

## METHODOLOGY

# Teachers' Understanding of Students' Attitudes and Values Toward Physical Activity in Physical Education Dropout Rates and Adolescent Obesity

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## Abstract

*Structured interviews were used to explore 10th grade teachers' understanding of students' attitudes and values toward physical education and physical activity as a variable in students' probability of dropping physical education and adolescent obesity. When asked how school-based physical education could help combat the problem of students dropping physical education, teachers suggested providing a greater range of choices among activities and providing further opportunity for positive experiences in physical education. Furthermore, teachers stated that the greatest barriers to students who are overweight and/or poorly skilled from enjoying physical education were their feelings of being humiliated, ridiculed, embarrassed, and discriminated against. Teachers demonstrated a lucid understanding of students' attitudes and values, as well as of more debilitating barriers, to increasing physical activity. Notwithstanding, if physical educators are to provide a safe and encouraging environment, they must acknowledge that what they do, or choose not to do, may have an enduring impact on students.*

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*Although teachers are unable to do much about extracurricular physical activity, they can do something about the physical education offered in schools. Results of the study suggest that teachers must offer more activities from which students may choose including sports that do not demand highly developed motor skills, but still emphasize fitness and health.*

Child and youth obesity rates are outrageously high and continue to increase at a frightening rate (Kim & Lee, 2009). According to Hedley et al. (2004), approximately one third of American adolescents are overweight, and the *International Journal of Paediatric Obesity* predicts that this number will rise to 50% among North American teens by 2020 (Wang & Lobstein, 2006). On a global scale, the World Health Organization (WHO) International Obesity Task Force estimates that 30 million to 45 million children are currently obese and that nearly 155 million are overweight (Barnes, Copeland, & Trembley, 2005). Unfortunately, without proper intervention, the trend of increasing child obesity rates will continue (Dollman, Norton, & Norton, 2005). This is of particular concern because youth who are overweight are at a h greater risk of becoming adults with weight problems (Must & Strauss, 1999). Indeed, Freedman et al. (2005) confirmed that children who are overweight have 4 times greater risk of becoming overweight later in life.

Although the prevalence of youth who are overweight in Canada is not as high as in the United States (24% in Canada compared to 34% in the United States), the situation is still undesirable and has continued to rise significantly over the past few decades (Wong & Leatherdale, 2009). Recent statistics indicate that the incidence of overweight among Canadians is currently 70% greater than it was 30 years ago and that obesity rates are presently 2.5 times higher than they were in 1978 and 1979 (Shields, 2006). Excessive weight is associated with an increased risk of developing cardiovascular disease, stroke, type 2 diabetes, and some cancers (Colditz, Sellers, & Trapido, 2006). Consequently, child and youth obesity also encompasses indirect costs, namely, the economic burden associated with treating, caring for, and rehabilitating obesity-related illnesses (Larissa & Donaldson, 2004). The cost of obesity-related health expenditures in Canada is estimated to be \$4.3 billion annually (Katzmarzyk & Janssen, 2004), and approximately \$1 billion per year in British Columbia (British Columbia Legislative Assembly, 2006). Furthermore, this number is expected to increase 50%

in British Columbia within the next decade (Sin, 2008). Not surprisingly, conclusions from the British Columbia Select Standing Committee on Health confirm that unless deliberate and abrupt actions are taken, British Columbia's children may be the first generation to have a shorter life span than their parents (British Columbia Legislative Assembly, 2006). Clearly, Canada, along with many other countries worldwide, is failing its children and youth.

Although obesity is typically attributed to improper diet and insufficient exercise, the condition is much more complex and diverse (Australia Standing Committee on Health and Ageing, 2009). One of the difficulties in combating the problem is that although numerous interrelated factors exist, treatment approaches have traditionally focused almost exclusively on diet and exercise alone. These approaches typically combine conventional exercise programs with restrictions in caloric intake and characteristically yield less than favorable results (Israel, Guile, Baker, & Silverman, 1994). Ebbeling, Pawlak, and Ludwig (2002) suggested that the disappointing results all too common with intervention programs designed for children and adolescents who are obese could be due in part to environmental and behavioral factors. Consequently, what children and youth who are struggling with obesity do not need is another "new" diet with which to experiment. What they need is a new paradigm (Katan, 2009). To date, relatively little inquiry has occurred into the role of environmental and behavioral factors on children who are obese. This work aimed to address the current gap in literature by examining how teachers' understanding of students' attitudes and values in physical education (PE) impact their curriculum delivery, which influences students' lifestyle and activity choices, ultimately affecting their body weight and fatness.

Earlier research by Landolfi (2012) investigated 114 male and female 10th grade high school students' attitudes and values to PE and physical activity (PA) as a variable in obesity among adolescents through the use of a survey-based questionnaire. Tenth grade students were specifically selected as this is the final grade level in which PE must be successfully completed to meet the minimum requirements for a high school graduation diploma in British Columbia (British Columbia Legislative Assembly, 2006). Moreover, both male and female adolescents are less physically active than younger children, and a more thorough understanding of this phenomenon is imperative to ameliorating the present obesity crisis among adolescents who are obese (Active Healthy Kids Canada,

2012). Results from the Health Behavior in School-Aged Children survey (Boyce, 2004), the Canadian Fitness and Lifestyle Research Institute's (2009) Kids CAN PLAY study, and the 2008–2009 Tell Them From Me survey (Active Healthy Kids Canada, 2010) confirm that the frequency and duration of PA levels are lowest in 10th grade students. Discouragingly, participation in school-based sports also decreases during high school (Willms & Flanagan, 2007).

Body mass index (BMI; defined as “weight in kilograms divided by height in meters squared”) was used to determine participants’ obesity levels (Canadian Society for Exercise Physiology, 2003). Although BMI often has been condemned as a less than ideal means of assessing an individual’s level of obesity, it is a pragmatic method for determining obesity levels among larger populations (Australia Standing Committee on Health and Ageing, 2009). This is in accordance with the International Obesity Task Force’s approach to measuring obesity among adolescents. In addition, these methods are identical to those deployed during the most recent Canadian Community Health Survey (2004) and are also sensitive to the timing of puberty among adolescents (Roblin, 2007).

In this current investigation, 10th grade teachers’ understanding of students’ attitudes and values toward PE in schools and PA in general were examined through structured interviews. Please refer to the Methods section of this article for a more detailed account of how teachers’ understandings were measured. For the intentions of this particular study, PA included school (regular curricular-based gym class instruction, as well as intramural and after-school sports or programs) and extracurricular physical activities in which students may engage on their own time such as programs offered through fitness facilities, recreation centers, and community-based sports clubs. Extracurricular physical activities encompassed formal programs that require preregistration and are heavily structured and supervised and less formal pickup-type activities. Although it was beyond the scope of this project to investigate all factors that could potentially contribute to students’ activity patterns, I anticipated that a deeper comprehension of 10th grade PE teachers’ understanding of students’ attitudes and values would provide critical insight into potentially viable interventions that could conceivably assist in the development and delivery of successful obesity prevention and retention programs. I hypothesized that 10th grade teachers’ understanding of students’ attitudes and values toward PE in schools and PA in general directly would influence (through teachers’ curricu-

lum delivery) students' PA experiences and behavior patterns. To date, quality data in this area are limited.

### **Significance of the Study to the Current State of Adolescent Obesity**

Children who dislike PA are less likely to engage in exercise regularly (Hastie, 2003). For those students, structured gym classes during school PE often are associated with feelings of hatred or animosity. Frank (1988) stated, "The distinct impression is that PE and fun are not synonymous, and as such, should be avoided at all costs" (p. A4). Consequently, children who are most in need of regular exercise are least likely to engage in it. They are typically unmotivated, see little or no value in PA, and are either left standing knock-kneed on the sidelines during school-based PE or drop the program altogether (British Columbia Legislative Assembly, 2006). Although the causes of obesity are complex and diverse, PA has been identified as a key intervention applied to obesity prevention and reduction among adolescents and may play a significant role in enhancing their health (Hollins, 2009). According to Griffin (2006), no single factor is more frequently responsible for obesity than lack of PA. The World Health Organization (2004) champions this assertion and endorses daily PE for all school-aged children. In addition, the United Nations Educational Scientific and Cultural Organization International Charter of Physical Education and Sport (1978) states that the practice of PE and sport is a fundamental right for all. Furthermore, the World Health Organization (2004) proposes that regular PA is the most viable course of action for enhancing the health of young people. Indeed, Menschick, Ahmed, Alexander, and Blum (2008) demonstrated reductions in BMI among high school students who obtained increased time in quality PE programs. Likewise, Datar and Sturm (2004) in their longitudinal study reported similar results in BMI with overweight elementary school students. Clearly, increasing quality PE time is a core component of obesity prevention (Caballero, 2004). Unfortunately, PE was graded a C in the 2012 Active Healthy Kids Canada Report Card—inferring that PE programs are succeeding with a little less than half of today's children and youth. Moreover, PA levels received an *F*, which suggests that few students (approximately 7%) are physically active enough to meet Canadian guidelines of 60 min of PA per day (Active Healthy Kids Canada, 2012). Perhaps these unfavorable outcomes are the result of persistent reductions in government funding of PE programs on a national level.

## **Attitudes to Physical Education and Physical Activity**

According to Fishbein and Ajzen's (1975) theory of reasoned action, attitudes influence a person's intention for engaging in PA. Clearly, people who maintain positive attitudes toward PA exercise more frequently and with greater intensity than those with less favorable attitudes (Mack & Shaddox, 2004). Furthermore, factors such as attitudes and beliefs play an important role in determining whether an individual decides to participate in and maintain active behavior (Cameron, Norgan, & Ellison, 2006).

Parizkova and Hills (2001) suggested that children and adolescents who are obese often demonstrate a fear of participating in sports and recreational activities, as well as in social events. This indicates that children struggling with obesity are less involved in the behaviors from which they could benefit the most. Consequently, they are more likely to develop a negative attitude toward PA and less likely to engage in it. For some junior high and middle school students, PE class remains a deplorable experience and their attitudes toward exercise progressively spiral downward through each subsequent grade (Krouscas, 1999). In addition, adolescents who are overweight and/or obese have reported that PA is not as enjoyable or beneficial for them in comparison to their "normal-weight" peers (Bourdeaudhuij et al., 2005). Encouragingly, attitudes toward PA have been shown to improve over time with proper intervention (Craeynest, Crombez, Deforche, Tanghe, & Bourdeaudhuij, 2008). This is precisely why it is important to gain deeper insight into teachers' understanding of students' attitudes and values toward PE and PA. Attitudes greatly influence everything that students do or choose not to do, as well as whether students experience success in a particular school subject. In addition, teachers account for students' attitudes on a continual basis during the design and delivery of their lessons. Due to teachers' crucial function and potential impact on students' learning experiences, a stronger grasp of teachers' understanding of students' attitudes and values could provide valuable information for curriculum design and delivery. By acquiring a clearer awareness of individuals' attitudes, teachers could adjust lessons to enhance students' experiences and ultimately influence future participation in PE and PA (Silverman & Subramaniam, 1999).

### **Methods**

The study employed interviews within a phenomenographic methodology (Marton, 1981). Phenomenography investigates

ways in which people experience or think about phenomena and (when applied within educational research) reflects what effective educators do within their practice (Bowden, 2000; Marton, 1986). Although facts or situations exist in only one world, people experience them in different ways (Bowden, 2005). Thus, phenomenography seeks an understanding of peoples' experiences. In addition, the method characteristically involves interviews with a small purposive (based on the knowledge of a population and the purpose of the study) sample with the researcher attempting to gain knowledge from the interviewee's experiences (Marton & Booth, 1997). As the investigation was oriented toward teachers' understanding, a primary concern included determining different ways in which teachers experience, perceive, and conceptualize students' attitudes and values toward PE and PA. Deeper insight into teachers' interpretations and understandings of students allows the researcher to make inferences that potentially advance knowledge. Furthermore, patterns and themes that emerge from the data result in the development of principles pragmatic to the field and ultimately guide teachers' practice within PE (Strauss & Corbin, 1990). Hence, the paradigm is well suited for understanding phenomena within their context, as well as establishing links among concepts and behaviors (Quinn, 2005).

With respect to teacher interviews, good interviewing skills are essential to the success of this type of investigation. The sense of trust that must exist between the interviewer and respondent is paramount. Prior to each session, the interviewer (whether it was the principle investigator or the research assistant) clarified that the goal was not to evaluate respondents as teachers or to evaluate the success of students, but rather to obtain a better understanding of teachers' views on students' attitudes and values. Making the interviewer's objectivity known from the outset was extremely important. However, objectivity did not extend to maintaining disinterest or distance from what was being discussed. Rather, the interviewer shared personal experiences with interviewees when it was appropriate, for instance, to clarify questions and to provide examples. As confirmed by Oakley (1981),

It becomes clear that, in most cases, the goal of finding out about people through interviewing is best achieved when the relationship of interviewer and interviewee is non-hierarchical and when the interviewer is prepared to invest his or her own personal identity in the relationship. (p. 41)

During interviews, the interviewer attempted to effectively use the following skills (Landolfi, 2002):

1. **Active listening:** Maintaining eye contact and showing interest in what the interviewee was saying, as well as not interrupting or jumping from subject to subject.
2. **Openness and empathy:** Being open in posture and expression while accepting respondents' information and avoiding value judgments based on what the interviewee said so that he or she felt free to express himself or herself without fear of disapproval.
3. **Paraphrasing and summary of content:** Paraphrasing responses to recapitulate the essence of what a respondent has said. This helped ensure correct comprehension on the interviewers part, as well as demonstrated to the respondent that he or she had the interviewers undivided attention.

## Participants

In-depth structured interviews with preestablished questions were conducted with twenty-one 10th grade PE teachers from two school boards located outside of Vancouver, British Columbia, Canada (see Table 1 for questions). Participants were recruited directly by the principal investigator using purposive sampling with the goal of maximizing information. Thirteen participants were male and eight were female. Male PE teachers' experience ranged from 1 to more than 30 years, and teaching experience among the female participants ranged from 1.5 to 25 years.

**Table 1**

*Questions for Structured Interviews*

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1. What do you think students enjoy most about physical activity?
2. What do you think students enjoy most about school-based physical education?
3. What do you think students enjoy least about physical activity?
4. What do you think students enjoy least about school-based physical education?
5. Do you believe students would change anything about the current physical education curriculum? If so, what do you think they would change?
6. Would you change anything about the current physical education curriculum? If so, what do you think you would change?
7. From students' perspectives, what do you think is most meaningful for them in physical education class (e.g., having an opportunity to be fully engaged and participating in the activities, learning new physical skills, improving fitness,

- developing a love and appreciation for physical activity, socializing with friends, not being made fun of)?
8. What do you believe best motivates students to participate in physical education class and engage in physical activity after completing high school?
  9. What strategies do you believe are most effective for engaging students who might be lower skilled in physical education class?
  10. A popular book among physical educators titled *Children and Movement* (Wall & Murray, 1994) describes the “Whole Child Approach.” The basic premise is that physical education is for everyone, but not all activities are appropriate for everyone. How could physical education teachers modify activities to match students’ abilities, interests, and needs?
  11. Rising obesity levels among young people is a hot topic these days. What do you believe are some of the key factors in the current increase in obesity among adolescents, and how could school-based physical education help combat this problem?
  12. What do you believe are some of the greatest barriers to students who are overweight and/or poorly skilled from enjoying physical education?
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## Data Collection

Interviews (which were audio recorded and transcribed verbatim) occurred at the teachers’ workplaces and were conducted by either the principal investigator or a fourth year University of the Fraser Valley Kinesiology and Physical Education undergraduate student research assistant and included 12 depth-probe (for clarification, completeness, and accuracy of understanding) questions that required approximately 30 to 45 min to complete. Although all questions focused on teachers’ understanding of students’ behavior (e.g., students’ participation in school-based PE or extracurricular PA), six questions emphasized cognition (e.g., what teachers think about students’ attitudes and values toward a particular type or aspect of PE or PA) and six questions pertained to affect (e.g., teachers’ understanding of students’ emotional attraction or feeling about a particular type or aspect of PE or PA). Subdividing questions in this manner helped characterize the multidimensionality of PA (Kenyon, 1968). Along with responding to formal interview items, teachers were also encouraged to express their own beliefs at the end of each question. This was done in an effort to diminish the problem of overestimating responses, a general tendency that is shared by interviewers, as well as add another dimension to teachers’ responses (Aikenhead, 1988). Obtaining data of this nature ultimately may assist in structuring PA programs that help children to make regular PA part of their lifestyle (Vlachopoulos & Biddle, 1997).

## Data Analysis

Interview questions had absolutely no correct or incorrect answers, but measured different beliefs about teachers' understanding of students' attitudes and values toward PE and PA. However, some responses to each question were more favorable to students participating in school-based PE, as well as leading a physically active lifestyle. Once all questions were answered, issues of credibility, reliability, and trustworthiness were addressed through member checks, which referred interpretations of data back to teachers for correction and verification (Erickson, 1979). Credibility was further strengthened through the sense of trust established between the interviewer and respondent (Lincoln & Guba, 1985). In addition, interview questions incorporated a tripartite model that conceptualized attitudes and values from a multidimensional perspective. This allowed for the thorough examination of cognitive, affective, and behavioral components of attitudes and values—unlike less rigorous interview methods that have traditionally deployed one-dimensional-based questions.

Once transcribed, the responses to interview questions were categorized according to students' motivation, students' attitudes and values, school-based PE, PA in general, and teachers' views on obesity among adolescents. Although all questions referred to teachers' understanding of students' behavior, interview items were further subdivided among those that more closely focused on teachers' understanding of students' affect or cognition. Following the subdivision of interview responses, data were analyzed for recurrent statements among participants, as well as patterns and themes. Themes emerged from participants' detailed accounts of their experiences, which provided unifying concepts related to teachers' perceptions (Bradley, Curry, & Devers, 2007). Moreover, a cross-analysis was employed to locate common themes across participants.

Of utmost importance was that data were collected, analyzed, and interpreted through teachers' eyes and in teachers' voices. As people are usually much more willing to adopt recommendations from projects for which they provide personal input, it was crucial to hear directly from those who are responsible for curriculum delivery and influence students' lifestyle and activity choices (Leeper, 1965). This assisted in amassing rich, thick, detailed information and descriptions that minimized prejudice, partiality, and subjective bias (Smith & Heshusius, 1986).

## Results

Findings were reviewed with respect to what teachers stated during interviews, and quotes taken directly from verbatim transcripts of teachers' responses were used to provide richer detail of results. Moreover, although all questions ascertained teachers' understanding of students' behavior, interview findings referring to teachers' perceptions of students' attitudes and values were expressed explicitly through affective and cognitive domains. Consequently, responses to affective-based questions indicated the most common theme among participants' (11 of 13 male teachers and all eight female teachers) understanding of students' greatest joy from school-based PE encompassed "being able to meet and socialize with friends outside of a regular classroom setting." One female teacher with 25 years of experience commented, "The social aspect is a really important part of it." Another female respondent with 15 years of teaching experience suggested a gender disparity: "The best part of physical education for girls is being with their friends and interacting with each other. For boys, I think they like competition." In addition, gender differences were noted in one of the novice (2 years of experience) female teachers' responses:

It's a social thing. I know for the girls it's pretty social, and if they're not really into competition, then getting them to do social things while moving is of great benefit. It's different for boys who are usually more competitive.

A male teacher with 18 years of experience also reflected on the dissimilarities between genders:

There is a social element. They like to be active with other people and I think that's a bit of a feminine quality as well. I think that with the girls that's a big part of it for them, whereas the boys enjoy competitiveness.

Moreover, seven of the male teachers, in comparison to two of the female teachers, stated that enjoyment of school-based PE also included "being part of a team," particularly for some of the more highly skilled, competitive students. "Meeting and socializing with friends" was an equally consistent theme in male and female participants' responses to what students liked most about PA in general as well. Another common theme (five of the male teachers and two of the female teachers) in response to what students enjoyed most

about school-based PE was “taking a break from some of the more academic subjects.” Furthermore, “having fun” was stated as being important to students by three of the female and two of the male interviewees.

There was consensus among seven male and five female teachers that “working hard” is what students enjoyed least about PA. One of the female teachers linked her response specifically to the general lack of physical conditioning among students: “This wasn’t the case when I entered the profession 25 years ago, but today’s students are more out of shape. Movement is more taxing on them, so they don’t want to work hard.” A male respondent with nearly 20 years of experience stated, “I would say working hard. The sustained elevated heart rate and the fact that it can be physically tiring, along with the sore muscles, is definitely what they enjoy least.” With respect to school-based PE, seven male and four female teachers referenced the impact of “lack of choice among activities on students’ experiences.” A novice female teacher with 2 years of experience stated, “What students enjoy least is the strict regimentation involved with always having to follow the teacher’s directions. For example, I tell them this is what we are doing today, and students don’t like it.” In addition, a male teacher with 6 years of experience confirmed that students often end up doing activities that they do not enjoy. Moreover, four respondents (two female and two male) specifically identified running as the least enjoyable physical activity among students. A female teacher with more than 10 years of experience agreed: “A lot of them don’t like running. Some students might have a particular unit they don’t like, but the vast majority do not enjoy running.” A male teacher with 5 years of experience confirmed,

That’s an easy one—running. Most kids hate it, but it’s something that we make sure we do on a regular basis to improve cardiovascular fitness. There is also the fact that it’s often tied in with testing. It’s just straight up physical exertion to see the maximum they can do, and students generally don’t like it.

High-level motor skills (as corroborated by five male and four female respondents) were another compelling deterrent to students’ enjoyment of school-based PE. Students’ lack of motor skills as a limiting factor to enjoying PE elicited some of the more passionate and detailed responses to interview questions. One of the more experienced (25 years) female teachers stated,

Not being able to perform and feeling singled out or basically ignored in a sense when no one passes the ball to them during a game. Students need a healthy environment where they feel secure and are not afraid of taking risks, but they also need a fundamental baseline of skills to develop the confidence to take risks. Without motor skills, students are seen in PE as wimps, and others sort of prey on them.

A male teacher with over 30 years of experience concurred,

Students feel they are on display during class and don't want to be singled out as not being good enough. They are worried about feeling intimidated or embarrassing themselves. Students have this massive fear of losing, of failure. Even the thought is absolutely devastating. It's ridiculous, but then again they've never lost. My sons played soccer, and no one ever kept score. Everybody gets a trophy. This attitude carries over to school PE. It's ridiculous. It's absolutely absurd!

Furthermore, although not a dominant theme, two female teachers proposed that an overly competitive environment facilitates negative experiences for students that may deter them from continuing PE when it becomes optional.

Regarding what was most meaningful to students in PE class, teachers stated that "socializing, having fun, and being successful" (e.g., not feeling awkward or intimidated in PE) were most imperative. These themes, in this specific order and as a single response to the question, were asserted by seven female and seven male interviewees. A novice female teacher with 1.5 years of experience affirmed,

I know how important socializing is to students, so I say they can talk as much as they want as long as it's not when I'm giving instructions. When I'm done, they can talk all they like providing they are moving and it's not stopping them from participating. It's funny because they think that they're not doing anything, but they really are. They're doing lots.

The value of socializing and having fun was noted by another novice (2 years of experience) female teacher who also noted the importance of students' success: "Experiencing success is very important, but the teacher must ensure a safe environment where students are more willing to participate and be active. Students are

more likely to experience success this way.” One female teacher with 25 years of experience supported this view, but included that feeling successful is a complicated thing because everyone’s different, but they should all feel secure, not threatened. This might be difficult because some kids are just not coordinated, just like some kids are not great essay writers. But students should feel that they have excelled and moved forward in their skill development and develop confidence. They are able to demonstrate this success by participating outside of the class on their own.

A male teacher (also with 25 years of experience) elaborated on this theme:

I think they would like to get more help with being able to do things. This includes knowing how to play a game and not feel awkward or intimidated by the whole process. I think they want to learn so they are not bullied or made fun of. They fear throwing or catching a ball. They’re afraid of the ball. I don’t know where they get it from, but students believe they can’t do it. I think they would like to be more comfortable so they could go out and play, you know, volleyball somewhere, but they have no self-esteem. They give up on things really easily and then don’t experience success.

In response to what best motivates students to participate in PE class and engage in PA after completing high school, four female and eight male respondents gave credence to providing “enjoyable and positive experiences in school physical education,” which they maintained was largely influenced by the teachers’ attitude and ability to encourage students. One of the female novice teachers with 2 years of experience stated,

I think the teacher is a big motivational tool. If teachers are passionate, then it really comes across. Myself, I like to role-model, so I participate with them and find that students are more likely to be engaged because you’re in there doing it; I think that carries over. If students have a positive experience in phys. ed., they’re more likely to continue with physical activity once school’s out.

A male teacher with 5 years of experience stated,

Teacher involvement is one of the biggest things. Being enthusiastic and acting as a role-model is huge—getting up

there with some energy and encouraging students. I also tell them my story of not being particularly athletic when I was younger and how I was overweight, but physical activity changed my life. This helps create an atmosphere where kids are willing to try new things and not feel like they will be harassed or laughed at.

Responses to cognitive-based questions indicated that three female and eight male teachers believed students would change the current PE curriculum by placing less focus on motor skills and more emphasis on play. A novice female teacher with 1.5 years of experience stated, “Some of my kids would just want to play. They just like moving and really don’t like learning skills.” One of the male teachers with 18 years of experience confirmed, “They’re just focused on the carrot, which involves playing the game afterwards. They would just play games.” The next most commonly mentioned theme (four female and six male teachers) encompassed increasing choices among the number of activities offered. A female teacher with more than 10 years of experience noted, “They would like to swim, skate and offer a number of different activities such as aerobics, kickboxing, yoga, Pilates, and step classes, but we just don’t provide that kind of stuff.” This was confirmed by one of the male teachers (with 6 years of experience) who also added hockey, curling, skiing, golfing, hiking, boating, and canoeing among the activities that students had requested. One female and four male teachers believed students would eliminate the classroom components of PE such as health. A male teacher with 6 years of experience stated,

They really don’t like the health unit. We also do first aid and a unit in the library. These involve a written component, and students don’t like it. Students would eliminate most classroom components in favor of games in the gym.

Furthermore, two female teachers and one male teacher affirmed that students would prefer single-sex as opposed to coed classes. A female teacher with 25 years of experience stated,

I think coed classes discourage girls because they don’t feel comfortable, and you certainly don’t want them to feel uncomfortable. Coed classes are a real hindrance to a lot of the girls; they can completely withdraw. I think the girls who aren’t competitive would opt for single-sex classes.

When teachers were asked what they would change about the current PE curriculum, five female and five male teachers said they would provide more options for students. A female teacher with 25 years of experience affirmed,

I would offer much more opportunities for students including outdoor recreational units. I would take them out on the surrounding lakes and rivers, but a lot of this is tied in with money. In addition to more choices I would also add greater funding.

One of the more novice (2 years of experience) male teachers stated, “I would provide kids with more off-campus type of activities, more alternative programs because traditional sports tend to get pretty boring for a lot of kids. The drawback is that this takes money to do.” In addition, two female respondents and one male respondent commented on providing improved gym facilities for PE to accommodate more choices for students. Consequently, responses to what teachers would change were relatively similar to what they believed students would change.

When asked about the most effective strategies for engaging lower skilled students in PE classes, teachers (four females and six males) most commonly responded that they would divide the class based on ability level and have students participate with those of similar skills. Other suggestions included modifying activities (three female and six male teachers) so they would provide a nonthreatening environment, and one female and one male teacher recommended offering students individual attention through peer learning. Responses were essentially reiterated by male and female teachers when they were asked how to best modify activities to match students’ abilities, interests, and needs.

Regarding key factors that contribute to the current increase in adolescent obesity, all eight female and 13 male teachers were unanimous in their beliefs about the negative effects of screen time (e.g., time spent in front of television, computers, and video games) and its relationship to increasing sedentary behavior as a fundamental cause of the obesity problem. In addition, eight female and four male teachers stated that another significant factor included the lack of parent involvement in children’s lives. A novice female teacher with 2 years of experience stated,

It starts with the family and how kids are brought up. Whether their parents are active and model that type of behavior. There's a lot of stuff that happens outside the school, and parents are the kids' first teachers. I think that some families don't value physical activity as much, and kids end up spending so much time in front of either the TV or computer.

A male teacher with 5 years of experience confirmed,

We are seeing kids spending a lot more time on computers and video games. I think the other thing is that parents are working more. They don't have the time to be as involved in their kids' lives. I see that type of detrimental combination.

Six female and 11 male teachers suggested that the greatest barriers to overweight and/or poorly skilled students enjoying PE were students feeling humiliated, ridiculed, embarrassed, and discriminated against, all of which contributed to students developing poorer attitudes toward school-based PE and PA. A novice female with 2 years of teaching experience asserted, "I think the greatest barrier is probably getting made fun of. It's humiliating and embarrassing to be made fun of. No one wants to be ridiculed." In addition, a male teacher with 5 years of experience stated, "The fear of looking bad and being ridiculed. One of my rules is that no teasing is allowed."

## **Discussion**

Ginott (1972) maintained that teachers are the most significant aspect of students' learning experiences:

As a teacher, I possess tremendous power to make a child's life miserable or joyous. I can be a tool of torture or an instrument of inspiration. I can humiliate or humor, hurt or heal. In all situations, it is my response that decides whether a crisis will be escalated or de-escalated, and a child humanized or de-humanized. (p. 15–16)

Strean (2009) concurred that teachers have a tremendous function in shaping young peoples' educational experiences and that an instructors' attitudes and behaviors impact greatly on students' PA choices later in life. In addition, there is consensus among physical educators, including those interviewed and surveyed for this study,

that a teachers' attitude plays a fundamental role in influencing adolescents' PA patterns (Boyd & Yin, 1996). Although PE teachers may have the best intentions, their attitudes, beliefs, and practices could result in detrimental learning experiences among students. Notwithstanding, negative experiences are a principal factor among students who choose not to engage in sports and PA (Cary, 2004). This view was also shared by participants in this particular study. Consequently, examining teachers' understanding of students' attitudes and values toward PE and PA remains imperative to gaining insight into PE dropout rates and obesity among adolescents. It is essential to explore teachers' beliefs about how they could best enhance students' PA learning experiences.

According to Sage (2003), the pursuit of a pertinent and acceptable theory of teaching has been a compelling challenge since the origins of contemporary PE. As aims, purposes, and beliefs, as well as social and educational theories, have changed over time, perhaps what is needed is a significant paradigm shift in the delivery of PE programs. Although society has definitely changed, has physical and health education adjusted appropriately (Tannehill, Romar, O'Sullivan, England, & Rosenberg, 1994)? Is a revamping of the PE curriculum, along with the function of PE teachers, necessary to meet the needs of today's students (Morey & Karp, 1998)? Clearly with the rising trend of inactivity among children and adolescents, in addition to corresponding increasing levels of obesity, physical educators must ponder offering greater diversity within their programs (Segher, de Martelaer, & Cardon, 2009). Regrettably, PE has not responded to the increasing number of students adopting sedentary behaviors (Guedes, 2007). Earlier work by Landolfi (2012), which examined students' attitudes and values toward PA and PE as a variable in obesity among adolescents, suggested that school-based PE is failing to meaningful impact those who are most in need of it, namely, students who are obese and/ or poorly skilled and may end up dropping PE when it becomes optional. Landolfi's (2012) previous study used students from the identical school district employed within this current investigation of teachers. Results of that research demonstrated that slightly more than 50% of students (even those whose BMI was categorized as normal) felt they were not skilled enough in sports to fully enjoy school-based PE. These same students stated they were less likely to continue school-based PE the following year (Grade 11) when it would become optional and would not be required for a high school graduation diploma. How

then, do teachers meet the demands of students who they are not reaching? Some students reported being so disinterested and withdrawn from PE that they simply avoided PA and sports at all costs (Boyd & Yin, 1996). Strean said (2009), “Bad experiences in sport last long after the game is over” (p. 211). What then should the curriculum consist of, and how could it best be delivered? Furthermore, which aspects of PE are most significant to the overall health of young people today?

Perhaps what is needed is greater emphasis on making students’ experiences more enjoyable and personally meaningful. Based on participants’ responses, teachers already possess a strong understanding of students’ attitudes and values toward PE and PA. Results also indicate congruence between what teachers believe they are providing and what students want. Furthermore, when teachers and students were asked what they would change about the curriculum, responses were not dissimilar. What remains, however, is the fundamental task of effectively translating teachers’ knowledge into action. “Knowing one’s students and the best way in which to present the subject matter in relation to their diversity is arguably the most important factor in effective teaching” (Napper- Owen, Marston, Van Volkinburg, Afeman, & Brewer, 2008, p. 27). PE teachers know that students enjoy socializing and having fun and that they least enjoy the high degree of motor skills required, as well as the lack of variety among activities. Moreover, results of this investigation confirm that teachers clearly understand that students must experience success and feel competent if they are to remain physically active throughout their lives.

## **Conclusions**

Children and youth spend a large part of their day in school. Although educators are in a unique position to help those struggling with issues of overweight and obesity, the sad reality is that the practice of some PE teachers may hinder students’ PA behavior patterns (Irwin, Symons, & Kerr, 2003). Traditional PE classes, for example, are based heavily on calisthenics and highly competitive sports (Council on Sports Medicine and Fitness and Council on School Health, 2006). Not surprisingly, this type of program does not meet the needs of all students, especially those struggling with obesity and/or limited motor skills, leaving a significant number of young people behind (Guedes, 2007).

Numerous investigations suggest that teachers’ understanding of students’ beliefs and dispositions directly impact their curricu-

lum delivery (Carlson, 1995). If physical educators are to provide a safe and encouraging environment, they must acknowledge that what they do, or choose not to do, may have an enduring impact on students (Graham, 1995). Teachers who participated in this investigation demonstrated a lucid understanding of students' attitudes and values, in addition to some of the more debilitating barriers to increasing PA. Factors such as "lack of motor skills" and "lack of choice among activities" impact negatively on students' experiences (Power, Bindler, Goetz, & Daratha, 2010). Physical educators should reflect regularly on their practices and strive to incorporate strategies for helping all students experience joy from movement, which is more likely to result in the pursuit of lifelong PA (Napper-Owen et al., 2008).

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