



**Active Role Models at the Core of Active Secondary
School Cultures**

Des modèles de vie active au cœur de la culture d'écoles secondaires actives

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Abstract

With the increasing costs and time associated with community-based sport, it is essential that schools be active environments for students. At the core of active school cultures are the teachers and administrators who devise and defend the physical activity practices and policies that guide students. In order to explore the degree of influence school leaders have on a secondary school's culture of physical activity, eight teachers and four administrators were asked about their beliefs regarding this relationship. Participants believed that teachers who consistently modeled healthy behaviors to students and staff could overcome the challenges of the daily timetable and diminishing new teacher interest in extracurricular leadership. However, the lack of active lifestyle role models and scattered lines of communication between administration, teachers and students restricted the value of daily physical activity to a select few rather than an expectation for all.

Résumé

Les sports communautaires exigent des investissements de temps et d'argent de plus en plus importants. Par conséquent, il est essentiel que les écoles offrent aux élèves un milieu qui favorise la pratique régulière d'activité physique. Un tel type de milieu de vie active est tributaire de la présence dans les écoles d'enseignants et de gestionnaires engagés à instaurer et à défendre des pratiques et des politiques en matière d'activité physique qui orientent les élèves dans cette voie. Pour déterminer le degré d'influence des responsables scolaires sur la culture de vie active d'une école secondaire, les auteurs ont questionné huit enseignantes et enseignants et quatre gestionnaires sur la nature de cette influence. Ces derniers étaient d'avis que les enseignants qui agissent comme mentors et comme modèles pour les élèves et le personnel en adoptant des comportements sains sont plus en mesure de surmonter des défis quotidiens comme les problèmes d'horaire et le désintéressement des nouveaux enseignants à l'égard du leadership parascolaire. Par contre, en l'absence de tels modèles et de communications fréquentes entre la direction, le personnel enseignant et les élèves, l'activité physique quotidienne n'est en fait une valeur que pour un petit nombre de personnes dans l'école, et non une attente intégrée à la culture de l'école dans son ensemble.

Introduction

Sedentary lifestyles are the norm, rather than the exception for the majority school-aged children and adolescents in Canada. Recently, Canada's report card on physical activity (Active Healthy Kids Canada, 2013) indicated that 93% of 5-11 year olds and 96% of 12-17 year olds in Canada failed to meet the recommended 60 minutes of daily, moderate to vigorous physical activity (Public Health Agency of Canada, 2009). Additionally, Leatherdale and Rynard (2013) surveyed Canadian, secondary school students (grades 9-12) asking how many minutes of vigorous physical activity they engaged in on each of the last seven days. Findings from 32,000 respondents suggested that physical inactivity decreased significantly across grades; almost twice the number of students were deemed sedentary (Wong & Leatherdale, 2009) in grade 12 compared to grade nine. This is not surprising based on earlier results from the Canadian Health Measures Survey finding 31% of boys and 26% of girls (15-19 years) to be obese or overweight (Tremblay et al., 2010). Thus, the urgency to promote and mentor active lifestyles to younger generations remains at the forefront of reducing negative health outcomes in later life (Adami, Day, Trichopoulos, & Willett, 2001; Horton, 2009; Janssen & LeBlanc, 2010; Janssen, 2008).

Schools are places where active lifestyles can best be promoted to school-aged children due to time spent at school, the presence of teacher/administrator role models and supportive school-based physical activity policies and spaces/equipment linked to physical activity opportunities (Belanger et al., 2009; Cooper, Page, Foster, & Qahwaji, 2003; Dale, Corbin, & Dale, 2000; Leatherdale & Rynard, 2013; Mallam, Metcalf, Kirkby, Voss, & Wilkin, 2003). However, not all schools offer a myriad of physical activity options because of budgetary constraints, school policies that reduce the time dedicated to PE (Datar & Sturm, 2004) and limited physical activity equipment and time associated with leisure times (i.e. recess and lunch periods) (Koplan, Liverman, & Kraak,

2005; Rosenfeld, 2004; Trudeau & Shephard, 2005). In general, when fewer options for physical activity are available to students at school (Bocarro, Kanters, Casper, & Forrester, 2008; Rentner, Scott, & Kober, 2006), the result is an overall decrease in daily physical activity of school-aged children and adolescents (Koplan et al., 2005; Trudeau & Shephard, 2005).

Rationale

Thus far, studies investigating the relationship between school environments and student physical activity levels have largely focused on the built environment in elementary (kindergarten – grade 5) and middle schools (grades 6-8) (Cohen, Scott, Zhen Wang, McKenzie, & Porter, 2008; Haug, Torsheim, & Samdal, 2008; Lanningham-Foster et al., 2008; Williden et al., 2006). More recently, there has been a call for studies that reach beyond a school's physical environment to understand how the 'whole school' impacts student physical activity levels (Leatherdale, Manske, Faulkner, Arbour, & Bredin, 2010; Leatherdale & Rynard, 2013; Rickwood & Singleton, 2012).

Research is important in this area because student physical activity levels have shown to be associated with the less tangible components of school culture (i.e. teacher and principal values, attitudes, and behaviours concerning physical activity) (Barnett, O'Loughlin, Gauvin, Paradis, & Hanley, 2006; Bauer, Patel, Prokop, & Austin, 2006; Dymont & Bell, 2007; MacQuarrie, Murnaghan, & MacLellan, 2008). Moreover, several researchers have verified that school-wide acceptance of the importance of daily physical activity significantly influences school-based physical activity opportunities and student physical activity levels (Barnett et al., 2009a; Haug et al., 2008; Loucaides, Jago, & Charalambous, 2009; Mahar et al., 2006; Naylor, Macdonald, Zebedee, Reed, & McKay, 2006; Rickwood & Singleton, 2012).

Cumulatively, the research implies that a school's cultural system including visible artifacts and less tangible value structures, positively influence student physical activity levels and the number and quality of school-based physical activity opportunities. Therefore, using an in-depth, cultural approach to investigate the influence the 'whole school' has on school-based physical activity opportunities is warranted, particularly in the secondary school context.

Cultural Framework

Many researchers on organizational culture have based their research on Edgar Schein's (1985) cultural systems theory - a theory grounded in earlier theories of group behaviour, social systems, and organizational functional analysis (Homans, 1950; Merton, 1968; Parsons, 1951). Schein (1985) found that as an organization evolved and became more resilient, its culture became embedded into members' sub-conscious. In 1999, Schein refined his theory to include the understanding that behaviours within an organization could only be interpreted in the specific context in which the cultural system existed (Schein, 1999).

Schein's theory embraces a systems approach and offers a holistic definition of culture that defines the internal and external components of an organization. Schein (1985) believed that an organization's cultural system contains three distinct levels. First, the outermost level of a school's cultural system is its artifacts including any tangible features such as the physical layout, how people dress, smells in the hallways, and even

visuals hanging on school walls (i.e. posters, trophy cases) (Schein, 1990). The second more internal level contains the less tangible components of a school's cultural system such as its policies and practices derived from school strategies, goals and philosophies. The innermost and least tangible level of a school's cultural system is its members' beliefs that provide structure for school values and behaviours. For this research, Schein's three levels of culture will serve as the theoretical construct for investigation into the intricate nature of school cultures and, in turn, facilitate a deeper analysis of the influence schools have on school-based physical activity opportunities.

Research Questions

Guided by the research aims of understanding and interpreting the less tangible influences of secondary school cultures on school-based physical activity opportunities, the following four questions were formulated:

1. What are the beliefs of secondary school teachers and administrators concerning the value of physical activity in their school?
2. What are the beliefs of secondary school teachers and administrators concerning access to and opportunities for physical activity in their school?
3. What is the relationship between secondary school teachers' and administrators' beliefs around school-based physical activity and physical activity opportunities?
4. What are the perceived factors that facilitate and/or inhibit secondary school teachers' and administrators' participation in school-based, physical activity opportunities?

Method

The limited sample size and Schein's (1985) theoretical interpretation of a school's cultural system aided in the selection of a multiple case study design for examination of study inquiries. In particular, case studies focus on how and why things happen and allow for the examination of cultural realities and differences between intentions and actual behavioural outcomes (Anderson, 1993). Moreover, case studies are useful in understanding the breadth and width of particular relationships within organizations (i.e. schools) (Noor, 2008; Patton, 1987).

Since this study explores the relationship among school culture variables through a detailed examination of secondary teacher and administrator beliefs regarding school-based physical activity, the descriptive case study methodology is particularly appropriate to answer the posed research queries. Descriptive case studies offer the ability to focus on a concentrated group of school leaders towards the understanding of how access and opportunities for school-based physical activity across Schein's levels of school culture are affected by the beliefs of these cultural members.

Participants

Study participants were purposively sampled from two of three public, English-speaking secondary schools in a small, Northern Ontario school district; one school declined involvement because of an earlier commitment to a separate study. In 2012, the University and the local school district's research ethics review boards, along with the principals of the two participating secondary schools, granted study approval.

Immediately thereafter, teachers and administrators were invited to participate through a written letter of invitation. Interested participants provided informed consent and were individually briefed on study goals, benefits and expectations (4 principals, 8 teachers). Interviews occurred during school hours within a secure location on school grounds; data collection was finalized in March 2013.

Secondary school teachers and administrators are of interest because of their influence on school-based physical activity practices and policies and ‘insider’ perspective into their school’s physical activity culture (Schein, 1999). In particular, teachers can be long-standing members of their schools with established beliefs surrounding access to, and opportunities for school-based physical activity. Therefore, teachers are especially important to this research. To protect the anonymity of each person and school, pseudonyms replace actual names.

School A: School and participant profiles.

School A is located in the city-center and is the largest public secondary school in the district with a population of 920 students (predominantly Caucasian) and 61 staff members (24 males, 37 females). The majority of students are bussed to the school; it is regarded as the “artsy” school with dance and drama being its magnet programs. A key feature of this school is its recently modernized weight/wrestling room used by several outside community groups and the local University. Several staff members instruct practical courses within the local University’s Physical and Health Education department and believe collaboration with their community partner benefits their students, staff and culture.

School A has a new administrator with strong ties to physical activity that is attempting to engrain her values across the curriculum and culture. School A is known as an “artsy” school but has managed to maintain its prowess in intermural sports. According to the Physical Education teachers at School A, student numbers in elective, Physical Education courses are slowly increasing and non-competitive sport clubs and teams (i.e. yoga, zumba, volleyball, dance) are widely supported by students and staff.

Ashley is in her first year as the school’s principal after serving eight years as a vice-principal in three separate secondary schools in the district. Before becoming an administrator, Ashley was a grade eight teacher in the school district for five years and was actively involved in parent council and coaching volleyball, hockey and track and field.

Janice is one of the school’s two vice-principals and has worked for the district for 22 years. Prior to this appointment, she was a vice-principal at another public secondary school, held the coordinator of learning services position for four years and was in the classroom for 15 years before entering administration. Janice spoke fondly of her years coaching cross-country running, volleyball and track and field at various secondary schools and currently supervises the school’s volleyball club and helps coach track and field.

Dave is the school’s head of the Physical Education and the head coach of the boys’ senior football team and the girls’ ice hockey team. Dave has taught at this school for 13 years and is also a graduate of this school. During his interview, he regularly reminisced about how the school culture has changed over his tenure and spoke openly about the enhanced responsibilities and restrictions placed on teachers relative to his first year at the school.

Jason has spent his teaching career (nine years) at this school and is also a graduate. He is the head of Social Sciences and teaches one section of Physical Education each semester. Jason is the head coach of the senior boys' volleyball team.

Aaron has been the primary boys' Physical Education teacher at this school for the last ten of his 13-year teaching career. He coaches junior boys' football, boys' baseball, supervises the weightlifting club before and after school, and is an assistant coach with the track and field team.

Abbey has been a staff member at School A since she started teaching in 1990. She initiated the school's dance program and has taught Drama and English to all grades. For the last six years, Abbey has worked as one of the school's guidance counselors but continues to coach the cheerleading and downhill ski teams.

Lacey is an experienced, Physical Education teacher (23 years) and is the primary female Physical Education teacher at School A. She has spent her entire career at this school and in 2009, initiated the Specialist High Skills Major Program: Health and Wellness sector. Lacey remains active in intermural sports as the head and/or assistant coach of the girls' basketball, volleyball and soccer teams and leads the student athletic council.

School B: School and participant profiles.

School B is the second largest public secondary school in the district and is five kilometers south of the city center. It houses 800 students (predominantly Caucasian), 72 staff (41 males, 31 females) and is the only public school in the district that requires students to wear uniforms. Smart boards in every classroom, a new outdoor track and class sets of Blackberry Playbooks are the school's most recent capital investments. This school is considered the "sports' school" in the district with several city championships in football, ice hockey and track and field. Additionally, the Specialist High Skill Major: Health and Wellness academic program is heavily promoted to parents and students during grade eight parent information sessions, and the school is currently in transition from a grades 9-12 school to a grades 7-12 learning environment.

School B has several staff that within three or fewer years to retirement – two of these teachers are the male and female Physical Education teachers who coach three school sport teams. Adam, the principal of School B, discussed that the district was only allowing him to replace the retiring Physical Education teachers with part-time staff who were not Physical Education specialists. He was concerned of the impact this would have on the school's sport teams because many students attend School B for the strength and long history of intermural sport success.

Adam is School B's principal holding this title since 2006. Before 2006, he taught for 11 years in the school district at multiple secondary schools in the subject areas of Business and Computer Technology. Adam has always been immersed in school sports acting as the head coach of boys' baseball, ice hockey, track and field and soccer.

Jacob has worked as one of this school's vice-principals for a semester (six months). He was the vice-principal at another secondary school in the district for three years and has been in education for a total of 15 years. Jacob taught mostly at the junior levels (grades 5 and 6) where he coached alpine skiing and teacher-supervised the Free the Children student club.

Len is a guidance counselor with 32 years experience in the teaching profession, the last 15 years at this school. He has taught secondary Physical Education classes across Canada and internationally. During his teaching tenure, he has been involved in

school-based physical activities as a coach: ice hockey, basketball, gymnastics, wrestling and downhill skiing. Len currently helps with the track and field team.

Nancy is the head of guidance but continues to teach one section of girls' Physical Education each semester. In total, Nancy has taught Physical Education at School B for 27 years. She does not coach any more but has led girls' basketball, volleyball and soccer teams prior to her appointment in the guidance department. Nancy aids in the organization of Terry Fox Run fundraiser.

Randy retires at the end of 2013 with 31 years of Physical Education secondary school teaching experience, 23 years at School B. He is the primary male Physical Education teacher at the school and is the head coach of boys' football, ice hockey, basketball and track and field. Randy mentioned in his interview that the school district is not replacing him with a full-time, certified Physical Education teacher leaving many of the sport programs he leads in limbo.

Data Collection

Teacher and administrator beliefs were obtained through individual focus interviews that occurred in a secure location on school grounds and during school hours for participant convenience. This method was chosen because of its reliability (Tellis, 1997) and flexibility to manage each participant differently while asking the same questions (Noor, 2008).

The interview items (Table 1) were drawn from the Modified Active PASS (Physically Active School Settings) survey (MAPS) (Rickwood, Temple, & Meldrum, 2011). This modified survey is a valid and reliable tool for examining factors associated with school culture that influence school-based physical activity opportunities and student physical activity levels (Rickwood et al., 2011).

Table 1

Focus Interview Prompts

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1. This school's values concerning physical activity are explicit (i.e. policy documents, assembly announcements, school newsletters).
 2. At this school, students have opportunities to learn how to organize games, sports, and other physical activity programs at school.
 3. At this school, staff is encouraged to be physically active role models (i.e. walk/run with students during Terry Fox walks/runs).
 4. This school provides opportunities for staff and students to be physically active together (i.e. intramurals, Terry Fox walks/runs, class activities).
 5. This school provides organized physical activity opportunities for students before, during, and after school hours (i.e. running clubs, swim teams, environmental clubs).
 6. At this school, staff members promote and facilitate student participation in physical activities during leisure times (i.e. organize intramural activity programs, supervise open
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gym sessions, etc.).

7. This school recognizes students through celebrations, certificates, and/or rewards for physical activity participation.
 8. This school discourages the removal of time dedicated to PE or leisure time as punishment.
 9. At this school, staff are encouraged to share their personal physical activity interests with students (i.e. running a marathon, yoga instructor).
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These survey items were selected because of the concentration on school practices and policies. Initially, participants were given five response prompts: strongly disagree, disagree, undecided, agree, and strongly agree and then asked, (a) “Why do you feel this way?” (b) “What experiences have solidified your beliefs on this issue?” and; (c) “Have your beliefs changed over your time spent in this school? If so, what circumstances or experiences have altered your beliefs?” Furthermore, if someone strongly disagreed with a statement, he/she was asked to think of school policies or practices that might alter their beliefs. In turn, if a teacher/administrator strongly agreed with a statement, they were asked to give reasons why they believed the school was achieving success in this area.

Verbal responses were recorded using Quick Time (Macintosh application) that allowed for event sequencing and replays of direct quotes (Hammersley & Atkinson, 1983; Warren & Karner, 2010). One month post-interview, participants were given word-processed transcripts of their comments and asked to review them for clarity and representativeness. At this time, they could delete any information they were uncomfortable disclosing and/or add any new thoughts.

Data Organization and Analysis

Due to the copious nature of qualitative data collected in this study, it was necessary to effectively organize the data prior to analysis. Initially, participant comments were inputted into the latest version of word-processing program *Microsoft Word* in search of thematic patterns, the preferred method of data organization in qualitative research (Warren & Karner, 2010). Miles and Huberman (1984) confirm that analyzing qualitative data is more efficient when categorized into themes, flow charts and/or calculating the frequency of similar statements.

The next step involved clustering participant responses according to the levels of school culture: school artifacts and school practices and policies (Schein, 1985). Yin (1994) suggests the most pragmatic method is to dissect the evidence according to the theoretical framework proposed at the outset of a study. To accomplish this, each level was afforded a singular colour (i.e. school artifacts = orange, school practices/policies = green) for consistent transfer of participant beliefs into the cultural systems’ framework. The responses were colour-coded using the following definitions: school artifacts (i.e. tangible components of school culture - what one sees, hears, smells or tastes) and school policies and practices (i.e. Physical Education/physical activity related). Overall, organizing the data in this manner categorized participant beliefs into the study’s theoretical construct and helped identify thematic trends across participants.

Trustworthiness

Several techniques that heightened the trustworthiness of the data collected from school leaders at the studied schools were implemented. Initially, the research team communicated study expectations at each school's monthly staff meeting to promote voluntary participation to all administrative and teaching staff. At this time, potential participants were informed that voluntarily withdrawal from the study was permitted at any time prior to, during or post-interview. An additional purpose of the on-site study presentation was to help the research team situate participant comments into specific school contexts. Moreover, the principal of each school guided the research team on a tour of school hallways, administrative offices, gymnasiums, theatre and technology classrooms, and outdoor spaces. This offered an insider perspective into the culture and aided in drawing inferences and verifiable conclusions from the data.

A second strategy involved drawing information from a wide variety of sources. For example, consenting teachers and administrators encompassed administrators (principals, vice-principals), heads of physical education and social sciences, guidance counselors and dance teachers. The diversity among participant roles in their school, and length of time working in the culture, allowed for a broader, more in-depth examination (i.e. triangulation) of the school's physically active cultural systems. It also improved the validity and reliability of the data across participants.

Another technique included a follow-up interview where the research team reviewed individual transcriptions with each participant. This process allowed school leaders the opportunity to add details to their initial comments or delete any statements they felt were not representative of their beliefs. It also helped eliminate researcher bias, particularly when statements were unclear or left open. Each of these strategies has been found to increase trustworthiness in qualitative research (Shenton, 2004).

Results

Participants' beliefs were synthesized and analyzed according to Schein's (1985) levels of organizational culture for a more complex analysis of the factors believed to be associated with physical activity opportunities and student physical activity levels in the studied secondary schools. Using this framework, the respondents' beliefs are outlined in the following section.

School Artifacts

Legends and stories.

School leaders from School B outlined the significance of the school's history around sporting excellence and alumni who dispersed positive messages to the community and future student generations about the culture of sport and physical activity. Adam, principal of School B, stated, "We're known as an athletic school based on years and years of tradition – more at kind of the varsity sports' level." In support of this sport tradition, Adam said the school displays these values around the school:

We have character education posters on the walls illustrating both genders in multiple sports and things like that. We have an athletic wall of fame that has a trophy case right when you walk into the school. We promote active living by

opening the gym at lunch everyday for random things that kids can come in and do just to be active.

Moreover, Jacob explained:

I came to this school with some history – my wife taught here for 13 years so I know most of the staff – I knew the sport culture when I arrived. I knew the staff was encouraged to promote the importance of fitness to students.

Len from School B reaffirmed Adam and Jacob’s beliefs:

We’re sort of known as the jock school – this label is good and bad because we fight this label when we try to recruit students. We are more than just PE and sports – it’s out there because we’ve always won the triple crown in school sports.

However Nancy, a long serving teacher and guidance counselor at School B felt the stigma of being titled a “sports school” was changing – and for the better:

We used to be a real jock school – we’ve changed which is good. A reason for diversifying our culture is that we have lost the PE teachers, we’ve lost the students numbers and they’re (students) not going into PE anymore after grade nine. So now, you’re not getting the promotion.

Teachers from School A also confirmed the importance of teaching newcomers about school history for cultural sustainability. For example, Aaron recalled:

I think the history behind the school – I remember when I was teaching at another school and noticing all the alumni teachers from this school sitting in the stands supporting their school’s sports’ teams.

Additionally, Lacey felt:

It is everyone’s perspective that we are an artsy school because a few years ago, the district tried to make us a drama/dance magnet school. We do seem to draw students interested mostly in drama and dance but we seem to get the same number of athletes that we would anyhow whether it is a school for the arts or not.

Mentorship.

Teachers and administrators in this study believed the most significant outward expression of a physically active culture was the behaviours of its leaders. According to the principal of School A (Ashley), teacher mentorship was key to keeping the school’s sport culture alive – she said, “Teacher role models are at the heart of our long-standing sport, dance and physical activity programs at the school.” She went on to say:

If you want a healthy, active school, you better live it too. I live an active lifestyle and am very involved with our school sports’ team. I am a consumer of physical activity, not just a cheerleader. Being active is who I am and that naturally flows through my leadership.

Janice, vice-principal of School A, strongly agreed with Ashley:

We have a lot of teachers who just happen to be active on their own so they demonstrate it. I mean, we have teachers that ride their bikes to school and the students are well aware of this. So, we have active teacher role models who do discuss and demonstrate the value of physical activity to students. Mr. G is a good example – he’s a big cyclist, a big cross-country skier and the kids know that because they see him on his bike and he talks about stuff that he does and promotes it.

Furthermore, Abbey from School A talked about the unwritten rule of teacher involvement in school-based physical activity:

We have teachers who bike and walk to school – we have teacher teams for intramurals and the Terry Fox run where students and teachers are active together. The whole school is mandated to participate in this run. If you can't get everyone participating, not just those who like it or want to, we try to get everybody going. In my opinion, it's (physical activity) a vehicle to enrich the students' lives – to make them better people.

Dave reinforced the need for promoting physical activity to students who are not on sport teams. He says, "I'm always trying to work the angle of the importance of intramurals for kids who aren't involved on teams – they can get exercise and enjoy some activity at lunch." Lacey believed this approach was very effective to reach the non-athletic students. Her mission with her junior Physical Education classes was:

I usually try to get my grade nines to get involved in something at the school whether it be drama, music, dance, sports, etc. I want students to get involved in physical activity opportunities in the school but if not on a team or club, then I push them to get involved outside of the classroom as opposed to just coming to school from 9-3 and going home.

Moreover, Jason talked about how his teachers growing up inspired him to be the teacher he is today:

I believe being active at school re-focuses students – it makes people physically aware of themselves. I was fortunate to have teachers who understood the importance of physical activity when I was a student at this school. It is vitally important, you notice the more active kids have the higher academic averages in this school. They have the skills to seek out answers or they have a rapport with teachers on a different front so it's easier to find the answers or ask questions and to get help.

Aaron, a Physical Education teacher at School A, discussed the significance of modeling behaviours expected of the students. He stated:

I strongly want all my kids in all my PE classes to be involved – I want them to be active first. I will get involved if a team needs a player – I have always been like that. I know that my other PE colleagues are pretty much the same. It is important that we practice what we preach.

The vice-principal of School A (Janice) believed that administration, and the school as a whole, should be doing more to promote teacher involvement in school-based physical activity opportunities. Janice tried to do her part by funding professional development opportunities for teachers who wanted to coach or lead a sport club or team, and personally ran five kilometers everyday at lunch. At times, she felt these efforts were frugal because new teachers did not perceive that extracurricular involvement was part of their job. However, Janice understood why some new teachers were discontinuing their involvement extracurricular sport activities – she stated, "For the new teachers who are making efforts to get involved in school sports, the relentless pressure from parents to field elite level, competitive school sport teams, is pushing these teachers out of sport leadership."

At School B, Adam believed the staff was positively promoting the value of physical activity to students and colleagues. For example, he said:

We have six teachers who train with the cross-country team and one female teacher runs a 10 km club where students train all winter to go to a race in Ottawa. Our vice-principal is a Zumba instructor so she's been doing weekly sessions with staff and students – she has actually gone into the grade nine girls' gym classes and done a few sessions.

Adam said that he knows that for many of his teacher/coaches at the school, extracurricular activities were the reasons they entered the teaching profession. In his opinion, "When teacher/coaches get to know kids at a different level, they become advocates for them. It may be the baseball team that keeps some kids (and teachers) around." For Jacob, vice-principal at School B, this philosophy held true. In his words:

For young teachers, it's important to not just know the academic part of the kid. They need to get involved with teams and that sort of thing. If you want to be a good teacher, you should be involved outside your classroom – it will make your job inside the classroom much easier.

Len believed his colleagues were trying to encourage student physical activity by example but there was some work to be done. He said:

Teachers here certainly encourage students to be active – there are open gym sessions at lunch that encourage kids to try new things but it is low-key promotion. The same kids always seem to be in the gym at lunch playing the same games. I think we are really missing out on an opportunity here to get non-athletes and the recreational person into the gym and having fun.

Comparatively, Nancy also expressed the need for more activities and active role models in general at School B. She said:

We do not have enough PE people who are in leadership roles in this school. We also do not have PE consultants and things like that in our district. I know elementary teachers come to us and ask if we'll run the volleyball team for them and we turn them down because we do not have the physical activity leaders in this school. If you do not have strong individuals with PE backgrounds, opportunities for physical activity will decline.

According to Nancy, the decrease in the number of physically active role models in her school negatively affected the number and importance of school-based physical activity opportunities at the school, and stymied the growth and presence of physical activity in elementary and secondary schools across the region.

School Practices and Policies

Administrative support for physical activity.

Ashley (School A) spoke proudly of student buy-outs for the student body to support the school's football and/or hockey teams. She said:

I allow student buy-outs for student attendance at school team sporting events because it builds culture – it builds awareness and appreciation for students who commit to daily physical activity and sport. If I do not allow events like buy-outs, you're only going to be academic only school. I believe the principal has to provide direction to the students that physical activity is pivotal to education and learning.

Ashley felt that allowing students to attend school sporting events during school hours modeled to other schools, parents and the community that sport and physical activity was

valued and meshed into the school's daily routine. Ashley also believed it was important that administration be present at school-based team events:

I think the principal and administration need to show their faces at sporting events. I think support – I have got all of these coaches dedicating all this time and if you don't get that feedback from administration, you're done – they'll go, OK, that's nice.

It was apparent that she took school-based physical activity promotion very seriously as outlined in her comments below:

I am up at night thinking about how I can keep at-risk kids in school if they love basketball and there is not basketball team – sport is the carrot for most of these kids.

Supporting staff involvement in curricular and non-curricular physical activity opportunities was also important to Janice, the vice-principal of School A. When talking with her, she spoke passionately about supporting her teachers in these endeavours. For example:

We (administration) encourage teachers to get any kind of training certifications required to coach or lead a sport or make their classrooms more engaging for students. We offer release time from classes for teachers involved in coaching and support team fundraising initiatives to obtain the money necessary for student participation. In my opinion, administrators across the province need to recognize that many of our kids stay in school because of the extracurriculars and again, it's not just physical activities.

Teaching staff at School A outlined how fortunate they were to have administrators who supported teacher and student involvement in school-based physical activity opportunities. Abbey stated:

It is crucial that administration supports and recognizes student physical activity accomplishments to teach them that it is an important part of our daily lives. The staff and parents also need to support physically active, school-based initiatives in order for the students to buy-in.

Furthermore, Dave mentioned that, "Support of physical activities starts with the principal – she's the one who schedules me in to supervise the gym at lunch for kids to be active." Lacey was impressed by the regularity in which administrators attended intermural games:

I always see at least one administrator around somewhere at every team's games. This is good because I know they are really busy visiting drama and music productions so it is impressive to see them make the commitment to supporting athletics as well.

Administrators at School B also believed they promoted the value of physical activity to staff and students. For example, Jacob mentioned:

I always find time to get involved in extracurriculars – I sit on the Me to We student campaign club at lunch. I have been to three football games this year and one hockey game. I know the staff leaders for these teams and clubs need to see support from administration because I used to be in their shoes and remember how reassuring it was that my time and efforts were being noticed and appreciated.

However, administrator attempts to support team and sport club leaders were not substantial enough to reinforce that school-based physical activity was an important cultural value. Len believed:

I don't think there's any promotion or encouragement (from administration) to be physically active or set an example for our students. We have a lot of teachers who are but it's more of a personal choice. There is nothing that is pushed from administration that says physical activity must happen.

Nancy concurred with Len:

I do not feel administration supports physical activity as much as the staff does. Certainly, nothing is being recognized in terms of teachers with impressive physically active accomplishments. We have a staff member that runs the Boston Marathon every year but it was more or less our principal who went to her and said congratulations and that was it.

She continued her thoughts by saying:

Some teachers are being physically active and role models but I certainly don't think they are being encouraged. It's just a personal initiative. There needs to be encouragement from administration – we like to be active so we would like to see the kids be active and get involved.

Daily timetable.

Dave from School A affirmed that because of the altered daily timetable, he had ceased organizing intramurals. “Since the advent of MSIP (multi-subject instructional period) and shortened lunch periods, I have less preparation time – because of this, I have gotten away from organizing intramurals.” Lacey from the same school mentioned the now 45 minute lunch inhibits staff and student involvement in lunchtime intramurals:

There is simply not enough time to eat, exercise and get prepared for the first afternoon class. My first 15 years teaching at this school, we had a longer lunch and so we used to have a staff team that played every single sport and we'd compete against the students. I think if there was more time dedicated to physical activity throughout the school day, there would be more involvement by staff and students. We need 20 minutes of school-wide, daily physical activity as part of our regular routine – just like elementary schools.

She believed the lack of teacher participation and presence in the gym during lunch negatively impacted staff morale and student involvement in these activities. Participants from School B did not make reference to the daily timetable as being an influential factor on delivering intramurals or any other school-based physical activity opportunity.

Teacher liability.

Some teachers and administrators expressed the increasing weight of legal liability as a major deterrent to sport coaching and/or organizing and leading open gym periods and intramurals. From School A, Dave felt that the principal was integral in this area because he/she had the ability to place the right teachers in the gym for supervision (i.e. Physical Education teachers); teachers who were familiar with the rules and regulations of managing larger student numbers, using equipment, in large spaces. Also, he realized from experience supervising the gym that Physical Education teachers were more likely to organize the space, the students and the activities in a safe and efficient manner that maximized the time available for physical activity. From an administrators' perspective, Ashley (School A) agreed with Dave stating that:

With sports, I mean, dealing with policy documents and everything else that comes along with that – there is a lot of politics, a lot of liability, you're constantly working with that. I probably deal with sport-related issues more often in a day than I do with curriculum which is very interesting.

Janice (School A) also believed that “We are in the days of suing because parents think they can get some money and some teachers do not want this risk in a bleak job market.” In line with her colleagues, Abbey also claimed fear of legal retribution as one reason why teachers are avoiding extracurricular activities. She said:

Legally, teachers are not allowed to speak about their personal lives – it's considered grooming. Grooming is encouraging a child to come into your confidence so you can abuse them. This goes against the grain of who you are as a teacher. It is very difficult for a teacher who is passionate about their field and for teaching not to share personal interests with their students.

Aaron, a Physical Education teacher at School A, placed this statement in context. He told the research team, “Right now, there are a lot more outside coaches than there ever has been assisting with some of our competitive sports' team.” Additionally, teachers at School B felt restricted by legalities when trying to design new activity opportunities for students. For example, Aaron said:

I wish we could offer more physical activity options for students like tennis courts or an outdoor ice rink during the winter months but you can't now due to safety and liability issues.

New teacher hires.

Although Schools A and B employed several full and part-time teachers with under three years experience in education, consenting participants were all experienced teachers and administrators (> five years). The research team recruited each staff member diligently but the less experienced teachers chose not to voice their beliefs on the studied relationship. Interviewees felt this was a typical response from new staff when any voluntary extracurricular opportunities were presented at staff meetings.

For example, Aaron (School A) believed that principals used to hire teachers with a sport/coaching background but recently, he noticed new teachers were not doing their part with extracurricular duties. He said, “I do not think new teachers offer their services to extra-curriculars as often as they should; new teachers are off doing their own thing.” Aaron also noticed a trend with staff support at school sporting events. “We used to have greater staff support at team games but now, with a younger staff who have young kids to look after at home, staff support is noticeably decreasing.” Janice, like Aaron, noticed that new teachers were making a personal choice not to coach or get involved outside the classroom. This was an interesting statement because she was School A's vice-principal and responsible for hiring new teachers. According to Janice, “New teachers do not have the coping skills to handle the simultaneous stresses of a full-time teaching load and extracurricular involvement – they (new teachers) gravitate to what they are paid for – teaching.” Continuing with School A, Abbey stated, “The administration needs to inform new teachers of this unspoken expectation – when support is strong from teachers, running teams are a lot easier.” Furthermore, Abbey believed that teacher involvement in extracurricular duties was directly related to teacher demographics. In her opinion, the more experienced teachers were at the forefront of school-based physical activity

opportunities and the newer, less experienced teachers showed sporadic and superficial interest in leading their own club or team. Her perception was that:

We have a very young teaching staff that have young families. When you think of a sport that goes five nights a week for five months and you're gone on weekends, that is a big sacrifice for your family and your teaching duties. These time demands can ruin one's interest and joy of coaching.

Moreover, Jason, the Social Sciences' head at School A stated, "A lot of teachers being hired, many of them aren't doing extracurricular stuff like teachers used to." These comments seem contradictory based on the importance of a physically active school culture to School A's administration but are justified in the fact that the principal was recently appointed (six months) to lead this school and she has had few opportunities to instill her values into the greater school culture. Thus, participant beliefs surrounding School A may be reflective of prior administration.

Interestingly, teachers from School B commented very little on the involvement of new teacher hires in physical activities. This was unexpected since School B appeared to promote physical activity in pockets or sub-cultures (i.e. Physical Education teachers) rather than a cultural norm as spoken of by teachers in School A. It was evident that School B required an influx of new teachers with sport backgrounds because of the number of retiring teacher/coaches but this was not perceived as a crucial factor in sustaining the school's sport culture. Nancy (School B) attributed the lack of interest from new teachers in extracurricular activities to the number of short-term occasional assignments they encounter when trying to secure full-time work in the profession. She felt these teachers recognized that they were only at the school for a brief period of time; their professional references are based on their teaching so that is what they spend their time doing.

Discussion

The evidence from this study aimed to answer whether the beliefs of secondary school leaders in Northern Ontario around physical activity were associated with the number and quality of school-based physical activity opportunities at their schools. In addition, what cultural characteristics of each secondary school encouraged and/or inhibited student and staff populations' participation in current school-based, physical activity opportunities?

A physically active school culture is defined in the literature as a school that encourages students to be more active (Fein, Plotnikoff, Wild, & Spence, 2004; Fuller, Sabiston, Karp, Barnett, & O'Loughlin, 2011; Mahar et al., 2006), one that maximizes opportunities for student physical activity, and/or a culture that explicitly values physical activity (Barnett et al., 2009b; Fuller et al., 2011). Based on these guidelines, both studied schools can be classified as active school cultures because of their outward investments in promoting physical activity through visible artifacts (i.e. what one sees, hears, feels). Abound in the data were references by school leaders from both schools about athletic banquets, sport assemblies, open gym periods, grade eight parent information sessions, student athletic councils and a variety of Physical Education courses and extracurricular sports' teams as flagship promotional tools for encouraging student involvement in physical activity opportunities. However, when investigated at deeper, internal level (i.e.

member beliefs) both cultures were fragmented; school staff acted as individual entities within the larger culture; common goals, behaviours and values regarding physical activity were absent from their cultural identities. Unless the 'whole school' can characterize and behave according to cultural norms specific to physical activity, participation and promotion of school-based physical activity will remain an underground anomaly.

In order to represent the data equally and fairly across studied schools, it is important to understand that students attend Ontario secondary schools for a total of four to five years. In contrast, students in elementary/middle schools can be present in the same school culture for six to eight years. Deal and Kennedy (1983) suggest a period of two years for students to learn their culture and coherently teach newcomers about school values. Therefore, just as students become familiar with their secondary school, they graduate with very little time or inspiration to convey key stories and culturally acceptable behaviours to students entering grade nine. Ostensibly, the culture is transformed at a pace faster than it can be learned and lived which, in turn, has a significant impact on the practices and policies that define cultural members' experiences in secondary schools.

School Artifacts

Physical spaces and equipment.

One teacher and one administrator briefly discussed the importance of modernized, physical activity spaces and equipment as part of the successful operation of secondary school intramurals and leisure time activity options. However, a majority of the participants deemed school facilities negligible when promoting school-based physical activity opportunities. Essentially, if physical activity was a part of a teacher's and/or administrator's personal daily routine, then these lifestyle choices were relayed to the student population irrespective the existing school facilities and equipment.

These findings deviate from earlier studies carried out in elementary and middle school contexts that found gymnasiums, outdoor spaces, weight and fitness rooms and overall square footage of schools positively influenced student physical activity levels (Cohen et al., 2008; Dymont, Bell, & Lucas, 2009; Haug et al., 2008). Fewer studies have focused on the influence of facilities and spaces designated for school-based physical activity on physical activity opportunities and/or student physical activity levels in secondary schools (Durant et al., 2009; Rickwood & Singleton, 2012). What is clear from each study that evaluated this relationship, regardless of the school context, was that the presence of these artifacts did not increase the number of school-based physical activity opportunities or student physical activity levels. It was the school's policies and daily practices that granted student access at times when they could use these facilities and allowed teachers to organize and supervise activities that incorporated these artifacts (Barnett et al., 2009b; Bauer et al., 2006; MacQuarrie et al., 2008).

Overall, when considering the existing research in this area, new fitness and sports' equipment, modernized playgrounds and large, maintained outdoor play spaces may be more imperative in the elementary and middle school contexts due to the amount of time students spend outdoors as part of teacher-organized and supervised play during the school day.

Politics

A factor originating outside school walls but directly impacting teachers' willingness to go the extra mile for their students and school (i.e. extracurricular involvement) was the current political climate. During data collection, Northern Ontario secondary teachers were in a legal strike position where all extracurricular supervisory duties were ceased. Some participants talked about how this stand would influence teacher involvement in extracurricular activities long-term. For example, Jacob (School B) explained:

Today, in terms of our sport culture, the political climate around Bill 115 has been culturally poisonous to our school. Teachers have just stopped doing what they have always done voluntarily and it will take years to recover – some teachers may never coach or lead sport clubs again.

Furthermore, Jason (School B) weighed in on the impacts of the political tension:

Right now, it is a political environment – a very tough year for teachers here who are adamant about coaching and extra-curriculars. Not just sport but dance and music – everything is affected.

Randy, also from School B, coached three sport seasons for decades – he expressed his feelings on how the teacher strike would impact school sports:

I have voluntarily given years of my life to sport and physical activity at this school and my family has made huge sacrifices for the time I have invested into school sports. Now, because of political issues, I must stop doing what I love to do. Sport is only strong at this school because of the people involved in it. I guarantee you that this strike will push new teachers away from doing extra and maybe even me.

Legends/stories.

At School B, school leaders believed students arrived in grade nine harbouring deep knowledge of a school's physical activity values passed down from their parents and/or siblings who previously attended the school. Favourable stories told around the school community can be effective in communicating a school's identity and values to outsiders; a strong school culture invites the outside in to avoid a mismatch of cultural ideals (Deal & Kennedy, 1983). Conversely, participants from School A did not feel students entered the culture with a deep sense of what the school stood for beyond the Arts' programs.

In reference to the data, teachers from School B leaned on the notion that the school's reputation of sport prowess was enough to sustain its strong values of physical activity; in essence, students entered the building pre-wired for success and participation in school-based physical activities. As a result, the culture of physical activity was stagnate and not being revived by new or existing teachers. At School B, students were the leaders in physical activity promotion through athletic councils and senior Physical Education leadership classes.

On the other hand, teachers and administrators from School A believed it was their daily duty to mentor the importance of student and staff participation in extracurricular, physical activity opportunities. Interestingly, administrators from both schools valued daily physical activity and encouraged student and staff participation in intramurals and extracurricular sports but the message was only heard and delivered by teachers in School A. Staff working in School A consistently mentioned the struggle to

overcome the stigma of just being an “Arts” school. This motivation appeared to rally school leaders to regularly promote and mentor, beyond the dance program, physically active values and opportunities to the students.

Specialized academic programs.

One factor that arose in many of the participant’s responses was the underlying influence (or lack of) of each school’s magnet programs on student and staff participation in school-based physical activity opportunities. School A’s academic focus was the Arts (i.e. drama, dance, music), which attracted a unique set of student interests. School B’s magnet programs were Math, Science and Technology. However, neither teachers nor administrators directly linked these magnet programs to the noticeable decline in student participation in Physical Education classes and/or competitive, extracurricular sports. Participants at both schools felt their extracurricular sport programs (competitive team sports) were thriving in the typical areas, but student attendance and teacher participation in open gym sessions, early morning volleyball and badminton clubs and other leisure time, non-competitive activities was diminishing. Some teachers attributed this decline to the exhaustive number of extracurricular responsibilities (i.e. drama rehearsals, team meetings, membership on charitable school clubs) students take on to build their resumes for university applications. Thus, the pressure to enhance one’s profile and demonstrate diversification in studies and community service may supersede the desire to take advantage of the leisure-time opportunities for physical activity throughout the school day.

These findings support earlier evidence that student’s primary academic interests can influence the number and frequency in which they participate in leisure time, intramurals or sport clubs. Rickwood and Singleton (2012) found that students at an Arts focus secondary school in southwestern Ontario chose not to engage in lunch-time intramurals because of the academic demands of the program; duties such as rehearsing for upcoming drama productions or completing art sculptures and/or paintings to fulfill curricular objectives were of higher priority. Surprisingly, these same students were involved with extracurricular sport teams after school as athletes, trainers or assistant coaches – a finding duplicated in this study.

Considering this dilemma, it appears that dedicating a specific time (excluding lunch period) and/or day for intramurals/physical activity may be the only reasonable alternative for today’s secondary student. This concept is not new and is accepted as part of the Ontario private school philosophical approach to engaging all students in physical activity. With curriculum expectations extending beyond class hours for many students, the private school model of mandated physical activity implanted into the weekly timetable may be a practical option to encourage school-wide participation.

School practices and policies.

Perhaps the most effective method of creating and/or sustaining a physically active, secondary school culture is to develop and defend the policies and practices that make physical activity inclusionary across the curriculum, and part of a student’s regular routine at school. At the forefront of these decisions is school administration; this hierarchical organizational structure can be problematic in secondary schools as administrators are often uprooted and reassigned to new schools after three years of service. Dependent upon the values and goals of the new principal, the existing physical activity culture may become marginalized or revoked (Deal & Peterson, 1990).

According to Hargreaves (2000), establishing a secondary school culture that is accepted and enforced by cultural members requires six years – if the school administrator is replaced every three years, then a distinct culture is unable to infiltrate across cultural members.

With this in mind, a common ending to most participant interviews involved discussions precipitated by the respondent, concerning the answer to, “How do we create an active school culture and if we incorporate supportive practices and policies for regular physical activity into our daily timetable, how do we know it is working?” The data clearly outlined the palpable desire of all study participants to promote the importance of daily, physical activity to the student and staff populations. Furthermore, staff at both schools recognized the benefits of daily physical activity beyond the physical; enhanced student focus and attention in classrooms, decreased student anxiety, improve student-school connection, information retention and higher academic rewards (Bonny, Britto, Klostermann, Hornung, & Slap, 2000; Dymont & Bell, 2007; Klem & Connell, 2004). However, the dysfunctional channels of communication between administration, teachers and students prevented cultural acceptance and understanding. When asked the various interview questions, a majority of teachers and administrators initiated their answer by, “I do not know what the rest of the staff believes or is doing to promote physical activity, but I...” In turn, these same individuals had blind confidence that the staff as a whole was doing what they could in their departments to promote physical activity but could not confirm, outside of the Physical Education teachers, what strategies, if any, people were using to get students active outside their classrooms.

Daily timetable.

The latent factor and disputed core of the issues around the reduced numbers of students and staff engaged in school-based physical activity opportunities was the daily timetable. Experienced teachers and administrators alike voiced their displeasure regarding the limitations that the current timetable placed on teacher preparation time and students’ and teachers’ abilities to be physically active at school.

Teachers from both schools believed the most significant change was the shortened lunch period as per Ministry of Education guidelines to compensate for increased instructional time. Many teachers reminisced about how lunch used to be the time when teachers could exercise and collaborate with their colleagues, but the reduced time allotment compacted staff’s discretionary time. As several participants indicated, any free time they had during the school day was dedicated to classroom/lesson preparation, not participation in physical activity or preparing to coach the school’s volleyball team practice.

Other researchers support these findings; school policies that demote leisure time minutes (i.e. nutrition breaks, lunch periods) and restrict and/or remove leisure times during the school day produce fewer student options for physical activity (Bocarro et al., 2008; Rentner et al., 2006) and decrease students’ daily physical activity levels (Koplan et al., 2005; Trudeau & Shephard, 2005). It will be of interest to follow the Ministry of Education guidelines for leisure periods over the next few years if the percentage of students who are moderate to vigorously active on a daily basis continues to decline.

Mentorship.

In Physical Education classes, teachers from School A found if they were engaged in the class activities, then their students were more active and participated to the best of

their abilities. Outside of Physical Education, these same teachers felt being involved in school-wide events such as the Terry Fox walk, actively commuting to and from school, coaching and/or attending extracurricular sport competitions and actively organizing and leading opportunities for students to be physically active during leisure times modeled healthy behaviours expected of the student population. This physical activity promotional model was not adopted or practiced by school leaders in School B.

The principals at both schools believed they robustly encouraged all staff to model a physically active lifestyle but the teachers (primarily of School B) were collectively unaware of any promotion from administration to be active and/or urge students to get involved in school-based physical activities. Furthermore, teachers from both schools were vaguely unaware of the staff members who did endorse physical activity to students beyond the Physical Education teachers.

Due to this cultural disconnect, it was not surprising that teachers and administrators from both schools perceived that promotion of student participation into intramurals, extracurricular sport and open gym sessions was solely dependent on an individual's personal choice to rally student interest rather than a cultural expectation. As outlined by respondents, a handful of teachers/administrators in both schools were able to sustain their school's team sport traditions through coaching, fundraising and student recruitment. Yet, in order to attract the non-competitive, non-athletic student to school-based physical activity opportunities, a "whole school" cultural approach to physical activity promotion was required but absent in both studied schools.

In summation, this research responds to the call for research relative to the relationship between physically active, teacher/administrator role models and school-based physical activity opportunities (Leatherdale & Rynard, 2013; Rickwood & Singleton, 2012). Relative to earlier findings in this area, this study concludes that active role models who outwardly demonstrate healthy behaviours can influence the number and quality of school-based physical activity opportunities and how physical activity is perceived by secondary school staff and students (Stratton & Mullan, 2005; Varpalotai & Thomas, 2007, 2009). On the other hand, it does not guarantee that more students and staff will contribute to these opportunities. In both schools, staff believed that multiple diverse opportunities were available to students and staff; although, the presence of these activities was not enough to encourage new teachers or the recreational student/athlete to get involved due to other overpowering cultural factors (i.e. daily timetable, legal liability, curricular obligations) that tampered their motivation.

Study Limitations

Administration in both schools cited teacher job action in refutation of Bill 115¹ as a key inhibitor to a more welcoming response to the call for participants. At the time of this study, secondary teachers across the district were in full withdrawal of extracurricular services. Furthermore, because of the limited sample of teachers and administrators studied from two schools in northern Ontario, study findings are not

¹Bill 115 allows the Ontario government to set rules that school boards must adhere to when negotiating with local unions. A collective agreement can be imposed on the board, employee bargaining units and employees. It also limits the legality of teachers' unions and support staff going on strike.

generalizable. However, the knowledge gained from this study has expanded the understanding around the cultural factors that influence school-based physical activity opportunities in secondary schools.

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