique sportive sur le développement des habiletés prosociales des adolescents de sexe masculin: une évaluation des techniques d'entraînement de l'organisme DesÉquilibres* [The impact of sports practice on the development of prosocial skills in adolescent males: An evaluation of the training techniques of DesÉquilibres]. [Unpublished master's thesis]. University of Ottawa.

Flore, P., & Juvin, A. F. (2005). Place de l'interrogatoire dans le diagnostic de surentraînement [The role of questioning in the diagnosis of overtraining]. *Science & Sports, 20*(5-6), 268-274. https://doi.org/10.1016/j.scispo.2005.09.002.

Fontan, J.-M. (2010). Recherche partenariale en économie sociale: Analyse d'une expérience novatrice de coproduction des connaissances [Partnership research in social economy: Analysis of an innovative experience in the co-production of knowledge]. *La Revue de l'Innovation dans le Secteur Public, 15*(3), 1-17.

Freire, P. (1970). *Pedagogy of the oppressed*. Continuum.

Fricker, M. (2007). *Epistemic injustice: Power and the ethics of knowing*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780198237907.001.0001

Gadais, T. (2019). Sport for development and peace: Current perspectives of research. In D. A. Marinho, H. P. Neiva, C. P. Johnson, & N. Mohamudally (Eds.), *Sports Science and Human Health: Different Approaches*. IntechOpen. https://doi.org/10.5772/intechopen.89192

Gardam, K., Giles, A., & Hayhurst, L. M. (2017). Sport for development for Aboriginal youth in Canada: A scoping review. *Journal of Sport for Development, 5*(8), 30-40.

Gardner, M., Roth, J., & Brooks-Gunn, J. (2009). Sports participation and juvenile delinquency: The role of the peer context among adolescent boys and girls with varied histories of problem behavior. *Developmental Psychology, 45*(2), 341-353. https://doi.org/10.1037/a0014063

Gargano, V. & Turcotte, D. (2021). Helping factors in an outdoor adventure program. *Journal of Social Work, 21*(1), 88-106. https://doi.org/10.1177/1468017319863708

Gargano, V., & Turcotte, D. (2018). L'intervention en contexte de nature et d'aventure: Différences et similitudes entre les programmes éducatifs et les programmes thérapeutiques [Intervention in the context of nature and adventure: Differences and similarities between educational programs and therapeutic programs]. *Canadian Journal of Education, 41*(1), 194-222.

Garsault, C. (2004). Finaliser les apprentissages en EPS: Les brevets sportifs [Finalize learning in Physical Education: Sports certificates]. *L'EPS en Zone d'Éducation Prioritaire. Document Académique 9*. Académie de Montpellier.https://didierdeligieresblog.files.wordpress.com/2016/04/garsault-c-2004-leps-en-zep-acadecc81mie-de-montpellier.pdf

Gasparini, W. (2008). L'intégration par le sport: Genèse politique d'une croyance collective [Integration through sport: Political genesis of a collective belief]. *Sociétés Contemporaines, 69*(1), 7-23. https://doi.org/10.3917/soco.069.0007

Gasparini, W. & Vieille Marchiset, G. (2008). Sport, quartiers populaires, politiques publiques: Des catégories à l'épreuve des sciences sociales [Sport, working-class neighborhoods, public policies: Categories tested by social sciences]. In W. Gasparini & G. Vieille Marchiset (Eds.), *Le sport dans les quartiers: Pratiques sociales et politiques publiques* (pp. 17-57). Presses Universitaires de France. https://doi.org/10.4000/lectures.660

Gerbelli-Gauthier, L. (2019). *Le grand frère: Coaching, adolescence et lien de confiance* [The big brother: Coaching, adolescence and trust bond]. [Master's thesis, Université de Montréal]. Papyrus: Institutional Repository. https://papyrus.bib.umontreal.ca/xmlui/bitstream/handle/1866/21613/Gerbelli-Gauthier_Leo_2018_Memoire.pdf?sequence=4&isAllowed=y

Green, B. C. (2008). Sport as an agent for social and personal change. In V. Girginov (Ed.), *Management of Sports Development* (pp. 129-145). Butterworth-Heinemann. https://doi.org/10.4324/9780080570099

Hartmann, D. (2003). Theorizing sport as social intervention: A view from the grassroots. *Quest, 55*(2), 118-140. https://doi.org/10.1080/00336297.2003.10491795

Hartmann, D., & Kwauk, C. (2011). Sport and development: An overview, critique, and reconstruction. *Journal of Sport and Social Issues, 35*(3), 284-305. https://doi.org/10.1177/0193723511416986

Hébert, J. (2011). *Arts martiaux, sports de combat et interventions psychosociales* [Martial arts, fighting sports and psychosocial interventions]. Presses de l'Université de Québec.

Hirschi, T. (1969). A control theory of delinquency. In F. P. Williams III & M. D. McShane (Eds.), *Criminology theory: Selected classic readings* (pp. 289-305). Elsevier.

Houssaye, J. (2014). *La pédagogie traditionnelle: Une histoire de la pédagogie* [Traditional pedagogy: A history of pedagogy]. Fabert.

Iannotti, R. J., Kogan, M. D., Janssen, I., & Boyce, W. F. (2009). Patterns of adolescent physical activity, screen-based media use, and positive and negative health indicators in the US and Canada. *Journal of Adolescent Health, 44*(5), 493-499. https://doi.org/ 10.1016/j.jadohealth.2008.10.142

Jeffrey, D. (2008). Les rites de passage à l'adolescence [Rites of passage in adolescence]. In D. L. Breton (Ed.), *Cultures adolescentes: Entre turbulence et construction de soi* (pp. 97-110). Éditions Autrement. https://doi.org/10.3917/autre.lebre.2008.01

Jerstad, S. J., Boutelle, K. N., Ness, K. K., & Stice, E. (2010). Prospective reciprocal relations between physical activity and depression in female adolescents. *Journal of Consulting and Clinical Psychology, 78*(2), 268-272. https://doi.org/ 10.1037/a0018793

Kidd, B. (2008). A new social movement: Sport for development and peace. *Sport in Society, 11*(4), 370-380. https://doi.org/10.1080/17430430802019268

Kozanitis, A., Desbiens, J.-F., & Chouinard, R. (2007). Perception of teacher support and reaction towards questioning: Its relation to instrumental help-seeking and motivation to learn. *International Journal of Teaching and Learning in Higher Education, 19*(3), 238-250.

Lachance, J. (2012). *Socio-anthropologie de l'adolescence: Lecture de David Le Breton* [Socio-anthropology of adolescence: David Le Breton's perspectives]. Presses de l'Université Laval.

Lapointe, L., Laberge, S., & Dusseault, M. (2012). Comment l'intervention psychosociale dans le sport peut-elle développer des habiletés de vie chez des jeunes de milieu multiethnique moins bien nanti [How can psychosocial intervention in sport develop young people's life skills from a multiethnic and less affluent background]? *PHEnex Journal, 4*(1), 1-22.

Lauver, S., Little, P., & Weiss, H. (2004). Moving beyond the barriers: Attracting and sustaining youth participation in out-of-school time programs. *Harvard Family Research Project, 6*, 1-16.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Leblanc, C. (2016). *Si seulement j'avais su. Le décrochage sportif: Une autoethnographie* [If only I had known. Sports dropout: An autoethnography]. [Unpublished master's thesis]. University of Ottawa.

Legrain, P., & D'Arripe-Longueville, F. (2010). Aide, apprentissage et autonomie [Help, learning and autonomy]. In F. Darnis (Ed.), *Interaction et apprentissage* (pp. 49-66). Éditions EP&S.

Lemieux, M., & Thibault, G. (2011). L'activité physique, le sport et les jeunes. Savoir et agir [Physical activity, sport, and young people. Knowledge and action]. *Observatoire Québécois du Loisir, 9*(7), 1-5.

Lemyre, F., & Trudel, P. (2004). Le parcours d'apprentissage au rôle d'entraîneur bénévole [The learning path to the job of volunteer coach]. *Avante, 10*(3), 40-55.

Lévêque, M. (2015). Pour l'implication du sportif de haut niveau dans la conception et la mise en œuvre de sa préparation [In favor of high-level athletes' involvement in designing and implementing their own training]. *Staps, 109*(3), 41-55. https://doi.org/ 10.3917/sta.109.0041

Levermore, R. (2008). Sport: A new engine of development? *Progress in Development Studies, 8*(2), 183-190. https://doi.org/10.1177/146499340700800204

Liberante, L. (2012). The importance of teacher-student relationships, as explored through the lens of the NSW Quality Teaching Model. *Journal of Student Engagement: Education Matters, 2*(1), 2-9.

Lobrot, M. (1993). *Le choc des émotions* [The shock of emotions]. La Louviere.

Lyras, A., & Peachey, J. W. (2011). Integrating sport-for-development theory and praxis. *Sport Management Review, 14*(4), 311-326. https://doi.org/10.1016/j.smr.2011.05.006

Marsac, A. (2006). En kayak de haute rivière: Pratiques individuelles et engagements partagés [Upper-river kayaking: Individual practices and shared pursuits]. *Ethnologie Française, 36*(4), 603-611. https://doi.org/10.3917/ethn.064.0603

Meyre, J.-M. (2013). Les souvenirs laissés par les bons enseignants d'EPS: l'Assertivité socio-conative comme concept explicatif [Memories left by the "good" physical education teachers: Socio-conative assertiveness as explicative concept]. *Staps, 100*(2), 77-87. https://doi.org/10.3917/sta.100.0077

Moeran, B. (2007). *From participant observation to observant participation: Anthropology, fieldwork and organizational ethnography*. Creative Encounters.

Moreau, N., Molgat, M., Plante, C., Parlavecchio, L., Cosset, A., Chanteau, O. & Benoît, M. (2013). Projet recherche-action 2010-2012. DesÉquilibres: Les éléments d'une alternative modélisation d'un programme sportif. Rapport de recherche - MDEIE (Ministère du Développement économique, de l'Innovation et de l'Exportation du Québec).

Moreau, N., Chanteau, O., Benoît, M., Dumas, M.-P., Laurin-lamothe, A., Parlavecchio, L., & Lester, C. (2014). Sports activities in a psychosocial perspective: Preliminary analysis of adolescent participation in sports challenges. *International Review for the Sociology of Sport, 49*(1), 85-101. https://doi.org/10.1177/1012690212452361

Moreau, N., Thibault-Lévesque, J., Molgat, M., Jaimes, A., Parlavecchio, L., Chanteau, O., & Plante, C. (2018). Opening the black box of a sports-based programme for vulnerable youth: The crucial role of social bonds. *Qualitative Research in Sport, Exercise and Health, 10*(3), 291-305. https://doi.org/10.1080/2159676X.2018.1430060

Morgan, H., & Costas Batlle, I. (2019). "It's borderline hypocrisy": Recruitment practices in youth sport-based interventions. *Journal of Sport for Development, 13*(7), 1-14.

Ouellet, L. (2009). *Étude qualitative des perceptions de jeunes adolescents qui ont vécu un placement, à l'égard des services reçus.* [Qualitative study of the perceptions of young adolescents who have experienced placement, regarding the services they received]. [Master's thesis, University of Montreal]. Papyrus. http://hdl.handle.net/1866/7552

Parlavecchio, L. (2015). *L'alternative explosive: Le guide pratique pour utiliser le sport comme outil de développement psychologique et social auprès des jeunes... et moins jeunes* [The explosive alternative: The practical guide to using sport as a tool for psychological and social development among young… and not so young people]. Institut DésÉquilibres.

Pascoe, M. C., & Parker, A. G. (2019). Physical activity and exercise as a universal depression prevention in young people: A narrative review. *Early Intervention in Psychiatry, 13*(4), 733-739. https://doi.org/10.1111/eip.12737

Peachey, J. W., Borland, J., Lobpries, J., & Cohen, A. (2015). Managing impact: Leveraging sacred spaces and community celebration to maximize social capital at a sport-for-development event. *Sport Management Review, 18*(1), 86-98. https://doi.org/10.1016/j.smr.2014.05.003

Peachey, J. W., Schulenkorf, N., & Spaaij, R. (2019). Sport for social change: Bridging the theory-practice divide. *Journal of Sport Management, 33*(5), 361-365. https://doi.org/10.1123/jsm.2019-0291

Pesqueux, Y. (2011). Pour une épistémologie du risque [For an epistemology of risk]. *Management & Avenir, 43*(3), 460-475. https://doi.org/10.3917/mav.043.0460

Petiot, O. (2019). Jouer avec le risque en escalade [Playing with risk in climbing]. In O. Petiot (Ed.), *Le risque* (pp. 81-99). Editions EP&S.

Petiot, O., & Delignières, D. (2019). Au risque de définir une notion complexe et actuelle [To risk of defining a complex and current concept]. In O. Petiot (Ed.), *Le risque* (pp. 11-28). Editions EP&S.

Pires, A. (1997). Échantillonnage et recherche qualitative: Essai théorique et méthodologique, les classiques des sciences sociales [Sampling and qualitative research: Theoretical and methodological essay, the classics of the social sciences]. In J. Poupart, J. P. Deslauriers, L. H. Groulx, A. Laperrière, R. Mayer, & A. Pires (Eds.), *La recherche qualitative. Enjeux Épistémologiques et Méthodologiques* (pp. 113-169). Gaëtan Morin.

Plante, C. (2014). *Entre reproduction et résistance: Les effets d'un programme sportif d'intervention sur les dynamiques d'inclusion et d'exclusion vécus par les adolescent(e)s* [Between reproduction and resistance: The effects of a sports intervention program on the dynamics of inclusion and exclusion experienced by adolescents]. [Unpublished master's thesis]. University of Ottawa.

Plante, C., Moreau, N., Jaimes, A., & Turbide, C. (2016). Motivational factors for youth recruitment in voluntary interventions: The case of a community sport program. *Sport, Education and Society, 21*(7), 1071-1090. https://doi.org/10.1080/13573322.2014.975115

Poirier, M., Chanteau, O., Marcil, F., & Guay, J. (2007). L'expérience de la prise en charge institutionnelle et du passage à la vie adulte chez des jeunes à risque d'exclusion sociale et d'itinérance: Émergence d'un dialogue entre jeunes et intervenants au Centre Jeunesse de Laval [The experience of institutional care and the transition to adulthood among young people at risk of social exclusion and homelessness: Emergence of a dialogue between young people and workers at the Centre Jeunesse de Laval]. 291-309.

Queloz, N. (1989). Lien social et conformation des individus: Examen critique [Social bond and individual conformation: Critical examination]. *Déviance et Société, 13*(3), 199-208.

Quidu, M. (2014). Le corps du savant: Cadre problématique et projets d'analyse [The body of the scientist: Problematic framework and analytical projects]. In M. Quidu (Ed.), *Épistémologie du corps savant. Tome 1: Le chercheur et la description scientifique du réel* (pp. 5-48). L'Harmattan.

Raveneau, G. (2006). Prises de risque sportives: Représentations et constructions sociales [Sporting risk-taking: Representations and social constructions]. *Ethnologie Française, 36*(4), 581-590. https://doi.org/10.3917/ethn.064.0581

Rhéaume, J. (1982). La recherche-action: Un nouveau mode de savoir [Sociology: A Matter of Methods]? *Sociologie et Sociétés, 14*(1), 43-51. https://doi.org/10.7202/006775ar

Richards, J., Kaufman, Z., Schulenkorf, N., Wolff, E., Gannett, K., Siefken, K., & Rodriguez, G. (2013). Advancing the evidence base of sport for development: A new open-access, peer-reviewed journal. *Journal of Sport for Development, 1*(1), 1-3.

Rioux, M.-A. (2016). Utilisation du sport comme médium d'intervention: Illustration d'un modèle d'intervention à la base du projet « développement personnel et social par le tennis » au Centre jeunesse de Québec—Institut universitaire (CJQ-IU) [Use of sport as a medium of intervention: Illustration of an intervention model at the base of the project "personal and social development through tennis" at Centre jeunesse de Québec—Institut Universitaire (CJQ-IU)]. *Défi Jeunesse, 22*(3), 12-19.

Rioux, M.-A., Laurier, C., Gadais, T., & Terradas, M. (2017). Intervenir par le sport auprès de jeunes contrevenants: Analyse descriptive et compréhensive de dix interventions [Sports and young offenders: A descriptive and comprehensive analysis of ten interventions]. *Revue de Psychoéducation, 46*(2), 337-358. https://doi.org/10.7202/1042254ar

Rouzel, J. (2014). *Le travail d'éducateur spécialisé: Éthique et pratique* [The work of a specialized educator: Ethics and practice]. Dunod.

Sarrazin, P., Tessier, D., & Trouilloud, D. (2006). Climat motivationnel instauré par l'enseignant et implication des élèves en classe: l'État des recherches [Motivating environments set by teachers and students' learning activities: What research says]. *Revue Française de Pédagogie, 157*, 147-177. https://doi.org/10.4000/rfp.463

Saury, J., Adé, D., Gal-Petitfaux, N., Huet, B., Sève, C., & Trohel, J. (2013). *Actions, significations et apprentissages en EPS. Une approche centrée sur les cours d'expériences des élèves et des enseignants* [Actions, meanings and learning in physical education. An approach centered on the learing experiences of students and teachers]. Revue EP&S.

Schulenkorf, N. (2017). Managing sport-for-development: Reflections and outlook. *Sport Management Review, 20*(3), 243-251. https://doi.org/10.1016/j.smr.2016.11.003

Schulenkorf, N., & Adair, D. (2014). *Global sport-for-development: Critical perspectives*. Palgrave Macmillan.

Segalen, M. (2009). *Rites et rituels contemporains* [Contemporary rites and rituals] (2nd ed.). Armand Colin.

Shin, N., Cohen, A., & Peachey, J. W. (2020). Advancing the sport for development field: Perspectives of practitioners on effective organizational management. *Journal of Sport for Development, 8*(14), 36-52.

Siedentop, D. (1994). *Sport education: Quality PE through positive sport experiences*. Human Kinetics.

Simard, S., Laberge, S., & Dusseault, M. (2014). Empowerment revisited: How social work integrated into a sports programme can make a difference. *Journal of Sport for Development, 2*(3), 1-13.

Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology, 11*(1), 101-121. https://doi.org/10.1080/1750984X.2017.1317357

Spaaij, R. (2012). Building social and cultural capital among young people in disadvantaged communities: Lessons from a Brazilian sport-based intervention program. *Sport, Education and Society, 17*(1), 77-95. https://doi.org/10.1080/13573322.2011.607913

Spaaij, R., & Jeanes, R. (2013). Education for social change? A Freirean critique of sport for development and peace. *Physical Education and Sport Pedagogy 18*(4), 442-457. https://doi.org/10.1080/17408989.2012.690378

Spruit, A., Vugt, E., Put, C., Stouwe, T., & Stams, G.-J. (2016). Sports participation and juvenile delinquency: A meta-analytic review. *A Multidisciplinary Research Publication, 45*(4), 655-671. https://doi.org/10.1007/s10964-015-0389-7

Stodolska, M., Sharaievska, I., Tainsky, S., & Ryan, A. (2014). Minority youth participation in an organized sport program: Needs, motivations, and facilitators. *Journal of Leisure Research, 46*(5), 612-634. https://doi.org/10.1080/00222216.2014.11950345

Thibault-Lévesque, J. (2014). *Entre épreuves et identité: le rite de passage dans la construction de l'identité des jeunes modernes: "D'un équilibre à l'autre, DesÉquilibres comme intervention par le sport et rite de passage contemporain"* [Between trials and identity: The rite of passage in the construction of the identity of modern young people: "From one balance to another, DesÉquilibres as intervention through sport and contemporary rite of passage"]. [Unpublished master's thesis]. University of Ottawa.

Thibault-Lévesque, J., Molgat, M., & Moreau, N. (2017). L'intervention en contexte de sport auprès des jeunes: La place du rite de passage dans le programme DesÉquilibres [The intervention in sport's context with young people: The place of the rite of passage in the DesÉquilibres program]. *Canadian Social Work Review/Revue Canadienne de Service Social, 34*(2), 229-251. https://doi.org/10.7202/1042890ar

Tofler, I. R., & Butterbaugh, G. J. (2005). Developmental overview of child and youth sports for the twenty-first century. *Clinics in Sports Medicine, 24*(4), 783-804. https://doi.org/10.1016/j.csm.2005.05.006

Tufford, L., & Newman, P. (2012). Bracketing in qualitative research. *Qualitative Social Work, 11*(1), 80-96. https://doi.org/10.1177/1473325010368316

Turner, V. W. (1990). *Le phénomène rituel: Structure et contre-structure: "Le rituel et le symbole: Une clé pour comprendre la structure sociale et les phénomènes sociaux"* [The Ritual Process: Structure and Anti-Structure]. Presses Universitaires de France.

Ubaldi, J.-L. (2004). Une EPS de l'anti-zapping [Physical education of anti-zapping]. *Revue EP&S, 309*, 49-51.

United Nations Inter-Agency Task Force on Sport for Development Peace. (2003). *Sport for development and peace: Towards achieving the millennium development goals*. United Nations Publications.

United Nations Office of Sport for Development and Peace. (2017). *Sport and sustainable development goals. An overview outlining the contribution of sport to the SDGs*. https://www.un.org/sport/sites/www.un.org.sport/files/ckfiles/files/Sport_for_SDGs_finalversion9.pdf

Verchère, R. (2012). *Travail, ordre et discipline: La société sportive et ses tensions* [Work, order, and discipline: The sports society and its tensions]. [Doctoral dissertation, Université Jean-Moulin-Lyon]. Theses.fr. https://scd-resnum.univ-lyon3.fr/out/theses/2012_out_verchere_r.pdf

Vettenburg, N. (1998). Juvenile delinquency and the cultural characteristics of the family. *International Journal of Adolescent Medicine and Health, 10*(3), 193-210. https://doi.org/10.1515/IJAMH.1998.10.3.193

Visioli, J. (Ed.). (2019). *La relation pédagogique* [The educational relationship]. Éditions EP&S.

Visioli, J., Petiot, O., & Ria, L. (2015). Vers une conception sociale des émotions des enseignants [Towards a social conception of teachers' emotions]? *Carrefours de l'Éducation, 40*(2), 201-230. https://doi.org/10.3917/cdle.040.0201

Wacquant, L. (2015). For a sociology of flesh and blood. *Qualitative Sociology, 38*, 1-11. https://doi.org/10.1007/s11133-014-9291-y

Webb, A. J., & Richelieu, A. (2015). Sport for development and peace snakes and ladders. *Qualitative Market Research: An International Journal, 18*(3), 278-297. https://doi.org/10.1108/QMR-01-2014-0011

Whitley, M. A., Farrell, K., Wolff, E. A., & Hillyer, S. J. (2019). Sport for development and peace: Surveying actors in the field. *Journal of Sport for Development, 7*(11), 1-15.

Wilde, G. J. (1988). Risk homeostasis theory and traffic accidents: propositions, deductions and discussion of dissension in recent reactions. *Ergonomics, 31*(4), 441-468. https://doi.org/10.1080/00140138808966691

Wright, W. (2006). Keep it in the ring: Using boxing in social group work with high-risk and offender youth to reduce violence. *Social Work with Groups, 29*(2-3), 149-174. https://doi.org/10.1300/J009v29n02_11

Zanna, O. (2015). *Le corps dans la relation aux autres. Pour une éducation à l'empathie* [The body in relation to others. For education in empathy]. Presses Universitaires de Rennes.

Original Research

"It makes me want to take more steps": Racially and economically marginalized youth experiences with and perceptions of Fitbit Zips® in a sport-based youth development program

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ABSTRACT

Healthy and high levels of physical activity can positively impact youth development, physiological and psychosocial well-being, academic performance, and reduce the risks of obesity, cardiovascular disease, and other chronic illnesses. Various health and physical activity interventions have started to engage with wearable technologies (e.g., Fitbit®) to objectively measure and manage levels of physical activity, for both academics and practitioners alike. The purpose of this study is to explore the potential utility of digital activity trackers, and the subsequent experiences of wearing such devices, toward increased engagement with physical activity among racially and economically marginalized youth. To this end, we had 20 youth of color wear a Fitbit Zip® over a 23-week period during their participation in a sport-based youth development program. At the conclusion of 23 weeks, 17 of the students reflected on their experiences by taking part in one of three focus groups. The participants shared predominantly positive experiences with and attitudes toward the devices. While there were some sentiments of indifference, most participants acknowledged increased levels of physical activity and awareness of the resultant health benefits. These results further highlight the potential value of integrating digital activity trackers in sport-based youth development programming and stress the importance of culturally appropriate expectations and training.

Keywords: physical activity; marginalized youth; sport-based youth development; digital trackers; wearable technology

"IT MAKES ME WANT TO TAKE MORE STEPS": RACIALLY AND ECONOMICALLY MARGINALIZED YOUTH EXPERIENCES WITH AND PERCEPTIONS OF FITBIT ZIPS® IN A SPORT-BASED YOUTH DEVELOPMENT PROGRAM

A growing body of literature suggests a strong, positive association between higher levels of physical activity and cognitive, physical, psychological, and social health indicators (Appelqvist-Schmidlechner et al., 2018). For instance, healthy physical activity can lead to the development and maintenance of strong bones and muscles, life longevity, improved physiological and psychosocial well-being, as well as reduced risks of some cancers, obesity, cardiovascular disease, and other chronic illnesses (Centers for Disease Control and Prevention, 2011, 2018a, 2018b). As it concerns to youth, higher levels of physical activity have been linked to better academic performance, improved cognitive abilities (Centers for Disease Control and Prevention, 2010, 2014), and positive psycho-social health outcomes such as increased self-efficacy, self-concept, and self-worth (Haugen et al., 2011). Moreover, increased physical activity at a young age can lead to enhanced physical literacy, defined as "the ability, confidence, and desire to be physically active" (Aspen Institute, 2015a, p. 3), an outcome which can situate youth on a life course trajectory of healthy physical activity and its ensuing benefits (Bopp et al., 2019). Taken together, this

literature demonstrates the crucial role physical activity plays in the physiological and psychological development of youth, the promotion and subsequent maintenance of which has led researchers to appropriately quantify it (i.e, measure it; Gusmer et al., 2014).

It is in this vein that monitoring one's movement has influenced various health interventions to engage with physical activity tracking devices such as accelerometers and pedometers to objectively measure physical activity (Hurvitz et al., 2014; Schaefer et al., 2016). Recent trends in physical activity have seen an increase in both the commercial availability and utilization of wearable technologies and digital activity trackers, for both academics and practitioners alike (Graham & Hipp, 2014). Though limited in number and scope, studies have been conducted to assess not only the validity and/or reliability of Fitbits® in physical activity measurement (see Ferguson et al., 2015; Gusmer et al., 2014; Mooses et al., 2018; Schneider & Chau, 2016; Haegele et al., 2017), but also, their efficacy in examining the behavioral intentionality toward physical activity among youth populations (see Altamimi et al., 2015; Klinker et al., 2014; Pope et al., 2018; Walther et al., 2018). Despite the recent popularity of tracking devices such as Fitbits® to document daily physical activity and health behaviors (Bice et al., 2016), much is to be learned regarding the utility of wearable technologies toward increased levels of youth physical activity (Ridgers et al., 2016).

Recent studies have cautioned that the effects of behavioral, environmental, and social factors on the relationship between wearable digital activity trackers and positive youth outcomes must be accounted for when analyzing youth engagement with wearable technology and physical activity opportunities (Bagot et al., 2018). Schaefer et al. (2016) contended that while "wearable devices can yield great insights for youth about their physical activity, these devices may not be successful agents of change in and of themselves" (p. 15). Further, Kerner and Goodyear (2017) posited that digital movement and activity trackers can have a negative impact on physical activity motivation among youth. The youth in their study experienced decreased levels of competence and autonomous motivation toward physical activity. Kerner and Goodyear suggested these declines might be the result of the competitive elements of the Fitbit® app utilized in the study, leading to both external and internal pressure (e.g., predetermined goals and guilt). Regardless, Goodyear et al. (2019) maintained the potential benefit of such wearable technology to provide opportunities and aid youth in increasing their health knowledge and physical activity levels; however, they noted that such health-related opportunities must be supplanted by an understanding of said opportunities from young people themselves. Similarly, Ridgers et al. (2018) found wearable trackers to provide benefits toward the promotion of physical activity among youth but cautioned that more information is needed "about how youth engage with and use such technology" (p. 8).

Thus, to deepen our understanding of the role that digital movement and activity trackers play in the lived experiences of youth, we must curate knowledge on not only how and why youth might engage in the use of wearable technologies, but also the perceptions of these individuals when utilizing these respective technologies (Goodyear et al., 2019). To this end, the purpose of this study is to explore the potential utility of digital activity trackers, and the subsequent experiences of wearing such devices, toward increased engagement with physical activity among racially and economically marginalized youth. Given the contextual backdrop of the sport-based youth development (SBYD) program within which we collected our data, we sought to focus particularly on how these trackers might impact engagement with physical activity for racially and economically marginalized youth. Knowing race and socioeconomic status to be social determinants of health (Braveman & Gottlieb, 2014; Trent et al., 2019), we considered these factors in our analysis of the data.

Framing the Study

SBYD programs are designed to assist youth in positively engaging with their community and contribute to their overall development and social capital through their interactions with and participation in sport and physical activity (Coakley, 2011; Perkins & Noam, 2007; Petitpas et al., 2017). However, since positive development and social outcomes are not inherently derived simply through sport participation, efforts toward youth development and enhanced physical activity must be intentional, strategic, and innovative (see Jones et al., 2017). It is in this manner that sport serves a crucial role in the physiological and psychological development of youth regarding physical activity. As already noted, Gusmer et al. (2014) argued the promotion and maintenance of this development partly rests on how physical activity is measured.

Such considerations of bodily movement and ecological interaction have since influenced various health and physical activity interventions to engage with movement tracking devices such as accelerometers and pedometers to objectively measure physical activity (Schaefer et al., 2016). Although we appreciate that digital health technologies can offer positive insight and development for

youth as it concerns physical activity (Schaefer et al., 2016), we also understand that there exist "social-material circumstances that enable particular ways of being a Fitbit® subject for some, while constraining others" (Esmonde & Jette, 2020, p. 311). Accordingly, Esmonde and Jette acknowledge that although possible to procure insight on one's own physical activity from any given social location, it may be:

> *… more difficult to do so if you do not have the flexibility to walk throughout the day, a body that can take 10,000 steps per day, the availability of safe and interesting areas to walk in, or even the appearance of a person who can walk in those safe areas without arousing suspicion. (p. 311)*

Thus, the manifestation of such social, structural, and systemic barriers can result in physical activity disparities among youth (Adlakha et al., 2014), thereby decreasing opportunities and thwarting their development toward a lifetime of healthy physical activity (Bopp et al., 2019). It is in this manner that race and socioeconomic factors act as social determinants of health (Braveman & Gottlieb, 2014; Trent et al., 2019).

Within the United States of America, Black youth are physically active at a significantly lower level than their White counterparts, partly due to having fewer options to become active in the first place (Aspen Institute, 2015b; Centers for Disease Control and Prevention, 2018b). In a study of estimated facilities and resources in North Carolina, New York, and Maryland in the early 2000s, Moore et al. (2008) found that 71 percent of predominantly Black neighborhoods lacked access to a recreational facility, as opposed to only 38 percent of predominantly White areas. This may be exacerbated when accounting for the relationship between race and socioeconomic status, as one's respective socioeconomic status can impact physical activity levels (Aspen Institute, 2015a). In turn, a lack of recreational resources stemming from financial barriers can impact one's health (Adlakha et al., 2014), such that youth from households earning the lowest incomes ($25,000 or less) are about half as likely as youth from wealthier households ($100,000 or more) to participate in physical activity (Aspen Institute, 2015a).

Strengthening our understanding of the perceptions of sport participation and physical activity among racially and economically marginalized youth will afford researchers and practitioners an evidence-based foundation on which to design appropriate studies, as well as program offerings and curricula. In doing so, it is critical to remain cognizant of the intersections of race, physical activity, and digital (in)equity when considering digital trackers as an intervention toward increased and/or enhanced levels of physical activity of racially and economically marginalized youth. Despite the recent popularity of tracking devices such as Fitbits® to document daily physical activity and health behaviors (Bice et al., 2016), little is known about how they might be perceived and utilized in low socioeconomic communities (Ridgers et al., 2018; Schaefer et al., 2016). Tichavakunda and Tierney (2018) suggested researchers and practitioners might better understand and serve the physical activity needs of marginalized youth by providing a thorough examination of their use of activity trackers, without which may leave scholars with an "incomplete understanding of digital inequality and how best to support diverse groups" (p. 113). Thus, the purpose of this study is to explore the potential utility of digital activity trackers, and the subsequent experiences of wearing such devices, toward increased engagement with physical activity among racially and economically marginalized youth.

METHODOLOGY

The SBYD Program

The SBYD program in this study is a free after school program that serves disadvantaged middle and high school students, primarily 11-15 years of age, in a suburban community. The program meets for approximately two hours, Monday-Thursday, on the campus of a predominantly White institution and offers a unique blend of sport, academic enrichment, health promotion, and character and life skills development. The primary sport on which this program focuses is tennis, however the program offers participants other sporting experiences throughout the year (e.g., basketball, swimming, roller hockey, quidditch). Tennis and other sporting experiences are therefore utilized as a context in which participants' life skills are reinforced and practiced. Prior to participating in different sports, coaches explain to the participants the reason(s) for doing so, and during such activities, coaches seize on learning opportunities by stopping play to discuss the application of individual and interpersonal skills. For instance, as an individual sport, while playing tennis participants are taught emotional self-regulation, focus, and conflict resolution (e.g., when disputing a call). Conversely, roller hockey is a team sport that further allows youth to develop their communication skills, practice accountability, and strengthen their teamwork abilities.

At the time of data collection, 91% of the program participants identified as Black or African American, 6% as Hispanic/Latinx, and 3% as White. Just over half (54%) of the students self-identified as female and 46% as male.

Most (80%) of the students hailed from single parent/guardian households, and although 70% of parents/guardians were employed, over 80% of the participants' households reported an annual income of less than $25,000.

Research Design and Procedures

This study was designed using qualitative methods to explore the potential utility of digital activity trackers, and the subsequent experiences of wearing such devices, toward enhanced physical activity among racially and economically marginalized youth in a SBYD program. Funding for this study was received from the Janet B. Parks NASSM Research Grant Program and provided us the opportunity to purchase 20 Fitbit Zips®. Fitbit Zips® were selected as the appropriate digital tracker due to their relatively low cost, ease of use, and durability (i.e., sweat, rain, and splash proof). University IRB approval was received prior to the grant proposal and collecting data. Accordingly, parental consent and participant assent was also obtained.

We invited 20 students to participate in the study, all of whom agreed. It is important to note that no incentives were offered by the researchers. The 20 invitees were selected by the program's executive director based largely on attendance and their potential willingness to participate, with no input from the researchers. Participants were requested to wear the Fitbit Zips® for 23 weeks from November to May, however only while attending the program and when scheduling allowed. Prior to the commencement of the 23-week period, researchers and program administers met with the participants to explain the purpose of the study as well as the study protocol. Additionally, the youth were instructed on how to put on, turn on, operate, and interpret symbols and numbers that appeared on the screen of the wearable trackers. This was an informal discussion that took approximately 20 minutes. At the conclusion of the 23 weeks, we requested that participants reflect on their experiences by taking part in a focus group. Seventeen of the 20 participants consented, and based on availability during the scheduled days, were assigned to one of three focus groups, comprised of six, six, and five participants. Two facilitators were present at each focus group: one of the two lead investigators, both of whom identify as White males, served as facilitator while a graduate assistant, an African American male, helped to keep the youth participants focused on the discussion.

The focus group discussion guide drew on questions adapted from Schaefer et al.'s (2016) study on the feasibility of fitness tracking with youth in an urban setting. Questions centered on the youth's experiences (*Were you more active while wearing the Fitbit Zip*®?), potential knowledge gain (*Did you learn anything about yourself?*), behavioral shifts (*Did anything about you change when you had the Fitbit Zips® on or off?*), as well as attitudes and perceptions (*Did you talk to anyone about the Fitbit Zips®, and if so, what did you say?*). Focus groups were deemed a relevant research approach for this study as they have been an effective means to learn more about the experiences and attitudes of youth, particularly those from racially and ethnically marginalized groups (Hesse-Biber & Leavy, 2011). Given the identity sources of our participants, we felt focus groups best afforded these students space to share their experiences and perspectives, as well as to provide an opportunity for "education, exploration, and collaborative generation" (Hesse-Biber & Leavy, 2011, p. 165). Other researchers have argued that focus groups can provide youth peer support, facilitating self-disclosure (Kennedy et al., 2001) through the notion of safety in numbers (Kitzinger, 1994). Thus, to ensure a positive experience for each of our participants, we designed and conducted our study with consideration given to guiding principles as outlined for conducting research with youth by Gibson (2007) and Neill (2005). For instance, we received IRB approval, parental consent, and participant assent, ensured all verbal and written communications were at an appropriate reading and speaking level, were clear about the purpose of the study, encouraged them to ask questions, stressed that their participation was voluntary, and reiterated that they could withdraw at any time without penalty.

Participants

A total of 20 program participants agreed to wear Fitbit Zips®. Due to factors outside of the researchers' control (e.g., sports, extracurricular school commitments), three students did not participate in the focus groups. Of the seventeen remaining students, 10 (59%) were male and seven (41%) were female. Fourteen participants identified as Black or African American and three identified as Hispanic/Latinx. The ages of the participants ranged from 11-15 years (see Table 1 for participant details).

Data Analysis

Wanting to explore and understand participant behaviors and experiences when wearing digital movement and activity trackers during programming, we selected an analytical technique that allowed researchers to uncover themes from the data (Denzin & Lincoln, 2005). Taking an inductive approach to analyzing the data afforded us the opportunity to explore and interpret potential shifts in participant attitudes toward physical activity, and subsequently, how said shifts might influence or impact

Table 1. Participants Demographics

Pseudonym	Racial/Ethnic Identity	Gender	Age
Mark	Hispanic/Latinx	Male	11
Rick	Black/African American	Male	14
Skylar	Black/African American	Female	13
Mike	Black/African American	Male	13
Danni	Black/African American	Female	15
Dave	Black/African American	Male	13
Tim	Black/African American	Male	13
Terri	Black/African American	Female	13
Minnie	Black/African American	Female	13
Tommy	Hispanic/Latinx	Male	11
Joey	Black/African American	Male	11
Rob	Black/African American	Male	15
Johnny	Hispanic/Latinx	Male	13
Robin	Black/African American	Female	11
Jennifer	Black/African American	Female	13
Brian	Black/African American	Male	12
Tina	Black/African American	Female	14

outcomes associated with behaviors and social-material circumstances (Esmonde & Jette, 2020; Saldaña, 2013; Thomas, 2006). To this end, we conducted an inductive analysis, involving the coding of data and development of themes (Patton, 2015). We audio recorded the responses and discussions in the focus groups and had them transcribed using Rev.com, an online transcription service. It is important to keep in mind that the responses were short, as is common with this age group, and primarily in direct response to the questions (Heary & Hennessy, 2006; Kellett & Ding, 2004). However, the inductive coding of our raw data helped to mitigate any loss or stunting of potential themes (Thomas, 2006).

The principal investigator independently read through the transcripts, making note of key words and phrases, and created a preliminary set of 23 categories (or codes). Following this process, the second researcher read the transcripts and developed a second set of 24 codes. The researchers then convened in person to discuss differences and came to an agreement on similar and/or overlapping codes, merging their results into one combined set of 36 codes (Table 2). These codes were subsequently grouped into categories based on relatedness and similarities, resulting in seven general categories. The seven categories were representative of the participants' *General Affect*, *Management of Physical Activity*, *Levels of Physical Activity*, *Health Outcomes and Metrics*, *Motivation* (*Intrinsic and Extrinsic*), and the *Fitbit Zips*®. From this, three overarching themes were derived: *Attention to Physical Activity*, *Physical Activity Behaviors*, *and Usability and Acceptability of the Fitbit Zip*®. The codes were then applied to the text in another review of focus group transcripts to thoroughly understand and better interpret the intentions of participant responses.

Table 2. Categories, Themes, and Codes identified from Youth Wearing Fitbit Zips®

Themes	Categories	Codes
Attention to Physical Activity	Management of Physical Activity	Assistance
		Confidence
		Goals
		Health Awareness
	Extrinsic Motivation	Food
		Incentives
		Money
		Prizes
	Intrinsic Motivation	Amotivation
		Competition
		Distance
		Inspiration
		Pride
		Steps
Physical Activity Behaviors	Levels of Physical Activity	Activity
		Distance
		Lack of Behavior Change
		Running
		Steps
		Walking
	Health Outcomes and Metrics	Calories
		Exercise
		Fat
		Fit
		Weight
Usability and Acceptability of the Fitbit Zip®	General Affect	Hesitancy
		Indifference
		Negative
		Perception
		Positive
		Program Integration
	The Fitbit Zip®	Aesthetics
		Functionality
		Limited Capabilities
		Lost
		Utility

We achieved trustworthiness of our data, a foundational element of sound qualitative research, through procedures designed to meet criteria of credibility, validity, and objectivity (Lincoln & Guba, 1985; Schwandt et al., 2007). For instance, coding consistency checks were utilized to establish dependability and integrity of the data (Thomas, 2006). This was achieved through the process of independent parallel coding. Accordingly, the two researchers individually coded the raw data, met to review and discuss their findings, and came to an agreement on the content of their codebooks, allowing for competing themes and explanations to be categorized (Patton, 1999; Thomas, 2006).

Positionality Statement

The principal investigator of this study has a professional working relationship with the administration of this SBYD program, and as such, was mindful of his interactions with and observations of participants during the 23 weeks.

Moreover, both authors were working from an interpretivist epistemology in which knowledge results from the subjectively constructed interplay of one's perception and reality. As two self-identifying White male researchers collecting, analyzing, and interpreting data from marginalized youth of color, we recognize our engagement may have influenced participants' responses and our subsequent analysis. For instance, one participant altered his voice and body language when first participating in a focus group, attempting to use vernacular he does not commonly use during programming. Likewise, perceptions may have limited the examples that were given or narrowed the talking points to only those with which we (as White researchers) might seemingly have a level of familiarity. Taken together, we sought to remain aware of each of our contexts, location, and relational power throughout this process, which was accounted for, in part, through several consistency checks, as described above. Moreover, the graduate assistant who helped facilitate each focus group is a self-identifying African American male whose presence may have eased the comfort level of the participants and the disposition of each conversation, particularly given the proportion of participants who held a shared racial identity. As such, we engaged in self-reflexive practices and discussed how the representation of White male researchers may have influenced our understanding and interpretation of the data. Wanting to provide a detailed examination of the participants' experiences with Fitbit Zips® in their own words, as well as the subsequent interpretation and application of said experiences, we endeavored to present their "voices as knowledge and truth that comes from experience and that deserves a protected space and serious attention" (Cervantes-Soon, 2012, p. 376).

RESULTS

Below is a detailed examination of the data that comprised the 36 codes, grouped into seven categories under three themes.

Theme 1: Attention to Physical Activity

The participants spoke of the effects the Fitbit Zips® had on monitoring their levels of physical activity. Being able to keep track of their movement in real-time and observe their changes over time served as not only a means to manage their physical activity levels, but also a form of motivation, both intrinsic and extrinsic, for the youth.

Management of Physical Activity

Participants spoke of how wearing the Fitbit Zips® helped them to be more aware of their physical activity levels as well as better monitor it during program sessions. This was summed up quite succinctly by Dave who noted, "it helped me very much," in reference to the positive effects of wearing the device. Most notably, the positive manifestation of monitoring their physical activity was described in terms of steps. Dave continued, "it helped me keep track of how many steps I took." Regarding his steps, Joey said, "I don't know how much I'm doing, but the Fitbit® helps me." Mark added, "I been paying attention" to his number of steps. Another manifestation of wearing the Fitbit Zips® that aided their ability to manage and monitor their physical activity was increased health awareness. In reference to this awareness, Tommy pointed out that the Fitbit Zips® did "tell us how healthy we are." Although one's definition of healthy can vary, the participants in this study equated it to the number of steps they took, miles walked or distance traveled, as well as calories burned, and weight lost—neither of which were measurable metrics on the devices. Being able to quantify health (e.g., number of steps), the participants discussed how the device prompted them to set goals. Tommy liked that he could "set a goal in the Fitbit®" and added that "when we have a Fitbit®, it makes us want to reach a goal." After determining a baseline of 8,000 steps per day, Mark's daily goal was "to get more."

Motivation (Intrinsic and Extrinsic)

Many participants were intrinsically motivated to get in as many steps as they could while wearing the digital activity tracker. Oftentimes this motivation was the result of competition, both with one's personal goals (intrinsic) as well as with friends and other program participants (extrinsic).

Intrinsic motivation was revealed to be towards specific goals regarding the number of steps one could obtain in each session as well as a general sense of accomplishment and pride with their overall level of physical activity. For instance, Mark was very proud of being the self-proclaimed "first person to 8,000 steps in one day." Likewise, Tommy was very proud of surpassing 8,000 steps, recalling how he exclaimed to his mom, "I got 8,732 steps!" Some participants did not have a specific goal in mind regarding a daily number of steps or distance traveled, yet were still active and cognizant of their steps. Rick said it was "exciting to see how many steps I was taking" and "how many miles I walk[ed]," whereas Joey shared that every time he wore it and "clicked it, I looked forward to something," which "helps me stay more in shape." However, several participants expressed not liking or not wanting to know how many steps they took, calories they burned, or time they were physically active in a session. For

instance, Tina was disappointed when she realized one day that she "didn't even have 1,000 [steps]." Such feelings of frustration or dissatisfaction were minimal and appeared to have limited effect on participant behavioral changes, as most participants proudly shared the specific ways in which their levels of physical activity had positively changed.

Extrinsic motivation was also a factor that increased physical activity, particularly amongst friends and program peers. Tina was not shy about the digital trackers making her "more competitive. Me and my friends, we like to see who can get the most steps when we wear it. We try to beat each other". Danni was a little more reserved in expressing a similar sentiment about how at the end of the day she and her friends "would just have a conversation about who had more." Several participants did not see the value of the devices, noting that "you're just walking" (Joey). Subsequently, these same participants suggested the program offer incentives (extrinsic motivation) if they were to continue wearing the devices after the conclusion of the study or wanted to integrate the devices into everyday programming. Some of the participants were vague with their comments regarding a "reward" or "prizes," while several participants had specific enticements in mind, such as "money," an "apple," or "candy." Tommy was more innovative by suggesting incentives match the level of accomplishment: "the more steps you got, the bigger prize it is."

Theme 2: Physical Activity Behaviors

Most participants responded favorably to wearing the Fitbit Zips®. Recognizing they were increasing their movement and being more active, the youth participants spoke to how their increased activity levels were benefitting them from a health and fitness perspective.

Levels of Physical Activity

Mark noted, "when I had a Fitbit® on, I just get more and more active". This positive influence was confirmed by Skylar who simply stated, "I'm more active." Terri was more pointed in her response, noting that she didn't "count my steps, not without my Fitbit® on." While there were more testimonies that supported levels of increased physical activity, there were several participants who did not describe experiencing any behavioral change towards physical activity. Terri revealed that she was "still the same," while Joey added that "I still play the same." Interestingly, Joey seemed to differentiate between different types of physical activity. Although he still played the same, he also admitted to "working out more."

Differentiation between types and quantity of physical activity was consistent among the participants, as some emphasized how they moved (i.e., running, walking, particular sports) opposed to how far they moved (i.e., steps, distance traveled). When focusing on steps, participants referenced "you take a lot of steps" (Minnie) and "it makes you want to take more steps" (Terri). Several statements were made regarding the distance they traveled. Rick said it was "exciting to see how many miles I am walking" and Danni "kept track of how many miles I walked." Mark was surprised with his activity level, adding that when he saw how many steps he took and how far he traveled, "I said, 'Oh I don't know I walked this much.'" Terri was very cognizant of her steps, pointing out that when she is "going to walk, [she] puts it on" to accumulate more steps. Given the SBYD program is primarily focused on tennis, it was not surprising that participants referenced how sport participation increased their steps: "We used to play tennis. I used to look at my steps and be like, 'Hey, I got a lot of steps'" (Terri). Additionally, Joey referenced a particular sport and how it might have contributed to his number of steps, "I got 17,000 steps. I was playing basketball."

Conversely, several participants revealed some potential drawbacks to the impact of the Fitbits® on physical activity. Dave admitted that he was "inspired to run more," but also suggested that the increased levels of activity were temporary and contingent upon wearing the device: "When I wear it I run a lot, but when I don't wear it, I don't run at all." Tommy made a similar comment, stating "it makes us want to run more because when we're not, when we don't have a Fitbit® we're like, 'Oh, I don't want to run.'" Tommy further revealed that wearing the Fitbit® had a negative psychological outcome, pointing out that he feels "really lazy" when his activity level is dormant or not up to his expectations.

Health Outcomes/Metrics

As a result of the positive impact on their physical activity behaviors, several participants spoke about losing weight. Skylar shared that "it did help me lose some weight." Minnie, Joey, Johnny, and Danni all spoke to the positive influence on them "burning calories," while Tina also mentioned that wearing the Fitbit Zips® helped "burn fat and all that good stuff." Participants also recognized additional health benefits in the form of fitness and exercise. Terri said the Fitbit Zip® "makes me more fit", while Joey added that because of the digital tracker, he's "been trying to get more fit," as it "helps [him] stay in shape." Danni went so far as to equate her wearing of the Fitbit® to "exercise" itself.

Theme 3: Usability and Acceptability of the Fitbit®

Attitudes toward the usability and acceptability of the devices were mixed. At times, the participants seemingly had difficulty parceling their experience with the Fitbit Zips® from the program activities, but overall, we were able to discern the generally upbeat attitudes of the youth wearing the movement and activity trackers.

General Affect

Positive comments were typically vague, with Dave saying it "worked good for me"; Mark adding "I think it's good"; and Danni simply stating "it's just fun." While there were some negative feelings, demonstrated by Terri stating "I just don't care," most of the negative affect was specifically directed towards the device and what it did not do. For instance, Joey was not impressed with the device, opining that "it just counts how many steps you walk." Johnny likewise minimized the Fitbit Zips® many tracking options saying "I don't need a Fitbit® to count my steps." Rick seemed indifferent towards the device, shrugging and simply responding "so, so" when asked about the impact of the digital trackers, whereas Robin bluntly stated "I don't want people to know I'm wearing a Fitbit®." When probed further, she added "it doesn't look good." This and similar comments led to discussions about the actual, tangible device.

The Fitbit Zip®

Discussions regarding the aesthetics of the Fitbit Zips® addressed the looks, fit, and feel of the device, whereas usability focused on their utility, functionality, and capabilities. While some of the participants "liked how it looked," the majority seemed to favor the Fitbits® that are worn as a watch given that they "looked better." There were also several comments regarding the Fitbit Zips® being plain black and lacking in color. The device's screen was also deemed "too small," making it difficult to read and track your activity. The youth also lamented that due to its size, it "popped [or] fell off" too easily and moved around too much. Further proof of this sentiment was the fact we lost two of the wearable devices during the study. However, the primary issue with the Fitbit Zips® worn in this study seemed to be their functionality. Despite having worn it intermittently over 23 weeks and selecting Fitbit Zips® due to their ease of use, several participants still did "not know how to work it." However, this could also be the result of the limited training received by the participants.

DISCUSSION

In this exploratory study, we sought to learn about the experiences of wearing digital activity trackers (i.e., Fitbit Zips®) and potential utility of these trackers in increasing physical activity levels among racially and economically marginalized youth. Overall, participants in our study voiced primarily positive experiences wearing digital activity trackers. More specifically, wearing the Fitbit Zips® while at the SBYD program served as a valuable resource for participants to measure and monitor their physical activity. This capability resulted in increased levels of physical activity, as many of the participants developed and pursued personal goals or competed against peers to have the most steps. Focusing on such activity metrics led to youth being more cognizant of the means (e.g., running, walking, tennis) by which they were being more active, as well as the ensuing health benefits. The participants spoke of calories burned, weight lost, exercising more, getting in shape, and staying fit regarding the positive health gains accumulating from their continued digital tracking efforts. Although the utility of the Fitbit Zips® facilitated the youths' motivation to be more physically active, the aesthetics of the devices were not as inspiring. Below, we discuss the implications of these findings in practice and research.

Accurately accounting for and measuring the amount and type of physical activity and movement behaviors is critical to health and development research (Hurvitz et al., 2014). This data is particularly useful for health- and sport-related interventions aimed at youth, given the proficiency of physical activity to provide a foundation for healthy life outcomes (Appelqvist-Schmidlechner et al., 2018; Bopp et al., 2019). The results of our study suggest Fitbit Zips® to be a useful tool toward this end. More specifically, the youth in our study were most interested in counting their steps. Simply put, the Fitbit Zip® served as a reminder to participants that they might not be attaining desired or recommended physical activity levels and encouraged them to move and walk around to advance toward achieving said levels. Though pursuit of daily steps may have been the catalyst for movement, tracking their activity levels made the youth more cognizant of the types of activities that were more effective at increasing their step count, as well as the subsequent health benefits. These results not only support previous work among adolescents (e.g., Ridgers et al., 2018), but simultaneously extend the literature base by contextualizing youth movement tracking within a SBYD program serving racially and economically marginalized youth.

Few studies have explored how digital tracking devices

such as Fitbits® might be perceived and utilized in marginalized communities (Schaefer et al., 2016), yet this knowledge is critical for enhancing movement among marginalized youth, as their opportunities for and levels of physical activity are lower than their racial and economic counterparts. The influence of the SBYD program resources (i.e., Fitbit Zips®) seemed to be impactful as the self-reported physical activity levels of youth increased when wearing the device, however, participants noted the increases to be largely contingent upon wearing the devices. That is, when not at the SBYD program and wearing a digital tracker, they were not being as physically active nor considering their levels of movement. From this finding, we question whether the Fitbit Zips® are hindering participant activity levels and opportunities for more meaningful engagement with physical activity. That is, are youth in this program benefiting from the educational and health awareness opportunities provided when given access to the Fitbit Zips®? Are they truly comprehending the importance of a physically active lifestyle or are the devices simply a means to accumulating more steps (Kerner & Goodyear, 2017)?

We do not believe the youth in this study fully grasped and embraced the underlying value of being physically active, and as such, positive behavioral changes might only be temporary and not indicative of a more positive, healthy life course trajectory. Such is a critical finding that may hint at the underlying social and systemic barriers resulting in physical activity disparities among racially and economically marginalized youth (Adlakha et al., 2014; Esmonde & Jette, 2020). For instance, economically marginalized youth might not have the proper resources, support, or encouragement to be active other than their time in the program. Health awareness may not be enough to foster increased engagement with physical activity among racially and economically marginalized youth.

The association of the Fitbit Zip® as exercise is one of many emotional and perceptual responses participants had and serves as a strong advocate for such wearable technologies to be integrated into SBYD programming, given the benefits and impacts of physical activity on health and development outcomes. However, programs that want to incorporate the use of such innovative technology toward positive youth development and enhanced physical activity must be more intentional and strategic (Jones et al., 2017). The simple presence and/or use of wearable technology in a SBYD program is not sufficient for foundational knowledge on the health and development benefits of physical activity.

This SBYD program utilized the Fitbit Zips® as not only a motivational tool to enhance awareness and encourage more physical activity, but as an opportunity to teach the youth the types of activities that result in greater physical exertion or steps. For instance, the SBYD program took many field trips on campus to learn more about higher education opportunities and stress the value of education. What they had not considered on these walking tours was the number of steps they were taking. We found that participants were more active (i.e., taking more steps) on such trips than they may have been when playing a sport or participating in a game that does not involve consistent movement or engagement. This discovery encouraged the SBYD program to incorporate more elements of movement and walking into their curriculum, and to not just assume youth were garnering such benefits from participating in sports. From our results, we offer the following implications and recommendations to be considered by SBYD programs looking to strategically integrate digital activity trackers into their programming.

Implications and Recommendations

When provided the opportunity to wear Fitbits® or other digital activity trackers, youth should be instructed on their potential effectiveness and trained on how to properly use them to monitor activity and maximize positive outcomes. SBYD programs should educate and guide youth on how to transfer and utilize the skills and knowledge gleaned from wearing the devices during programming to their everyday lives. It is critical that youth learn to become accountable for their wellbeing and understand how being physically active can improve health outcomes, particularly youth of marginalized communities (Bopp et al., 2019; Centers for Disease Control and Prevention, 2018a). The need for such instruction was clear in participants' responses, which seemed to indicate that the Fitbit Zip® was accountable for the hard work and effort they spent towards the physical activity metrics in this study. This finding suggested a possible disconnect between their own efforts and the potentially resultant physical, health, and psychological benefits that awareness alone cannot amend. Similarly, sentiments of indifference and negative internalization, as well as adverse association with one's own engagement with physical activity (and with the Fitbit Zip®) was witnessed among several of the youth participants. Therefore, it is critical that SBYD programming provide safe and welcoming spaces and opportunities for youth to explore and benefit from physical activity (Watson et al., 2016).

When creating such spaces, socio-contextual factors that can shape the physical activity behaviors of Black/African American and Hispanic/Latinx adolescents from low-income communities must be considered (Hasson, 2018).

One such factor is ethnic identity, whereby engaging with and changing health-related behaviors, such as those relating to physical activity, "may go against culturally constructed local community norms and increase psychological stress and isolation" such that "[physical activity] may be rejected, considered irrelevant, or viewed as outside of one's control" (p. 167). Thus, culturally responsive programming is necessary to understand ways in which youth are exhibiting negative associations with indifference towards physical activity and inform SBYD programs and similar interventions wanting to encourage and increase opportunities toward a physically active lifestyle.

As it relates to the outcomes of this study, we argue that one approach to ensure the movement towards culturally responsive programming is for SBYD programs considering the use of wearable technologies to actively include participant voices in the development of programmatic strategies. It was clear from our participants that their use of such devices is (and would be) contingent on personal goals, favorable (physical) activities, and incentives. For instance, though not a central factor in this study, we gleaned from participants that the inclusion of a culturally relevant rewards system, based on both individual and group-level accomplishments and growth, might aid in their utilization of and benefit from such devices. By upholding cultural competency as the "rubric" throughout the process of planning and implementing strategic interventions, programs can provide an inclusive environment in which all participants and staff feel recognized, engaged, and teach/learn through a variety of diverse approaches (Hansen, 2014). As a part of the process, we expect these suggestions to help minimize the external pressure youth might feel from predetermined (and possibly unrelatable) goals, as well as the internal guilt they might feel from not being able to keep up with their peers (Kerner & Goodyear, 2017).

Our suggestion is in alignment with more recent trends in the space of physical education (PE), particularly those programs that have adopted physical education teacher education programs. In recent years, physical education teacher education programs have been adopted by schools to educate instructors of both PE and physical activity-based out-of-school time programs on how to be more inclusive and effectively respond to the educational needs of students from culturally, ethnically, and racially diverse backgrounds (Cervantes & Clark, 2020). For instance, Hoyer and Henriksen (2018) developed a course for PE teachers aimed at improving their cultural competency, noting as their primary intention for instructors to be more inclusive when teaching PE in multicultural settings. With soccer serving as the sport context, instructors enhanced their knowledge of different soccer cultures, become more culturally aware to the similarities and differences between these cultures and that of their students, and incorporated this into their coaching sessions. As noted, the foundation of these programs was cultural competency, which when applied to the realm of PE, can allow educators to move toward the ability to "successfully teach students who come from cultures other than one's own" (Hansen, 2014, p. 13), as well as better "identify cross-cultural [experiences], and to counteract the marginalization of [individuals] by race, ethnicity, social class, religion, sexual orientation, or other markers of difference" (Metzl & Hansen, 2014, p. 126).

Although the goal of this study was not to conduct market research on Fitbit Zips®, it is necessary to be cognizant of the perceived aesthetics, usability, and acceptability of the trackers so that programs interested in implementing wearable technology can get "cooler" devices. Though limited in their presence in the focus group discussions, comments regarding Fitbit Zips® as an added stressor cannot be ignored, particularly at the youth level where having them wear something they "don't want" or find "boring" can be a deterrent to being active. Such seemed to have manifested during this study given the participants' ridicule of the style and color of the digital activity trackers, and the relative "coolness" of these compared to other wearable technologies. Although the digital trackers did serve their purpose, it was clear that the students would have preferred more options regarding style, color, and how the devices were attached to their person.

Limitations

Despite efforts to share the findings as genuinely indicative of the lived experiences of youth participants wearing Fitbit Zips® during a SBYD program, the study is not without limitations. First, there was variation in the number of days the Fitbit Zips® were worn among the participants. Due to extracurricular activities, personal obligations, program scheduling, and other reasons, not all participants were available to wear a Fitbit Zip® on each day. Collecting qualitative data can also be challenging, particularly when conducting focus groups with youth participants. Drawbacks of this data collection approach include situational pressure, such as feeling compelled to offer statements reflective of group norms (Lewis, 1992) and feeling the need to produce "correct" responses (Kellett & Ding, 2004). It was apparent from our discussions that it was also difficult for participants to parcel out physical activity resulting from the wearing of the Fitbit Zips® versus the increased physical activity that resulted from other program interventions.

CONCLUSION

There exists a void in knowledge regarding the use of wearable technologies and activity trackers among marginalized youth that facilitates digital inequities and fails to provide answers for adequately supporting the technological practices of diverse communities (Tichavakunda & Tierney, 2018). Thus, the purpose of this study was to explore the potential utility of digital activity trackers, and the subsequent experiences of wearing such devices, toward increased engagement with physical activity among racially and economically marginalized youth. By providing participants autonomy in discussing their experiences, we were able to glean valuable insight and add to the current literature on the applicability, influence, and usability of wearable activity trackers (i.e., Fitbit Zips®) among this subpopulation of youth. The youth provided details about their predominantly positive experiences with and attitudes toward the wearable technologies regarding the monitoring and management of their physical activity levels and behaviors, as well as the device itself. While there were some sentiments of indifference, most participants acknowledged that their levels of physical activity increased, as did their awareness of the resultant health benefits.

Given the existing physical activity disparities for racially and economically marginalized youth, results from this study support the integration of digital movement and activity trackers in SBYD programs, with consideration given to the choice of wearable technology as well as culturally appropriate expectations and applications of their use. Developing a better understanding of how digital technologies can aid in the increased engagement with sport and physical activity among racially and economically marginalized youth, researchers and practitioners can inform and develop an evidence-based foundation on which to design appropriate studies, as well as program offerings and curricula. Practical implications from our study can contribute to the development and enhancement of SBYD programmatic offerings toward healthy engagement with movement and increased physical activity. Future research should further contextualize the many sociocultural and economic factors that influence the interrelationship between physical activity, technology, and youth.

CONFLICT OF INTERESTS

The principal investigator of this study has a service agreement with the SBYD program in this study and remained mindful of this throughout the study, including in his interactions with and observations of participants, as well as with program staff. In addition to locating his position, he followed the proper channels to gain university IRB approval to help mitigate any potential conflict of interest.

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REFERENCES

Adlakha, D., Budd, E. L., Gernes, R., Sequeira, S., & Hipp, J. A. (2014). Use of emerging technologies to assess differences in outdoor physical activity in St. Louis, Missouri. *Frontiers in Public Health, 2,* Article 41. https://doi.org/10.3389/fpubh.2014.00041

Altamimi, R. I., Skinner, G. D., & Nesbitt, K. V. (2015). A position paper on managing youth screen time versus physical activity. *GSTF Journal on Computing, 4*(2), 10-16.

Appelqvist-Schmidlechner, K., Vaara, J., Häkkinen, A., Vasankari, T., Mäkinen, J., Mäntysaari, M., & Kyröläinen, H. (2018). Relationships between youth sports participation and mental health in young adulthood among Finnish males. *American Journal of Health Promotion, 32*(7), 1502-1509. https://doi.org/10.1177/0890117117746336

Aspen Institute. (2015a). *Physical literacy in the United States: A model, strategic plan, and call to action.* http://aspenprojectplay.org/sites/default/files/PhysicalLiteracy_AspenInstitute.pdf.

Aspen Institute. (2015b). *Sport for All, Play for Life: A Playbook to Get Every Kid in the Game.* https://assets.aspeninstitute.org/content/uploads/2015/01/Aspen-Institute-Project-Play-Report.pdf.

Bagot, K. S., Matthews, S. A., Mason, M., Squeglia, L. M., Fowler, J., Gray, K., Herting, M., May, A., Colrain, I., Godino, J., Tapert, S., Brown, S., & Patrick, K. (2018). Current, future and potential use of mobile and wearable technologies and social media data in the ABCD study to increase understanding of contributors to child health. *Developmental Cognitive Neuroscience, 32*, 121-129. https://doi.org/10.1016/j.dcn.2018.03.008

Bice, M. R., Ball, J. W., & McClaran, S. (2016). Technology and physical activity motivation. *International Journal of Sport and Exercise Psychology, 14*(4), 295-304. https://doi.org/10.1080/1612197X.2015.1025811

Bopp, T., Stellefson, M., Weatherall, B., & Spratt, S. (2019). Promoting physical literacy for disadvantaged youth living with chronic disease. *American Journal of Health Education, 50*(3), 153-158. https://doi.org/10.1080/19325037.2019.1590263

Braveman, P., & Gottlieb, L. (2014). The social determinants of health: It's time to consider the causes of the causes. *Public Health Reports, 129*(2), 19-31. https://doi.org/10.1177/00333549141291S206

Centers for Disease Control and Prevention. (2010). *The association between school-based physical activity, including physical education, and academic performance.* Atlanta, GA: US Department of Health and Human Services. https://www.cdc.gov/healthyyouth/health_and_academics/pdf/pa-pe_paper.pdf

Centers for Disease Control and Prevention. (2011). School health guidelines to promote healthy eating and physical activity. US Department of Health and Human Services. https://www.cdc.gov/healthyschools/npao/pdf/MMWR-School-Health-Guidelines.pdf

Centers for Disease Control and Prevention. (2014). *Health and Academic Achievement.* US Department of Health and Human Services. https://www.cdc.gov/healthyyouth/health_and_academics/pdf/health-academic-achievement.pdf

Centers for Disease Control and Prevention. (2018a). *Physical activity guidelines for Americans (2nd ed.).* US Department of Health and Human Services. https://health.gov/paguidelines/second-edition/pdf/Physical_Activity_Guidelines_2nd_edition.pdf

Centers for Disease Control and Prevention. (2018b). *Youth Risk Behavior Surveillance — United States, 2017*. US Department of Health and Human Services. https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2017/ss6708.pdf

Cervantes-Soon, C. G. (2012). Testimonios of life and learning in the borderlands: Subaltern Juarez girls speak. *Equity & Excellence in Education, 45*(3), 373-391. https://doi.org/10.1080/10665684.2012.698182

Cervantes, C. M., & Clark, L. (2020). Cultural humility in physical education teacher education: A missing piece in developing a new generation of socially just physical education teachers. *Quest*, *72*(1), 57-71. https://doi.org/10.1080/00336297.2019.1608267

Coakley, J. (2011). Youth sports: What counts as "positive development?". *Journal of Sport and Social Issues, 35*(3), 306-324. https://doi.org/10.1177/0193723511417311

Denzin, N. K., & Lincoln, Y. S. (2005). *Introduction: The discipline and practice of qualitative research.* In N. K. Denzin & Y. S. Lincoln (Eds), The Sage Handbook of Qualitative Research (3rd ed., pp. 1-32). Sage.

Esmonde, K., & Jette, S. (2020). Assembling the 'Fitbit subject': A Foucauldian-sociomaterialist examination of social class, gender and self-surveillance on Fitbit community message boards. *Health, 24*(3), 299-314. https://doi.org/10.1177/1363459318800166

Ferguson, T., Rowlands, A., Olds, T., & Maher, C. (2015). The validity of consumer-level, activity monitors in healthy adults worn in free-living conditions: A cross-sectional study. *International Journal of Behavioral Nutrition and Physical Activity, 12*, Article 42. https://doi.org/10.1186/s12966-015-0201-9

Fitbit, Inc. (2020). *Home page.* Retrieved from https://www.fitbit.com/us/home.

Gibson, F. (2007). Conducting focus groups with children and young people: Strategies for success. *Journal of Research in Nursing, 12*(5), 473-483. https://doi.org/10.1177/1744987107079791

Goodyear, V. A., Armour, K. M., & Wood, H. (2019). Young people learning about health: The role of apps and wearable devices. *Learning, Media and Technology, 44*(2), 193-210. https://doi.org/10.1080/17439884.2019.1539011

Graham, D. J., & Hipp, J. A. (2014). Emerging technologies to promote and evaluate physical activity: Cutting-edge research and future directions. *Frontiers in Public Health, 2*, Article 66. https://doi.org/10.3389/fpubh.2014.00066

Gusmer, R., Bosch, T., Watkins, A., Ostrem, J., & Dengel, D. (2014). Comparison of Fitbit ultra to ActiGraph™ GT1M for assessment of physical activity in young adults during treadmill walking. *The Open Sports Medicine Journal, 8*(1), 11-15. https://doi.org/10.2174/1874387001408010011

Haegele, J. A., Brian, A. S., & Wolf, D. (2017). Accuracy of the Fitbit Zip for measuring steps for adolescents with visual impairments. *Adapted Physical Activity Quarterly, 34*(2), 195-200. https://doi.org/10.1123/apaq.2016-0055

Hansen, K. (2014). The importance of ethnic cultural competency in physical education. *Strategies: A Journal for Physical and Sport Educators*, *27*(3), 12-16. https://doi.org/10.1080/08924562.2014.900462

Hasson, R. E. (2018). Addressing disparities in physical activity participation among African American and Latino youth. *Kinesiology Review*, *7*(2), 163-172. https://doi.org/10.1123/kr.2018-0015

Haugen, T., Säfvenbom, R., & Ommundsen, Y. (2011). Physical activity and global self-worth: The role of physical self-esteem indices and gender. *Mental Health and Physical Activity, 4*(2), 49-56. https://doi.org/10.1016/j.mhpa.2011.07.001

Heary, C., & Hennessy, E. (2006). Focus groups versus individual interviews with children: A comparison of data. *The Irish Journal of Psychology*, *27*(1-2), 58-68. https://doi.org/10.1080/03033910.2006.10446228

Hesse-Biber, S. N., & Leavy, P. (2011). *The practice of qualitative research (2nd ed.)*. Sage.

Hoyer, S. S., & Henriksen, K. (2018). Soccer across cultures: An innovative course to develop physical education teachers' cultural competence. *Journal of Physical Education, Recreation & Dance*, *89*(9), 39-50. https://doi.org/10.1080/07303084.2018.1512912

Hurvitz, P. M., Moudon, A. V., Kang, B., Saelens, B. E., & Duncan, G. E. (2014). Emerging technologies for assessing physical activity behaviors in space and time. *Frontiers in Public Health, 2*, Article 2. https://doi.org/10.3389/fpubh.2014.00002

Jones, G. J., Edwards, M. B., Bocarro, J. N., Bunds, K. S., & Smith, J. W. (2017). An integrative review of sport-based youth development literature. *Sport in Society, 20*(1), 161-179. https://doi.org/10.1080/17430437.2015.1124569

Kellett, M., & Ding, S. (2004). *Middle childhood*. In S. Fraser, V. Lewis, S. Ding, M. Kellett, & C. Robinson (Eds.), Doing research with children and young people. Sage.

Kennedy, C., Kools, S., & Krueger, R. (2001). Methodological considerations in children's focus groups. *Nursing Research, 50*(3), 184-187. https://doi.org/10.1097/00006199-200105000-00010

Kerner, C., & Goodyear, V. A. (2017). The motivational impact of wearable health lifestyle technologies: A self-determination perspective of Fitbits with adolescents. *American Journal of Health Education, 48*(5), 287-297. https://doi.org/10.1080/19325037.2017.1343161

Kitzinger, J. (1994). The methodology of focus groups: The importance of interaction between research participants. *Sociology of Health & Illness, 16*(1), 103-121. https://doi.org/10.1111/1467-9566.ep11347023

Klinker, C. D. C., Schipperijn, J. J., Kerr, J. J., Ersbøll, A. K. A., & Troelsen, J. J. (2014). Context-specific outdoor time and physical activity among school-children across gender and age: Using accelerometers and GPS to advance methods. *Frontiers in Public Health, 2*, Article 20. https://doi.org/10.3389/fpubh.2014.00020

Lewis, A. (1992). Group child interviews as a research tool. *British Educational Research Journal, 18*(4), 413-421.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Metzl, J. M., & Hansen, H. (2014). Structural competency: Theorizing a new medical engagement with stigma and inequality. *Social Science & Medicine, 103*, 126-133. https://doi.org/10.1016/j.socscimed.2013.06.032

Moore, L. V., Diez Roux, A. V., Evenson, K. R., McGinn, A. P., & Brines, S. J. (2008). Availability of recreational resources in minority and low socioeconomic status areas. *American Journal of Preventive Medicine, 34*(1), 16-22. https://doi.org/10.1016/j.amepre.2007.09.021

Mooses, K., Oja, M., Reisberg, S., Vilo, J., & Kull, M. (2018). Validating Fitbit Zip for monitoring physical activity of children in school: A cross-sectional study. *BMC Public Health, 18*, Article 858. https://doi.org/10.1186/s12889-018-5752-7

Neill, S. J. (2005). Research with children: A critical review of the guidelines. *Journal of Child Health Care, 9*(1), 46-58. https://doi.org/10.1177/1367493505049646

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research, 34*(5), 1189-1208.

Patton, M. Q. (2015). *Qualitative research and evaluation methods: Integrating theory and practice* (4th ed). Sage.

Petitpas, A., VanRaalte, J., & France, T. (2017). Facilitating positive youth development by fostering collaboration among community-based sport and physical activity programs. *The Sport Psychologist, 31*(3), 308-314. https://doi.org/10.1123/tsp.2016-0031

Perkins, D. F., & Noam, G. G. (2007). Characteristics of sports-based youth development programs. *New Directions for Student Leadership, 2007*(115), 75-84. https://doi.org/10.1002/yd.224

Pope, L., Garnett, B., & Dibble, M. (2018). Lessons learned through the implementation of an eHealth physical activity gaming intervention with high school youth. *Games for Health Journal, 7*(2), 136-142. https://doi.org/10.1089/g4h.2017.0164

Ridgers, N. D., McNarry, M. A., & Mackintosh, K. A. (2016). Feasibility and effectiveness of using wearable activity trackers in youth: A systematic review. *JMIR Mhealth and Uhealth, 4*(4), e129. http://dx.doi.org/10.2196/mhealth.6540

Ridgers, N. D., Timperio, A., Brown, H., Ball, K., Macfarlane, S., Lai, S. K., Richards, K., Mackintosh, K. A., McNarry, M. A., Foster, M., & Salmon, J. (2018). Wearable activity tracker use among Australian adolescents: Usability and acceptability study. *JMIR Mhealth and Uhealth, 6*(4), e86. https://doi.org/10.2196/mhealth.9199

Saldaña, J. (2013). *The coding manual for qualitative researchers* (2nd ed.). Sage.

Schaefer, S. E., Ching, C. C., Breen, H., & German, J. B. (2016). Wearing, thinking, and moving: Testing the feasibility of fitness tracking with urban youth. *American Journal of Health Education, 47*(1), 8-16. https://doi.org/10.1080/19325037.2015.1111174

Schneider, M., & Chau, L. (2016). Validation of the Fitbit Zip for monitoring physical activity among free-living adolescents. *BMC Research Notes, 9*, Article 448. https://doi.org/10.1186/s13104-016-2253-6

Schwandt, T. A., Lincoln, Y. S., & Guba, E. G. (2007). Judging interpretations: But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions for Evaluation, 2007*(114), 11-25. https://doi.org/10.1002/ev.223

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation, 27*(2), 237-246. https://doi.org/10.1177/1098214005283748

Tichavakunda, A. A., & Tierney, W. G. (2018). The "wrong" side of the divide: Highlighting race for equity's sake. *The Journal of Negro Education, 87*(2), 110-124.

Trent, M., Dooley, D. G., & Dougé, J. (2019). The impact of racism on child and adolescent health. *Pediatrics, 144*(2), 1-14. https://doi.org/10.1542/peds.2019-1765

Walther, A., Dunker, T., Franzen-Castle, L., & Krehbiel, M. (2018). Increasing at-risk youth self-reported and objectively measured physical activity in an afterschool program. *Strategies: A Journal for Physical and Sport Educators, 110*(1), 59-63. https://doi.org/10.14307/JFCS110.1.59

Watson, K. B., Harris, C. D., Carlson, S. A., Dorn, J. M., & Fulton, J. E. (2016). Disparities in adolescents' residence in neighborhoods supportive of physical activity—United States, 2011–2012. *Morbidity and Mortality Weekly Report, 65*(23), 598-601.

Original Research

The influence of peers on life skill development and transfer in a sport-based positive youth development program

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ABSTRACT

Sport-based positive youth development (PYD) programs are recognized as important contexts for promoting life skill development and transfer, especially among socially vulnerable youth. Past research has examined the role of social agents (e.g., coaches, staff, parents) in life skill development and transfer. Although peers are identified as a critical social agent in sport-based PYD contexts, little English-speaking literature has examined the influence of peers on youth's life skill outcomes. This study examines multiple peer influences contributing to life skill outcomes among 483 youth involved in a sport-based PYD program. Cohen's d demonstrated improved self-control, effort, teamwork, social competence, and transfer of learning outcomes from pre- to post-program. Using a series of hierarchical linear regression models, results demonstrate the degree of life skills among peers in one's group, the youth's relative life skills within their group, and the number of friends in one's group predicted life skills scores at posttest after controlling for pretest scores and demographics. These findings point to the importance of peers as significant social influences contributing to youth's life skill outcomes in a sport-based PYD program. Sport practitioners can intentionally promote youth development through facilitated group processing, optimal peer group composition, and autonomy supportive staff practices.

THE INFLUENCE OF PEERS ON LIFE SKILL DEVELOPMENT AND TRANSFER IN A SPORT-BASED POSITIVE YOUTH DEVELOPMENT PROGRAM

Life skills are intra- and interpersonal assets that enable youth to successfully adjust to the challenges and stressors of life (Camiré et al., 2012; Danish et al., 2005). One context utilized to promote life skill development and transfer is sport-based positive youth development (PYD) programs. PYD is a strength-based conceptualization of development, in which youth are viewed as having assets to be developed rather than problems to be solved (Lerner et al., 2005). Youth sport programs designed to intentionally teach youth life skills and promote life skill transfer to non-sport settings are categorized under the term sport-based PYD (Fraser-Thomas et al., 2005; Gould & Carson, 2008). Sport-based PYD programs utilize implicit and explicit strategies to achieve life skill development and transfer. Moreover, Holt et al. (2017) proposed implicit processes from a PYD climate (e.g., relationships between youth and peers, parents, other adults) can produce PYD outcomes, as well as explicit processes in the presence of a PYD climate (e.g., life skill building and transfer activities). Programs optimize PYD outcomes as they move up the continuum of life skill development and transfer from implicit strategies (e.g., structuring the sport context, facilitating a positive climate) to explicit strategies (e.g., practice of life skills and transfer; Bean et al., 2018).

Keywords: youth sport; positive youth; development; life skills; peers; friends

Sport-based PYD programs utilize varying sport activities (e.g., single versus multiple sports, team versus individual sports) and contextual assets (e.g., coaches, staff, parents, and peers) to target different youth developmental outcomes (e.g., competence, confidence, positive identity) depending on the program's mission (Jones et al., 2017). Many sport-based PYD programs focus primarily on the needs of youth who are socially vulnerable as these youth may benefit the most from programming (Anderson-Butcher, 2019; Super et al., 2017). Moreover, socially vulnerable youth are confronted with complex challenges in their environment, such as poverty, food insecurity, lack of access to educational and sport opportunities, and lack of social support (Lower-Hoppe et al., 2020; Newman, 2020). These particular youth are often underserved, marginalized, and/or oppressed (Newman, 2019). Collectively, these risk factors increase the likelihood a problem—such as school failure, alcohol and drug abuse, and violence—will impede youth's healthy development and future success (Anthony et al., 2009). Through facilitating life skill development, sport-based PYD programs can help socially vulnerable youth deal with the environmental stressors they face to successfully transition into adulthood (Hermens et al., 2017; Newman, 2019).

Meta-analyses, systematic reviews, and other critical syntheses suggest the value of sport-based PYD and similar forms of youth sport for underserved populations (e.g., Hermens et al., 2017; Holt et al., 2017; Whitley et al., 2019). More specifically, research has demonstrated that among socially vulnerable youth, sport participation was related to the development of an array of life skills, including self-regulation and social skills (Hermens et al., 2017), self-esteem and personal/social responsibility (Whitley et al., 2019), communication and leadership skills (Holt et al., 2017), social competence and teamwork (Lower-Hoppe et al., 2020), and overall competence and social relationships with adults and peers (Eime et al., 2013). The positive impact of such programming, however, is not automatic (Whitley et al., 2019).

The literature highlights several seminal heuristic models that help explain how life skill development and transfer can be intentionally facilitated through sport, however, each has recognized limitations. For example, the Coaching Life Skills through Sport model accounts for youth's internal and external assets that influence their sport experience, but then exclusively focuses on the role of the coach in facilitating life skill development and transfer (Gould & Carson, 2008). The Model of PYD through Sport framework recognizes the influence of distal ecological systems (e.g., community, policy, culture) on sport programs and outlines a process of using implicit and explicit processes to produce PYD outcomes, yet does not distinguish developmental and transfer outcomes (Holt et al., 2017). One of the most comprehensive and integrative models in the literature is the Life Skills Transfer Model developed by Pierce and colleagues (2017). The model differs from others in that it accounts for the individual assets of the learner and multiple learning contexts (i.e., school, sport, family, vocational, extracurricular) that facilitate life skill development and transfer.

Life skill development and transfer models have received criticism in the literature that must be addressed. Kochanek and Erickson (2020) argued "PYD through sport may discount non-dominant ways of being and reinforce (White) status quo life skills" leading to cultural appropriation and possibly further inequality (p. 9). A co-creation process is encouraged in which sport-based PYD programs work with youth to achieve PYD outcomes through sport. Moreover, Kochanek and Erickson (2020) called for theory and practice to center around the voices of young people of color. Within sport-based PYD models, life skill development and transfer are predominantly examined through adult-centric perspectives, "with little knowledge of how youth—who are actually involved in the process—conceptualize life skills" (Newman, 2020, p. 643). We centered the current study around the socially vulnerable youth engaged in a sport-based PYD program, intentionally collecting data directly from youth participants—rather than coaches or parents/caregivers—to take an initial step towards addressing these issues.

Across the life skill development and transfer models (Gould & Carson, 2008; Holt et al., 2017; Pierce et al., 2017), youth's internal and external assets are consistently recognized as critical antecedents influencing life skill outcomes. Although social agents are considered integral to life skill development and transfer, sport-based models tend to focus exclusively on the role of the sport coach, without consideration of other important social agents—such as parents and peers. The present study aims to examine multiple peer influences related to life skill development and transfer among youth in a sport-based PYD program. The relevant literature and research context which informed the research methodology will next be reviewed.

Social Influences in Sport-Based Positive Youth Development

Seminal life skill development and transfer models point to the importance of social agents in promoting development and learning (Gould & Carson, 2008; Holt et al., 2017; Pierce et al., 2017). However, these models do not fully explain how key social agents influence this process.

Consequently, the social mechanisms of life skill development and transfer are often examined through social cognitive theory (e.g., Lower-Hoppe et al., 2020; Riley et al., 2017). Bandura's (1986) social cognitive theory highlights the dynamic interaction of person, behavior, and environment. Specifically, through a person's interaction with the social environment (e.g., modeling, group norms), their behavior is influenced. The environment provides opportunities for youth to not only observe the behaviors of significant others, but also apply and model new behaviors learned. The social environment also affords behavioral feedback, reinforcement, and consequences from others, which in turn can influence youth's experiences, motivation, and developmental outcomes (Simons-Morton et al., 2012). Therefore, youth may develop life skills through their interactions with others, especially those with social agents who offer ongoing support and connectedness.

Research in sport and sport-based PYD supports the role of social agents in life skill development, most notably coaches (Camiré et al., 2012; McDonough et al., 2013; Riley et al., 2017), parents (Gould & Carson, 2008; Hodge et al., 2017; Newman et al., 2020), and peers. These social agents can collectively create the PYD climate necessary to promote youth develop outcomes such as improved self-perceptions, interpersonal skills, and motor and health lifestyle skills (Holt et al., 2017). However, the influence of peers (e.g., friends and teammates) on life skill development and transfer in sport-based PYD programs has been examined less extensively in English-speaking literature. Although the researchers of the current study focused on English-speaking scholarly literature due to our language barriers, there are many relevant studies in the French literature on the subject of peer influence that should be considered in future research (e.g., Brodaty, 2010; Deflandre et al., 2004; Wylleman et al., 2004).

The literature suggests friendships form as early as age four, with children observed to have regular, reciprocal, cooperative interactions with peers in group settings (Howes, 1996). During the primary school years, more than 30% of youth's total social interactions involve peers, with youth said to "participate in a separate social world of their peers"—though not independent from family and other institutions (Gifford-Smith & Brownell, 2003, p. 236). Within sport-based PYD contexts, scholars largely point to peer group membership, role modeling, and reinforcement as suggested mechanisms of life skill development (Eccles et al., 2003; Gould & Carson, 2008).

The Influence of Peers on Life Skill Development and Transfer

English-speaking literature on traditional sport emphasizes the role of peers in shaping youth experiences. Moreover, research has found youth sport participants (age 10-18) in adaptive peer relationships who perceive peer acceptance and support experience positive contextual emotional responses toward their sport participation and have enhanced motivation to continue participating (Sheridan et al., 2014; Weiss & Smith, 2002). Similarly, positive friendship qualities—such as supportiveness, loyalty, commonality, and companionship—have been shown to foster ability beliefs, emotions, commitment, enjoyment, and motivation among youth (age 11-14) in traditional sport settings (Reichter & Weiss, 2019). Taken together, scholarship suggests youth are more inclined to actively engage and benefit from new developmental experiences in a psychologically safe environment where youth feel supported and related, with peers a critical social agent influencing the sport environment (Lower-Hoppe et al., 2020).

Only a few studies in the English language explore friendships and peer dynamics in sport-based PYD. McDonough and colleagues (2013, 2018) found positive peer interactions among low-income youth (age 9-16) in sport- and physical activity-based PYD programs contributed to youth feeling included, wanted, and cared for which improved their perceived competence, confidence, assertiveness, and self-esteem. The importance of peer interactions was also reported by Riley and Anderson-Butcher (2012), with parents indicating opportunities to interact with peers from diverse backgrounds contributed to their children's (age 11-13) "…increased ability to deal with/adapt to different people and also an increased ability to relate to others" (p. 1373). Another study found that peer reinforcement, expectations, and modeling of prosocial behaviors fostered life skill development among youth (age 9-14) from socially vulnerable circumstances over the course of a sport-based PYD program (Newman, 2019). Moreover, engaging peers in a sport-based PYD setting provided opportunity for youth to observe their peers model life skills—contributing to their understanding—and meaningfully practice and apply life skills—contributing to their development.

Some research on peers explores how youth differ in relation to position and friendships on a team, and therefore accrue different outcomes via their youth sport experiences. For instance, youth (age 15-16) identified by peers as central to teams have been found to be change agents, as they have significant influence on the behavior of other

team members and can positively impact youth development when acting as role models for their peers (Fujimoto et al., 2018). Further, youth (age 15-16) reported as more central within their team (i.e., more peer connections and relationships) at the beginning of a sport season have been found more likely to demonstrate prosocial behaviors toward their teammates at the end of the season, possibly to maintain peer acceptance (Herbison et al., 2019). Generally speaking, youth with more relationships are afforded greater opportunities to engage in and further develop life skills, as opposed to youth who lack social connections.

The life skills of peers of whom they associate with (i.e., peer group life skills), and youth's relative life skills within a social group may influence life skill development and transfer (Gifford-Smith & Brownell, 2003; Henry & Rickman, 2007). Indeed, research in education suggests this may be the case. For example, in schools with a high proportion of low-achieving peers, youth (age 15-16) tend to regress or under-perform (Lavy et al., 2012). Lavy et al. (2012) identify several potential mechanisms of ability peer effects, including youth are distracted by the low-achievers, youth try to emulate the behaviors of their peers, the teacher is adapting their pedagogical practice to suit the lowest achiever, and/or the teacher has fewer resources to give due to time and energy directed towards the lowest achievers. Additionally, youth (age 12-14) who have high-achieving peers predictably had fewer problem behaviors over time (Véronneau & Dishion, 2010). Véronneau and Dishion (2010) determined having high-achieving peers is more of a compensatory factor than protective factor, as it was found beneficial for all youth, regardless of their risky peer experiences (e.g., antisocial friends). High-achieving peers are often well-adjusted and model coping skills, social competence, and self-control—life skills youth can observe and learn from. In other words, youth with peers who are more socially competent may experience better outcomes as they mimic their peers' social behaviors and receive reinforcement for their positive behaviors in the social setting.

In the end, sport-based PYD programs can help socially vulnerable youth develop and transfer life skills to successfully transition into adulthood (Hermens et al., 2017; Newman, 2019). Several seminal life skill development and transfer models have been created to explain how life skill development and transfer can be intentionally facilitated through sport (e.g., Gould & Carson, 2008; Holt et al., 2017; Pierce et al., 2017), yet the literature has criticized sport-based PYD theory and practice for examining life skills through White, adult-centric perspectives (Kochanek & Erickson, 2020; Newman, 2020). Further, these models do not fully explain the social mechanisms of life skill development and transfer, warranting further research. Social cognitive theory provides a complementary lens to study the influence of peers on youth outcomes, emphasizing how the social environment shapes youth behaviors (Bandura, 1986). However, the limited scope of peer constructs measured within English-speaking scholarly literature often restricts the ability to adequately understand the complex role peers may have in influencing youth development (Smith & McDonough, 2008).

Purpose of the Current Study

To assuage these gaps and criticisms in the literature, the current study investigated peer influences of life skill outcomes among socially vulnerable youth involved in a sport-based PYD program, through the perspectives of the youth participants. Initially, youth perceptions of life skills were explored from pre-to-post programming. To assess the influence of peers on youth's life skill outcomes, multiple peer constructs were examined, including number of friends, peer group life skills, and youth's life skills relative to others within their group (i.e., youth's relative life skills). Specifically, we forwarded three main hypotheses:

H1: Youth's perceived life skills will increase from pretest to posttest in a sport-based PYD program, after controlling for youth's age, gender, and household income.
H2: Youth's perceived life skills at posttest will be significantly influenced by peer group life skills, after controlling for the youth's relative life skills within the peer group at pretest, as well as youth's age, gender, and household income.
H3: Youth's perceived life skills at posttest will be significantly influenced by their reported number of friends after controlling for the youth's relative life skills within the peer group at pretest, as well as youth's age, gender, and household income.

Research Context

A sport-based PYD summer camp for youth who were historically recognized as being socially vulnerable in a large urban city in the United States provided the context for this study. This summer camp was identified in Hermens et al.'s (2017) systematic review of evidence-based sport programs that foster life skill development among socially vulnerable youth and was the focus of several prior investigations (e.g., Anderson-Butcher et al., 2018). The program was created for youth in the local community, many of whom are youth of color from economically disadvantaged neighborhoods. There is no cost for participation, and youth receive two meals and free transportation to and from the program each day. Each year

the program serves approximately 600 youth between the ages of 9 to 15 through its 4-week, 19-day intervention designed to promote life skill development and transfer through sport-based activities and educational programming (Anderson-Butcher et al., 2014). Specific life skills this program targets include self-control, effort, teamwork and social competence (SETS), as well as the transfer of these life skills. Given the research context, these life skill outcomes were the focus of the current study. As a whole, the program curriculum is grounded theoretically in social cognitive theory and emphasizes how beliefs, attitudes, and the environment shape youth behaviors (Bandura, 1986).

Program strategies to promote the development of SETS involved direct instruction from trained adult program staff, pro-social interactions and modeling among peers, and opportunities to learn experientially. More specifically, all activities were led by program staff trained in PYD strategies, with the support of an additional staff member who traveled with the group of youth throughout camp. All program staff were provided curriculum with examples of how to frame instructions, facilitate the use of the SETS, and debrief the learned skills. At the beginning of a curricula session, staff described the specific social skill targeted, provided examples to further illustrate the social skill, and then explained how the social skill would be practiced through the activity. Next, staff facilitated an activity designed to provide youth ample opportunities to interact with and learn from peers in their group. Activities were interdependent in nature, requiring youth to work with their peers to practice the targeted social skill. During this time, youth were able to both observe their peers model the social skill and subsequently practice the skill themselves. At the end of the curricula session, staff engaged youth in debriefing the session, prompting interactive discussion with peers on the skills learned and practiced. Thus, the program integrated both implicit and explicit approaches to life skill development and transfer (Bean et al., 2018; Holt et al., 2017).

Each day for one hour, youth engaged in a play-based life skill development curriculum known as Chalk Talk. During Chalk Talk, youth were directly taught SETS, as well as provided opportunities to actively practice using SETS and reflect on their experiences through journaling. Additionally, youth participated in three different one-hour sport sessions with an assigned group of youth each day. Over the course of the program youth participated in 8 different sports (i.e., basketball, dance, football, lacrosse, soccer, softball, volleyball, and swimming), as well as a healthy lifestyle curriculum. Each sport was comprised of its own unique sport-specific curriculum that was designed to provide youth opportunities to practice using SETS within sport activities. For example, as part of the soccer curriculum, youth learned how to pass the ball to group members, while they simultaneously practiced using the life skill of teamwork (i.e., the ability to work, give feedback, ask for feedback, lead, follow, and communicate in a team context; Lower et al., 2017). The Chalk Talk and sport curriculum consistently followed the format outlined above for curricula sessions.

In addition to the program curriculum, the program structure of persisting peer groups also contributed to the influence of peers on youth's life skill development and transfer. At the beginning of the summer camp, youth were randomly assigned to one of 24 groups stratified by age and gender in order to group youth with peers of similar age and diverse gender. Groups consisted of approximately 30 youth, each with an assigned camp counselor responsible for providing constant supervision, building connections with youth and facilitating interactions across peers, guiding the youth through their daily schedule, reinforcing the life skills taught, and following safety guidelines. Youth would join their group at the beginning of each day for camp announcements, travel to four different curricula sessions with their group and collectively participate with their peers, eat lunch together as a group, and remain in their group until the end of camp each day. As a whole, the program structure and curriculum were designed to allow for group processing, informal and formal interactions among peers, peer modeling, and relationship development.

METHODS

Research Design

A descriptive pretest-posttest survey design was employed to test the study hypotheses (Bell, 2010). Inclusion of a pretest measure is considered an improvement from posttest only research designs assessing program outcomes. Administering a pretest and posttest survey allowed the researchers to assess change in youth's perceived life skills from pre-to-post programming and the influence of peers on youth's life skill outcomes. A pretest-posttest research design also has limitations, including history, selection, mortality, testing, instrumentation, regression to the mean, and maturation threats to internal validity (Bell, 2010; Dunbar-Jacob, 2018). Several strategies were employed to minimize these threats to internal validity, including randomly assigning youth to a peer group, enhancing youth's motivation to participate (e.g., 'swag bag', food, token incentives, transportation), utilizing researchers rather than program staff to administer the surveys, testing instrument reliability at pre and posttest, and controlling for the youth's relative life skills within the peer group at

pretest as well as youth's age, gender, and household income. Additionally, the use of only one repeated measure limits the potential learning testing effect, and the length of the program (19-days) limits the influence of youth maturation.

Participants and Recruitment

The program recruited youth to the summer camp through networking with local schools and youth-serving organizations. Any youth who registered for the program was eligible to volunteer for the study. During registration for the summer camp, parents/caregivers of youth were provided information regarding the study's purpose and asked to provide consent for their child's participation. Additionally, youth assent was collected from youth who had parent/caregiver permission and were 14 years of age and older on the first day of the program, given their age, maturity, condition, and capability of providing assent without their parent/caregiver's involvement. Only parent/caregiver consent were collected for youth younger than 14 years of age. Participation in the study was voluntary and was not a requirement for program registration.

Of the 533 youth registered for the program, a total of 483 youth with parent/caregiver consent completed all survey items of interest in this study. Demographics of the youth participants included 283 males (59%) and 200 females (41%). The majority of youth were Black/African American (83%), followed by "Some Other Race" (13%), and White/Caucasian (4%). Youth spanned an age range of 8 to 15 years old, with a mean age of 11.5 (SD = 1.63). Additionally, 61% of youth were eligible for free or reduced-price school lunch, as set by the federal government. In total, 13% of families reported an annual household income less than $10,000, 13% reported an income of $10-20,000 per year, 34% $20-40,000 per year, 19% reported $40-60,000 per year, and 15% reported an income above $60,000. The remaining sample did not provide an answer to the question.

Instruments

A pretest/posttest questionnaire was developed to assess youth's perceptions of their life skills at the beginning and end of the sport-based PYD summer camp, and their number of friends in their assigned group at camp (posttest). A self-report questionnaire was employed for several reasons. Scholars have emphasized the importance of gathering self-report information from youth, as opposed to a proxy-respondent (e.g., parent, coach, researcher), as youth are in a unique position to report on their behaviors that occur across situations (Danielson & Phelps, 2003). In addition to information richness, Paulhus and Vazire (2007) identify ease of interpretability, motivation of respondents to report, and practicality (efficient and cost-effective) as advantages of self-reports. When considering the validity of self-report tools, Danielson and Phelps (2003) found significant correlations between youth's self-report and peer-rated social skills, providing some support for self-reported life skill data from youth. Lastly, scholars have proposed the process of reflecting on items in a self-report tool can indirectly catalyze self-awareness and personal development (Duckworth, 2019). As such, we sought to facilitate additional opportunities for youth reflection and development to contribute to the mission of the sport-based PYD program.

In total five outcomes central to the goals of the program were examined. These outcomes included the life skills of self-control, effort, teamwork, and social competence, as well as transfer of learning. The outcome measures selected have been previously tested and validated in youth sport programs with youth age 9 to 16 years old (see Anderson-Butcher et al., 2014). Additionally, three distinct constructs were used to examine the multidimensional influence of peers related to the measured life skill outcomes. These peer influences included peer group life skills, youth's relative life skills, and number of friends.

Self-Control

Perceived self-control was measured using the 8-item Sports Social Experiences Scale (SSES; Anderson-Butcher et al., 2018). Self-control is conceptualized as the ability to have control of one's self and own actions (Gresham & Elliot, 2008). Items included, "I control my temper when playing sports." For each scale item, youth reported how true they thought the statement was for them ranging from 1 (not at all true) to 5 (really true). The internal consistency estimates in this study, which were computed using Cronbach's Alpha (α), were $\alpha = 0.979$ with 95% confidence interval (CI; 0.976, 0.981) at pretest and $\alpha = 0.991$ with 95% CI (0.990, 0.992) at posttest.

Effort

Perceived effort was measured using the 5-item commitment subscale of the Multidimensional Sportspersonship Orientations Scale (MSOS; Vallerand et al., 1997). Effort is defined as self-directed initiative and behaviors (Anderson-Butcher et al., 2014). Items included, "I don't give up even after making many mistakes," with youth reporting how true they thought the statement was for them ranging from 1 (not at all true) to 5 (really true). The

Cronbach's Alpha internal consistency estimates in this study were α = 0.953 with 95% CI (0.948, 0.959) at pretest and α = 0.985 with 95% CI (0.983, 0.987) at posttest.

Teamwork

Perceived teamwork was measured using the Teamwork Scale for Youth, consisting of eight items (Lower et al., 2017). Teamwork is characterized as the ability to collaborate and work with others to achieve a common goal (Anderson-Butcher et al., 2014). Items included, "I make an effort to include other members of my group." Using a range from 1 (not at all true) to 5 (really true), youth reported how true they thought each statement was for them. The internal consistency estimates in this study, computed using Cronbach's Alpha, were α = 0.965 with 95% CI (0.961, 0.969) at pretest and α = 0.987 with 95% CI (0.985, 0.988) at posttest.

Social Competence

Perceived social competence was measured using a modified Perceived Social Competence Scale (PCSC; Anderson-Butcher et al., 2008). Social competence consists of exhibiting prosocial behaviors as a way to engage in positive social interactions (Gresham & Elliot, 2008). Items included, "I give support to others," with youth responses ranging from 1 (not at all true) to 5 (really true).

Anderson-Butcher et al.'s (2008) scale reliability and validity testing suggested the original 6-item scale be reduced to 4-items, for which the 4-item modification was employed in the current study. The internal consistency estimates in this study, computed using Cronbach's Alpha, were α = 0.966 with 95% CI (0.962, 0.970) at pretest and α = 0.989 with 95% CI (0.988, 0.990) at posttest.

Transfer of Learning

Perceived transfer of learning was measured using the 3-item Transfer of Skills Learned in Sport Scale which was previously used in a sport-based PYD program evaluation (Anderson-Butcher et al., 2014; Newman et al., 2020). Transfer of learning is considered the ability to learn and practice a skill in the context of sport, and then successfully use that skill in another context (Gould & Carson, 2008). Youth responded to each statement using the range from 1 (not at all true) to 5 (really true). Items included, "The skills I learn in sport are useful to me in other parts of my life." The internal consistency estimates in this study, computed using Cronbach's Alpha, were α = 0.800 with 95% CI (0.771, 0.827) at pretest and α = 0.842 with 95% CI (0.817, 0.864) at posttest.

Table 1. Correlations of Life Skills Reported by Youth Involved in a Sport-based PYD Program

	Self Control			Effort			Teamwork			Social Comp			Transfer		
	Pre	Post	Peer Group	Pre	Post	Peer Group	Pre	Post	Peer Group	Pre	Post	Peer Group	Pre	Post	Peer Group
Self Control															
Post	0.56	1													
Peer Group	0.06	0.07	1												
Effort															
Pre	0.56	0.42	-0.01	1											
Post	0.42	0.72	0.02	0.53	1										
Peer Group	-0.01	0.06	0.46	0.02	0.10	1									
Teamwork															
Pre	0.73	0.49	0.08	0.61	0.44	0.05	1								
Post	0.47	0.80	0.08	0.42	0.70	0.10	0.49	1							
Peer Group	0.07	0.12	0.76	0.02	0.05	0.55	0.14	0.10	1						
Social Comp															
Pre	0.59	0.40	0.07	0.46	0.34	0.00	0.70	0.39	0.08	1					
Post	0.44	0.71	0.05	0.40	0.62	0.04	0.48	0.77	0.09	0.50	1				
Peer Group	0.08	0.10	0.80	0.00	0.03	0.38	0.12	0.08	0.85	0.04	0.06	1			
Transfer															
Pre	0.52	0.40	0.06	0.51	0.30	0.03	0.55	0.36	0.10	0.50	0.33	0.06	1		
Post	0.42	0.71	0.06	0.36	0.63	0.07	0.41	0.71	0.12	0.35	0.63	0.08	0.47	1	
Peer Group	0.07	0.12	0.60	0.00	0.07	0.46	0.14	0.13	0.69	0.07	0.12	0.60	0.09	0.12	1

Note. "Social Comp." represents social competence. "Transfer" represents transfer of learning. "Peer Group" represents Peer Group Life Skills. Means and additional descriptive information are presented in Table 3.

Peer Group Life Skills

Peer group life skills for each of the life skills was calculated for each individual youth as the mean of all other youth in their group on each of the five life skill outcomes at pretest (Note: individual youth were removed from their own group's life skills scores). Correlations of peer group life skills on the five life skills and other measures are listed in Table 1. Please note peer group life skills does not correlate highly with either the pretest or the posttest for any life skill outcomes.

Youth's Relative Life Skills

Each youth's relative life skills were calculated by subtracting each youth's scores at the beginning of the program from their respective group mean score at that same time point (i.e., peer group life skills). These are also referred to as group-mean centered scores. Youth whose relative life skills score was negative had higher skills than their group-peers at the beginning of the program. The opposite was true for those with a positive relative life skills estimate (i.e., the youth scored relatively worse than their peers at the beginning of the program). These measures of relative life skills were very highly correlated with the raw pretest variables (Self Control r = .97, Effort r = .98, Transfer r = .97, Social Competency r = .97, Transfer r = .96).

Number of Friends

Youth also answered one question about their friends at posttest, with youth given freedom to apply their own conceptualization of friend. Specifically, the youth were asked: "How many people in your group at Camp are your friends?" Youth responses to this item were normally distributed with an average of 13 friends (range 0 to 36, SD = 7.54, Skew = 0.46, Kurtosis = 0.47).

Data Collection

Upon enrollment, youth were randomly assigned into one of 24 groups, stratified by age and gender. There was an average of 30 youth per group (SD = 6.81, range 26-32 youth). Throughout the entire camp, youth engaged in all program activities with their assigned groups. Please note this peer group was used throughout the analyses and represents the small co-ed group of similarly aged youth (within 1 year age difference) who began the program on the same day and attended all program activities together. Youth completed pretest surveys on the first day of the program and posttest surveys on the last day of the program during Chalk Talk. The surveys took approximately 30 minutes to complete, with approved researchers present to provide assistance upon request. All study procedures were approved by a university institutional review board.

ANALYSIS

Data Cleaning

Prior to analyses, data were cleaned to ensure all variables were within acceptable and expected ranges. Enrollment numbers, data return rates, group sizes, and ages of youth were confirmed using administrative records. There were a few instances of detected outliers that were identified as coding errors (values outside the range of possible values), and these were deleted. All data cleaning and data analyses were conducted using SAS v. 9.3. Missing data were handled using multiple imputation, with ten datasets, conducted using SAS proc MI. All previously described variables, including covariates, were included during the imputation phase.

Additionally, data were checked for normality. All outcomes were negatively skewed. However, we also examined the residuals for all models described below. All described models showed normally distributed residuals, and thereby meet the assumption of regression-based models in that the errors are normally distributed, not that the variables themselves are normally distributed (Cohen et al., 2014). Therefore, the skewness was not problematic for the analyses presented here.

Preliminary Analyses

Initially we examined whether there was significant variance in the youth constructs measured at posttest that could be attributed to the 24 groupings, thus distilling whether there was a need to account for that variance statistically in the analyses of interest. This first analytic step is called unconditional modeling, and measures the variance accounted for by the grouping unit as a function of the total variance in the outcome (also called an intra-class-correlation; ICC). The ICCs for each of the life skill outcomes were small, with the group accounting for about 3% of the variance for each outcome. Though each of the variance components was non-significant (p-values ranged from 0.07 – 0.11), we elected to take a conservative approach and account for the nested structure of the data in subsequent analyses. Full variance components from these unconditional models are provided in Table 2.

Changes in Life Skill Outcomes

Means and standard deviations for the primary variables for

Table 2. Variance Components from Unconditional models of Post-test Life Skills Scores

	Tau	Sigma squared	ICC
Self Control	0.020	0.494	0.04
Effort	0.021	0.578	0.03
Teamwork	0.014	0.466	0.03
Social Comp	0.010	0.457	0.02
Transfer	0.015	0.686	0.02

Note. Tau = between group variance. Sigma-Squared = Within group variance. ICC = Intra-Class correlation, calculated as Tau as a percentage of total variance. None of the Taus were significantly different from zero.

the analyses are presented in Table 3. To test whether life skills significantly changed from pre to posttest, a hierarchical linear model was fit to the data (also known as a linear mixed effects model) with the youth life skill predicted by time, with participants nested within groupings. In addition, we included three covariates (youth's age, household income, and whether the youth identified as male or female). The results of the inferential tests are provided in Table 3. The inferential tests allow us to determine that skills generally improved from pre to posttest, with most outcomes showing a significant effect of time ($p < .001$). One exception was effect for Self-Control, which showed a p-value of exactly .05.

In addition to the significance tests, changes from pre to posttest were estimated in effect size units (Cohen's d) and calculated as the difference between the mean at pretest and the mean at posttest divided by the pooled standard deviation. We provide effect size units as a way of quantifying the magnitudes of these differences; magnitudes of effect-sizes are often compared to Cohen's benchmarks, such that 0.2 is small but substantively meaningful, 0.5 is considered to be medium, while 0.8 is large (Cohen, 1988). The smallest effect size was the change for self-control (d = 0.10), with a small to moderate change found for all other skills (d ranged from 0.20 to 0.39). H1 was accepted.

Peer Influences

For the second research hypothesis, we sought to examine peer influences on life skill development. We used hierarchical linear regression models (also known as mixed effects models) to predict the posttest outcome of each of the five life skill outcome variables (e.g., self-control, effort, etc.), from peer group life skills, and the youth's relative life skills within their group at pretest. By including relative skills, which is a variant of the youth pretest, our analyses now examine growth in youth skills during the

Table 3. Descriptive Statistics of Life Skills Reported by Youth Involved in a Sport-based PYD Program, and testing for change from pre- to post

	Descriptive Information					Pre-Post Differences	
	Min	Max	IQR	MEAN	SD	*d*	p-value
Self Control							
Pre	1.75	5.00	1.00	4.22	0.71		
Post	1.00	5.00	1.00	4.29	0.72	0.10	0.051
Peer Group	3.90	4.65	0.28	4.20	0.16		
Effort							
Pre	1.00	5.00	1.00	4.11	0.75		
Post	1.00	5.00	1.20	4.26	0.78	0.20	<.001
Peer Group	3.73	4.45	0.29	4.08	0.17		
Teamwork							
Pre	1.90	5.00	0.70	4.02	0.60		
Post	1.00	5.00	0.90	4.23	0.69	0.33	<.001
Peer Group	3.64	4.37	0.21	4.01	0.16		
Social Comp							
Pre	1.75	5.00	1.00	3.97	0.66		
Post	1.00	5.00	0.88	4.23	0.68	0.39	<.001
Peer Group	3.60	4.33	0.16	3.95	0.16		
Transfer							
Pre	1.00	5.00	1.33	4.03	0.86		
Post	1.00	5.00	1.33	4.22	0.84	0.22	<.001
Peer Group	3.17	4.42	0.27	4.00	0.23		

Note. "Social Comp." represents social competence. "Transfer" represents transfer of learning. "Peer Group" represents Peer Group Life Skills. d = Cohen's d. The p-value was determined through an inferential test accounting for the nested structure of the data and controlling for Age, Income, and whether student identifies as Female.

development program (Allison, 1990). In addition, we included three covariates (youth's age, household income, and whether the youth identified as male or female). These hierarchical linear models were fit using SAS Proc Mixed, with full information maximum likelihood estimation as our primary focus was on the significance of specific regression coefficients, and the results were synthesized across the ten imputed datasets using SAS Proc MI-Analyze.

Each of the hierarchical linear models were estimated following a random intercepts model. In other words, each intercept was allowed to vary across groupings. A random intercept only model was chosen for parsimony, and due to minimal between-grouping variance. The model can be written as follows:

$$Y_{ij} = B_{0j} + B_{1j}(Peer\ Skill_{ij}) + B_{2j}(Relative\ Status_{ij}) + B_{3j}(Covariates_{ij}) + u_{0j} + e_{ij}$$

Where Y_{ij} is the life skill at posttest for person *"i"* in grouping *"j"*. The B_{1j} coefficient associates the average life skill of the peers of person "i" in grouping "j" with the outcomes, and B_{1j} associates the relative status of the

youth within their group and their posttest score on that same life skill outcome. The error terms u_{0j} and e_{ij} represent the variance associated with each grouping (*j*) and the residual or individual variance (*"i"* in grouping *"j"*) respectively. This model was fitted to the data five times; once for each of the five outcomes.

Table 4. Youth's Post-test Life Skills Scores predicted Peer Group Life Skills and Pretest Life Skills

Parameter	Estimate	S.E.	*t*	*p*
Self-Control				
Intercept	1.56	1.41	1.10	.270
Peer Skill	0.65	0.28	2.33	.020
Relative Skill at Pretest	0.63	0.07	8.39	<.001
Age	-0.01	0.03	-0.46	.643
Income	0.01	0.02	0.57	.572
Female	-0.07	0.06	-1.27	.202
Effort				
Intercept	1.06	0.90	1.18	.238
Peer Skill	0.79	0.20	3.91	<.001
Relative Skill at Pretest	0.72	0.08	8.71	<.001
Age	-0.02	0.02	-0.96	.339
Income	0.01	0.02	0.46	.646
Female	-0.11	0.06	-1.83	.067
Teamwork				
Intercept	1.76	1.30	1.35	.177
Peer Skill	0.61	0.27	2.29	.022
Relative Skill at Pretest	0.60	0.09	6.58	<.001
Age	-0.01	0.03	-0.43	.669
Income	0.00	0.02	-0.04	.965
Female	-0.04	0.06	-0.71	.475
Social Comp				
Intercept	1.77	1.37	1.29	.196
Peer Skill	0.61	0.28	2.15	.032
Relative Skill at Pretest	0.49	0.08	6.07	<.001
Age	-0.02	0.03	-0.62	.536
Income	0.01	0.02	0.35	.729
Female	0.03	0.06	0.58	.559
Transfer				
Intercept	0.86	1.15	0.75	.455
Peer Skill	0.75	0.22	3.46	.001
Relative Skill at Pretest	0.61	0.08	7.77	<.001
Age	0.00	0.03	0.05	.960
Income	0.02	0.03	0.67	.503
Female	-0.04	0.07	-0.52	.603

Note. "Social Comp." represents social competence. "Transfer" represents transfer of learning. "Peer Skill" represents the average skill of the youth's peers on the given life skill. All analyses accounted for the nested structure of the data using Hierarchical Linear Modeling.

The results of these five models are shown in Table 4, with table spanners representing the five different outcomes. In all five outcomes, peer influences significantly predicted youth's end-of-program scores on all five life skill outcomes (see Table 4). For example, for Self-Control (the first outcome examined), peer group life skills was significantly predictive of self-control (Estimate = 0.65, p =.020). Similarly sized effects were seen for all five of the examined outcomes. Therefore, H2 was accepted.

To test the third research hypothesis, we next examined how the youth's number of friends contributed to the development of each of the five life skills (see Table 5). The same model was fit as was described pursuant the second hypothesis, with the addition of the friendship variable. We found the number of reported friends did have a small but significant positive main effect on youth's posttest life skills for Effort (.013, p = .001), Teamwork (.011, p = .004), Social Comp (.013, p = .006), and Transfer (.02, p < .001). The effect of number of friends on Self-Control was similar in size to the other life skills, however was not significantly different from zero (.007, p = .053). Therefore, H3 was partially supported.

DISCUSSION

The ability to effectively promote life skill development and transfer is critical for sport-based PYD programs, especially those serving populations of youth who are socially vulnerable. This study provides additional support for the value of a sport-based PYD program, as all assessed life skill outcomes demonstrated increases from pre- to post-program, even with data being negatively skewed at pretest. Though the program is designed for socially vulnerable youth, the summer camp is voluntary with youth self-selecting to participate in the program, resulting in a more diverse sample of youth with low/high perceptions of life skills. The diversity of the sample provided variability, enabling us to examine the relative life skills of the peer group, however, youth who entered the program with favorable life skills may have also skewed the data. Previous studies examining life skill outcomes of this program have demonstrated similar negatively skewed outcomes (Anderson-Butcher et al., 2014, 2018), with cluster analysis revealing youth who enter the program with low perceived life skills report the greatest growth in outcomes compared to youth who enter with favorable life skills. Therefore, the program is most impactful for socially vulnerable youth, who may benefit the most from the programming (Anderson-Butcher, 2019; Super et al., 2017).

The increases in life skill outcomes demonstrated in this study were marginal, therefore the study findings should be interpreted with caution. More specifically, small to

Table 5. Post-test Life Skills Predicted from Peer Group Life Skills and Number of Friends

	Estimate	SE	*t*	*p*
Self-Control				
Intercept	1.54	1.411	1.09	.274
Peer Skill	0.66	0.282	2.34	.020
Relative Status	0.60	0.043	14.10	<.001
Number of Friends	0.01	0.004	1.93	.053
Age	-0.01	0.027	-0.48	.632
Income	0.01	0.021	0.54	.589
Female	-0.07	0.056	-1.25	.211
Effort				
Intercept	1.03	0.908	1.13	.259
Peer Skill	0.80	0.206	3.89	.000
Relative Status	0.55	0.043	12.99	<.001
Number of Friends	0.01	0.004	3.25	.001
Age	-0.02	0.021	-0.98	.328
Income	0.01	0.023	0.46	.649
Female	-0.11	0.062	-1.77	.077
Teamwork				
Intercept	1.76	1.303	1.35	.178
Peer Skill	0.62	0.269	2.29	.022
Relative Status	0.60	0.052	11.67	<.001
Number of Friends	0.01	0.004	2.87	.004
Age	-0.01	0.026	-0.42	.671
Income	0.00	0.021	-0.04	.969
Female	-0.04	0.057	-0.72	.474
Social Comp				
Intercept	1.77	1.375	1.28	.199
Peer Skill	0.61	0.285	2.15	.032
Relative Status	0.51	0.047	10.81	<.001
Number of Friends	0.01	0.004	3.44	.001
Age	-0.02	0.027	-0.61	.544
Income	0.01	0.021	0.35	.724
Female	0.03	0.057	0.60	.550
Transfer				
Intercept	0.93	1.135	0.82	.410
Peer Skill	0.74	0.213	3.45	.001
Relative Status	0.47	0.042	11.17	<.001
Number of Friends	0.02	0.005	4.67	<.001
Age	0.00	0.030	-0.03	.973
Income	0.02	0.027	0.56	.573
Female	-0.03	0.070	-0.43	.667

Note. "Social Comp." represents social competence. "Transfer" represents transfer of learning. "Peer Skill" represents the average skill of the youth's peers on the given life skill. All analyses accounted for the nested structure of the data using Hierarchical Linear Modeling.

moderate effect sizes were found for the life skills of self-control, effort, teamwork, social competence, and transfer of learning, demonstrating the value of a sport-based PYD program for promoting life skill outcomes among socially vulnerable youth. A recent meta-analysis of physical activity interventions with children and adolescence demonstrated small to moderate effect sizes among program interventions (Vazou et al., 2019), which our findings align with. The program investigated intentionally designed their sport- and play-based curriculum to target the desired life skill outcomes (i.e., self-control, effort, teamwork, social competence, transfer of learning), facilitating four 1-hour curricula sessions for 15 days. Previous randomized controlled trials assessing the effects of physical activity programs have found even brief interventions can significantly improve youth outcomes (e.g., 10-minutes per week x 4 weeks, 2-hours per week x 10 weeks; Zeng et al., 2017), highlighting the integration of relevant tasks as critical for achieving desired outcomes.

Although the literature highlights several seminal heuristic models of life skill development and transfer through sport (e.g., Gould & Carson, 2008; Holt et al., 2017; Pierce et al., 2017), these frameworks predominantly focus on the role of the sport coach and do not fully explain how other social agents influence the life skill development and transfer process. Peers have been identified as a critical social agent influencing youth outcomes (Gifford-Smith & Brownell, 2003; Howes, 1996; Newman, 2019), yet the influence of peers has been examined less extensively in English-speaking literature. This research utilized social cognitive theory as a complementary lens to understand how peers contribute to youth's life skill outcomes in a sport-based PYD context (Bandura, 1986). Specifically, the study examined multiple peer dimensions, including the degree of life skills among peers in one's group (i.e., peer group life skills), the youth's relative life skills within their group, and the youth's number of friends. Peer influences and life skill outcomes were assessed through the perspectives of the socially vulnerable youth engaged in the sport-based PYD program studied to address previous criticisms of life skill development and transfer research reinforcing White, adult-centric perspectives (Kochanek & Erickson, 2020; Newman, 2020). Ultimately, findings illustrated the role of peers in promoting life skills among socially vulnerable youth involved in a sport-based PYD program, a notion that previously has been suggested in English-speaking literature with preliminary evidence (e.g., Holt et al., 2017; Jones et al., 2017; Riley & Anderson-Butcher, 2012), but warranted additional empirical support.

Results suggest that peer group life skills were predictive of posttest scores on all five life skill outcomes. In other words, youth engaging in peer groups with life skills more favorable than their own were more likely to demonstrate higher levels of life skills at posttest after controlling for pretest scores. This is an interesting finding, given that most sport-based PYD programs focus primarily on the needs of youth who are socially vulnerable and at-risk for experiencing negative outcomes that can impede healthy development and future success (Anderson-Butcher, 2019; Anthony et al., 2009; Super et al., 2017). This finding

suggests that even within a socially vulnerable population, there is a need for variability in the adaptive functioning of the peer group to promote live modeling, behavioral feedback, reinforcement and consequences, and interaction with others in order to cultivate youth's life skill outcomes (Bandura, 1986; Simons-Morton et al., 2012). Previous research in education supports this contention. For instance, Lavy and colleagues (2012) demonstrated that low achieving peers with low levels of skills negatively influenced youth, pointing to youth emulation and the teacher's pedagogical focus as possible effects. Comparatively, Véronneau and Dishion (2010) found high-achieving peers beneficial for all youth, as these peers are often well-adjusted and model life skills. In light of the importance of peer behaviors in contributing to youth's life skill outcomes, sport-based PYD programs may apply these findings by providing ample opportunities for youth to interact with peers in positive social environments. The sport context and program curricula may be modified to allow for more group processing, informal and formal interactions among peers, and relationship development. Additionally, team sports may incorporate strategies which allow for more prosocial interactions among youth.

Findings also support an association between youth's relative life skills within their peer group and their own life skill outcomes. Research in sport has explored youth's relative skill—in relation to motor skills—and found higher skilled youth had a healthier identity, stronger social relationships, and greater intention to persist due to positive sport experiences, whereas less skilled youth had more difficulty navigating social networks, relied upon extrinsic motivation from others to participate, and demonstrated poor coping skills when in stressful situations due to negative sport experiences (Timler et al., 2020). Bortoli et al. (2012) suggested if a youth's perception of their ability is low it can manifest into maladaptive behaviors (e.g., avoiding challenges, decreased persistence, antisocial actions) out of worry over their ability level comparative to their peers. Put simply, peers and their skill levels, as well as youth's relative skill level to their peers, influence youth's skill outcomes, perhaps both positively and negatively.

If applying these findings to outside contexts, sport-based PYD programs should be intentional when creating groups of youth, having a balance of youth with both low and high levels of life skills. Sport practitioners may consider assessing skill prior to program administration to create optimal group composition. This way, youth with low levels of skills may learn from their peers who may have already mastered various life skills and other competencies. However, because peers' life skills also might have a relatively negative effect, program staff should remain cognizant and reinforce positive instances and examples of behaviors that exemplify targeted life skills. This intentional strength-based facilitation technique is a critical feature of sport-based PYD pedagogy, programming, and practice (Newman et al., 2020). For groups of youth that may emerge as having a high proportion of low achievers, program staff in charge of those groups may benefit from additional support given research demonstrating the influence of staff on youth outcomes (Ross et al., 2015). In the same vein, groups of youth with predominantly high achievers may need exposure to greater challenge, for which curriculum can be tailored.

The influence of friendships on youth's life skill outcomes also was examined. Findings suggest the number of friends youth had at the end of the program was important for life skill increases over the course of the program. This finding confirms the seminal research by Wethington and Kessler (1986) that found peer relationships represent a critical predictor of social development. This finding also aligns with the formative work by Smith (1999) examining Harter's Competence Motivational Theory, demonstrating that perceptions of peer relationships (i.e., friendship, peer acceptance) predicted physical activity motivation. Moreover, in a study of life skill development among youth who were socially vulnerable and participated in a community sport-based PYD program, Newman (2019) noted the specific influence of friends on life skill development. Specifically, the author noted, "youth in the study differentiated friends from other peers by using the specific term friend," and that "friends differ[ed] from other peers due to the closeness of the relationship" (Newman, 2019, p. 201). To apply these findings, sport-based PYD programs can aim to foster these close relationships, as well as capitalize on pre-existing friendships, through interactive curricula, autonomy supportive staff practices, and persisting peer groups (Lower-Hoppe et al., 2020; Riley et al., 2017).

LIMITATIONS AND FUTURE DIRECTIONS

There were several limitations that must be considered when interpreting the results of the current study. First, measure of outcomes related to life skill development was limited to five life skills, for which youth were asked to self-report their perceived skill level. The five life skill outcomes were found negatively skewed, suggesting a possible ceiling effect measurement limitation (Taylor, 2010). Future scholars may consider measures that can better discriminate youth with low versus high life skills. In addition to considering appropriate methods to measure life skill outcomes, researchers and practitioners engaged

in sport-based PYD programming may consider how to recruit socially vulnerable youth at risk for low life skills, to ensure the program is reaching those most in need (Anderson-Butcher, 2019; Super et al., 2017).

Although use of self-report is supported in the literature by data collected directly from youth rather than a proxy-respondent (Danielson & Phelps, 2003; Duckworth, 2019; Paulhus & Vazire, 2007), self-report measures have noted limitations. Self-report measures are susceptible to social desirability bias, response bias, mono-method bias, and systematic bias, which can result in measurement error (Chan, 2009). Due to the size of the program (483 youth participants) and resources constraints, the researchers were not able to triangulate the data through methods such as direct observation of youth behavior, report from parents/caregivers regarding youth life skills in different environments, objective measures of life skill development and transfer, etc. Future scholars are encouraged to collect multiple sources of data where possible to mitigate the limitations of self-report measures.

As previously noted, life skill development and transfer are predominantly assessed through adult-centric perspectives and not centered around the voice of the socially vulnerable youth engaged in the process (Newman, 2020). Although the researchers collected data directly from youth through self-report, youth did not receive the opportunity to engage in a co-creation process with the sport-based PYD program under investigation to achieve life skill development and transfer through sport (Kochanek & Erickson, 2020). Practitioners and scholars should consider ways to incorporate youth in program design, delivery, and evaluation to provide youth participants greater voice in their life skill development and transfer. Moreover, practitioners and scholars could use interviews, focus groups, photo voice, or other participatory research methods for a more in-depth exploration of the life skills of greatest interest to youth participants, how youth conceptualize those life skills, and appropriate ways to facilitate and measure life skill development and transfer.

As previously noted, the researchers focused on English-speaking scholarly literature due to our language barriers, limiting our review of empirical scholarship relevant to peer influences. Future researchers are encouraged to examine relevant scholarship in other languages (e.g., Brodaty, 2010; Deflandre et al., 2004; Wylleman et al., 2004) for a deeper understanding of how peers influence youth life skill development and transfer. The life skills examined in this study reported fairly high Cronbach's alphas potentially due to the theoretical and conceptual association across the social constructs. Within the literature, social competence is conceptualized as a multi-dimensional construct, consisting of intrapersonal and interpersonal social skills— each individually contributing to one's overall social competence (Raver & Zigler, 1997). Future research should seek to disentangle these social constructs and consider additional life skill outcomes not examined in the current study to further understanding of peer influences. When considering youth's number of friends, there is potential youth defined friendship differently or responded in a socially desirable way. Future research may consider providing youth a definition of friendship when asking youth to report their number of friends to ensure the question is interpreted consistently. Additionally, in the current study, youth reported number of friends in the program only at posttest. Growth in friendships over the course of a program or season might provide additional insights into the influence of peers from a developmental perspective.

Future research also should consider exploring the dynamic evolution of peers. The differentiation (i.e., types and forms) in peer influences based on life skill outcome warrants further investigation. Continuing to explore the multidimensionality of peer influences remains a priority. For instance, there is some research to support the role of peer reinforcement, support, and expectations for the demonstration of life skills (Newman, 2019; Pierce et al., 2019; Riley & Anderson-Butcher, 2012). Future research might consider, as well, how peer support and friendship quality along with peer group life skills, youth's relative life skills in the peer group, and number of friends collectively contribute to social development outcomes. Additionally, future studies should control for other related demographic variables, such as the gender and age composition of the group. Furthermore, data were limited to one sport-based PYD program, with no comparison group, a prevalent limitation of most PYD intervention research (Whitley et al., 2019). Researchers should seek to study multiple groups or incorporate multi-site comparisons to enhance the study design. Future studies should continue to explore the multiple peer influences on life skill development to distill the mechanisms most viable for creating outcomes.

CONCLUSION

The current study investigated peer influences on youth's life skill outcomes among socially vulnerable youth participating in a sport-based PYD program. The findings demonstrated the degree of life skills among peers in one's group (i.e., peer group life skills), the youth's relative life skills within their group, and the youth's number of friends in their group predicted life skill outcomes among youth participants. Relationships with peers may be especially important for youth who are socially vulnerable and/or

those with less developed life skills, as youth with low levels of life skills relative to their peers and those with more friends predicted life skill gains in the study. Overall, findings point to the importance of peer group composition when designing a sport-based PYD program and facilitating activities, especially as sport-based PYD programs desire to maximize life skill development outcomes. When applying these findings to outside contexts, this study provides support for the role of sport-based PYD in promoting life skills among socially vulnerable youth. Strategies to include youth most at-risk for poor developmental outcomes is of critical importance, as these youth may benefit the most from programming.

REFERENCES

Allison, P. D. (1990). Change scores as dependent variables in regression analysis. *Sociological Methodology, 20,* 93-114. https://doi.org/10.2307/271083

Anderson-Butcher, D. (2019). Youth sport as a vehicle for social development. *Kinesiology Review, 8*(3), 180-187. https://doi.org/10.1123/kr.2019-0029

Anderson-Butcher, D., Iachini, A. L., & Amorose, A. J. (2008). Initial reliability and validity of the Perceived Social Competence Scale. *Research on Social Work Practice, 18*(1), 47-54. https://doi.org/10.1177/1049731507304364

Anderson-Butcher, D., Martin, E., Paluta, L., & Gould, D. (2018). Patterns of social skill development over-time among clusters of LiFE*sports* participants. *Children and Youth Services Review, 87,* 17-25. https://doi.org/10.1016/j.childyouth.2018.01.044

Anderson-Butcher, D., Riley, A., Amorose, A., Iachini, A., & Wade-Mdivanian, R. (2014). Maximizing youth experiences in community sport settings: The design and impact of the life sports camp. *Journal of Sport Management, 28*(2), 236-249. https://doi.org/10.1123/jsm.2#012-0237

Anthony, E. K., Alter, C. F., & Jenson, J. F. (2009). Development of a risk and resilience-based out-of-school time program for children and youths. *Social Work, 54*(1), 45-55. https://doi.org/10.1093/sw/54.1.45

Bandura, A., (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Bean, C., Kramers, S., Forneris, T., & Camiré, M. (2018). The implicit/explicit continuum of life skills development and transfer. *Quest, 70*(4), 456-470. https://doi.org/10.1080/00336297.2018.1451348

Bell, B. A. (2010). Pretest-posttest design. In N. J. Salkind (Ed.), *Encyclopedia of research design* (pp. 1087-1091). Sage. https://dx.doi.org/10.4135/9781412961288.n44

Bortoli, L., Messina, G., Zorba, M., & Robazza, C. (2012). Contextual and individual influences on antisocial behaviour and psychobiosocial states of youth soccer players. *Psychology of Sport and Exercise, 13*(4), 397-406. https://doi.org/10.1016/j.psychsport.2012.01.001

Brodaty, T. (2010). Les effets de pairs dans l'éducation: Une revue de littérature [Peer effects in education: A literature review]. *Revue d'économie politique, 120*(5), 739-757.

Camiré, M., Trudel, P., & Forneris, T. (2012). Coaching and transferring life skills: Philosophies and strategies used by model high school coaches. *The Sport Psychologist, 26*(2), 243-260. https://doi.org/10.1123/tsp.26.2.243

Chan, D. (2009). So why ask me? Are self-report data really that bad? In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends* (pp. 309-336). Routledge.

Cohen J. (1988). *Statistical power analysis for the behavioral sciences*. Routledge.

Cohen P., Cohen, P., West, S.G., & Aiken, L. S. (2014). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Psychology Press.

Danielson, C. K., & Phelps, C. R. (2003). The assessment of children's social skills through self-report: A potential screening instrument for classroom use. *Measurement and Evaluation in Counseling and Development, 35*(4), 218-229. https://doi.org/10.1080/07481756.2003.12069068

Danish, S. J., Forneris, T., & Wallace, I. (2005). Sport-based life skills programming in the schools. *Journal of Applied School Psychology, 21*(2), 41-62. https://doi.org/10.1300/J370v21n02_04

Deflandre, A., Lorant, J., & Falgairette, G. (2004). Socialisation sportive, le rôle des parents, de la fratrie, des amis et des éducateurs [Sports socialization, the role of parents, siblings, friends, and educators]. *AVANTE, 10*(1), 16-26.

Duckworth, A. (2019). Self-reports spur self-reflection. *MIT Sloan Management Review, 60*(3), 14-16.

Dunbar-Jacob, J. (2018). Minimizing threats to internal validity. In B. M. Melnyk & D. Morrison-Beedy (Eds.), *Intervention research and evidence-based quality improvement* (2nd ed., pp. 129-143). Springer.

Eccles, J. S., Barber, B. L., Stone, M., & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues, 59*(4), 865-889. https://doi.org/10.1046/j.0022-4537.2003.00095.x

Eime, R. M., Young, J. A., Harvey, J. T., Charity, M. J., & Payne, W. R. (2013). A systematic review of the psychological and social benefits of participation in sport for children and adolescents: Informing development of a conceptual model of health through sport. *International Journal of Behavioral Nutrition and Physical Activity, 10*, Article 98. https://doi.org/10.1186/1479-5868-10-98

Fraser-Thomas, J., Côté, J., & Deakin, J. (2005). Youth sport programs: An avenue to foster positive youth development. *Physical Education and Sport Pedagogy, 10*(1), 19-40. https://doi.org/10.1080/17408980420000334890

Fujimoto, K., Snijders, T. A. B., & Valente, T. W. (2018). Multivariate dynamics of one-mode and two-mode networks: Explaining similarity in sports participation among friends. *Network Science, 6*(3), 370-395. https://doi.org/10.1017/nws.2018.11

Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: Social acceptance, friendships, and peer networks. *Journal of School Psychology, 41*(4), 235-284. https://doi.org/10.1016/S0022-4405(03)00048-7

Gould, D., & Carson, S. (2008). Life skills development through sport: Current status and future directions. *International Review of Sport and Exercise Psychology, 1*(1), 58-78. https://doi.org/10.1080/17509840701834573

Gresham, F. M., & Elliot, S. N. (2008). *Social Skills Improvement System: Rating Scales*. Pearson Assessments.

Henry, G. T., & Rickman, D. K. (2007). Do peers influence children's skill development in preschool? *Economics of Education Review, 26*(1), 100-112. https://doi.org/10.1016/j.econedurev.2005.09.006

Herbison, J. D., Vierimaa, M., Côté, J., & Martin, L. J. (2019). The dynamic nature of connection and its relation to character in youth sport. *International Journal of Sport and Exercise Psychology, 17*(6), 568-577. https://doi.org/10.1080/1612197X.2017.1423507

Hermens, N., Super, S., Verkooijen, K. T., & Koelen, M. A. (2017). A systematic review of life skill development through sports programs serving socially vulnerable youth. *Research Quarterly for Exercise and Sport, 88*(4), 408-424. https://doi.org/10.1080/02701367.2017.1355527

Hodge, C. J., Kanters, M. A., Forneris, T., Bocarro, J. N., & Sayre-McCord, R. (2017). A family thing: Positive development outcomes of a sport-based life skills program. *Journal of Park and Recreation Administration, 35*(1), 34-50. https://doi.org/10.18666/JPRA-2017-V35-I1-6840

Holt, N. L., Neely, K. C., Slater, L. G., Camiré, M., Côté, J., Fraser-Thomas, J., MacDonald, D., Strachan, L., & Tamminen, K. A. (2017). A grounded theory of positive youth development through sport based on results from a qualitative meta-study. *International Review of Sport and Exercise Psychology, 10*(1), 1-49. https://doi.org/10.1080/1750984X.2016.1180704

Howes, C. (1996). The earliest friendships. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 66-86). Cambridge University Press.

Jones, G. J., Edwards, M. B., Bocarro, J. N., Bunds, K. S., & Smith, J. W. (2017). An integrative review of sport-based youth development literature. *Sport in Society, 20*(1), 161-179. https://doi.org/10.1080/17430437.2015.1124569

Kochanek, J., & Erickson, K. (2020). Interrogating positive youth development through sport using critical race theory. *Quest, 72*(2), 224-240. https://doi.org/10.1080/00336297.2019.1641728

Lavy, V., Paserman, M. D., & Schlosser, A. (2012). Inside the black box of ability peer effects: Evidence from variation in the proportion of low achievers in the classroom. *The Economic Journal, 122*(559), 208-237. https://doi.org/10.1111/j.1468-0297.2011.02463.x

Lerner, R. M., Almerigi, J. B., Theokas, C., & Lerner, J. V. (2005). Positive youth development: A view of the issues. *The Journal of Early Adolescence, 25*(1), 10-16. https://doi.org/10.1177/0272431604273211

Lower, L. M., Newman, T. J., & Anderson-Butcher, D. (2017). Validity and reliability of the teamwork scale for youth. *Research on Social Work Practice, 27*(6), 716-725. https://doi.org/10.1177/1049731515589614

Lower-Hoppe, L. M., Anderson-Butcher, D., Lo, M., & Turner, B. A. (2020). The influence of organizational climate and process on youth outcomes: A case study of a community youth sport organization. *Leisure/Loisir, 44*(4), 489-520. https://doi.org/10.1080/14927713.2020.1815564

McDonough, M. H., Ullrich-French, S., Anderson-Butcher, D., Amorose, A. J., & Riley, A. (2013). Social responsibility among low-income youth in physical activity-based positive youth development programs: Scale development and associations with social relationships. *Journal of Applied Sport Psychology, 25*(4), 431-447. https://doi.org/10.1080/10413200.2012.751563

McDonough, M. H., Ullrich-French, S., & McDavid, M. L. (2018). Helping kids connect: Participant and staff perspectives on facilitating social relationships in a physical activity-based positive youth development program for youth from low-income families. *Sport, Exercise, and Performance Psychology, 7*(1), 13-29. https://doi.org/10.1037/spy0000109

Newman, T. J. (2019). *Exploring life skill development and transfer: Experiences of youth in a community sport-based positive youth development program* [Doctoral dissertation, The Ohio State University]. OhioLINK. http://rave.ohiolink.edu/etdc/view?acc_num=osu1553692981574171

Newman, T. J. (2020). Life skill development and transfer: "They're not just meant for playing sports". *Research on Social Work Practice, 30*(6), 643-657. https://doi.org/10.1177/1049731520903427

Newman, T. J., Anderson-Butcher, D., & Amorose, A. J. (2020). Examining the influence of sport program staff and parental support on youth outcomes. *Applied Developmental Science, 24*(3), 263-278. https://doi.org/10.1080/10888691.2018.1467762

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224-239). Guilford Press.

Pierce, S., Amorose, A., Anderson-Butcher, D., & Wade-Mdivanian, R. (2019, October 23-26). *Social skill transfer from a sport-based positive youth development program to the school setting* [Poster presentation]. Association for Applied Sport Psychology Annual Conference, Portland, Oregon, United States.

Pierce, S., Gould, D., & Camire, M. (2017). Definition and model of life skills transfer. *International Review of Sport and Exercise Psychology, 10*(1), 186-211. https://doi.org/10.1080/1750984X.2016.1199727

Raver, C. C., & Zigler, E. F. (1997). Social competence: An untapped dimension in evaluating Head Start's success. *Early Childhood Research Quarterly, 12*, 363-385. https://doi.org/10.1016/S0885-2006(97)90017-X

Reichter, A. P., & Weiss, M. R. (2019). Conceptions of adolescent friendship quality in sport and music domains. *Research Quarterly for Exercise and Sport, 90*(4), 534-546. https://doi.org/10.1080/02701367.2019.1632412

Riley, A., & Anderson-Butcher, D. (2012). Participation in a summer sport-based youth development program among disadvantaged youth: Getting the parent perspective. *Children and Youth Services Review, 34*(7), 1367-1377. https://doi.org/10.1016/j.childyouth.2012.03.008

Riley, A., Anderson-Butcher, D., Logan, J., Newman, T. J., & Davis, J. (2017). Staff practices and social skill outcomes in a sport-based youth program. *Journal of Applied Sport Psychology, 29*(1), 59-74. https://doi.org/10.1080/10413200.2016.1179700

Ross, A. J., Mallett, C. J., & Parkes, J. F. (2015). The influence of parent sport behaviours on children's development: Youth coach and administrator perspective. *International Journal of Sports Science and Coaching, 10*(4), 605-621. https://doi.org/10.1260/1747-9541.10.4.605

Sheridan, D., Coffee, P., & Lavallee, D. (2014). A systematic review of social support in youth sport. *International Review of Sport and Exercise Psychology, 7*(1), 198-228. https://doi.org/10.1080/1750984X.2014.931999

Simons-Morton, B. G., McLeroy, K. R., & Wendel, M. L. (2012). *Behavior theory in health promotion practice and research*. Jones & Bartlett Learning.

Smith, A. L. (1999). Perceptions of peer relationships and physical activity participation in early adolescence. *Journal of Sport and Exercise Psychology*, *21*(4), 329-350. https://doi.org/10.1123/jsep.21.4.329

Smith, A. L., & McDonough, M. H. (2008). Peers. In A. L. Smith & S. J. H. Biddle (Eds.) *Youth physical activity and sedentary behavior: Challenges and solutions* (pp. 295-320). Human Kinetics.

Super, S., Wentink, C. Q., Verkooijen, K. T., & Koelen, M. A. (2017). Exploring the sports experiences of socially vulnerable youth. *Social Inclusion*, *5*(2), 198-209. https://doi.org/10.17645/si.v5i2.864

Taylor, T. H. (2010). Ceiling effect. In N. J. Salkind (Ed.), *Encyclopedia of research design* (pp. 133-134). Sage. https://dx.doi.org/10.4135/9781412961288.n44

Timler, A., McIntyre, F., Bulsara, C., Rose, E., & Hands, B. (2020). The influence of motor competence on adolescent identify health: A mixed method study. *Research Quarterly for Exercise and Sport*, *91*(1), 1-14. https://doi.org/10.1080/02701367.2019.1643821

Vallerand, R. J., Brière, N. M., Blanchard, C, & Provencher, P. (1997). Development and validation of the multidimensional sportspersonship orientations scale. *Journal of Sport & Exercise Psychology*, *19*(2), 197-206. https://doi.org/10.1123/jsep.19.2.197

Vazou, S., Pesce, C., Lakes, K., & Smiley-Oyen, A. (2019). More than one road leads to Rome: A narrative review and meta-analysis of physical activity intervention effects on cognition in youth. *International Journal of Sport and Exercise Psychology*, *17*(2), 153-178. https://doi.org/10.1080/1612197X.2016.1223423

Véronneau, M. H., & Dishion, T. J. (2010). Predicting change in early adolescent problem behaviour in the middle school years: A mesosystemic perspective on parenting and peer experiences. *Journal of Abnormal Child Psychology*, *38*, 1125-1137. https://doi.org/10.1007/s10802-010-9431-0

Weiss, M. R., & Smith, A. L. (2002). Friendship quality in youth sport: Relationship to age, gender, and motivation variables. *Journal of Sport and Exercise Psychology*, *24*(4), 420-437. https://doi.org/10.1123/jsep.24.4.420

Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social Behavior*, *27*(1), 78-89. https://doi.org/10.2307/2136504

Whitley, M. A., Massey, W. V., Camiré, M., Boutet, M., & Borbee, A. (2019). Sport-based youth development interventions in the United States: A systematic review. *BMC Public Health*, *19*(89). https://doi.org/10.1186/s12889-019-6387-z

Wylleman, P., Verdet, M. C., Lévêque, M., De Knop, P., & Huts, K. (2004). Athlètes de haut niveau, transitions scolaires et rôle des parents [High performance athletes, school transitions and the role of parents]. *Staps*, *2*(64), 71-87. https://doi.org/10.3917/sta.064.0071

Zeng, N., Ayyubb, M., Sun, H., Wen, X., Xiang, P., & Gao, Z. (2017). Effects of physical activity on motor skills and cognitive development in early childhood: A systematic review. *Biomed Research International*, *2017*, Article 2760716. https://doi.org/10.1155/2017/2760716

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