

**Physical Activity in Children and Adolescents with Exceptionalities:
The Role of School and Athletic Programs**

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ABSTRACT

The purpose of this study was to compare pre-service and in-service teachers' and coaches' attitudes toward instructing children and adolescents with exceptionalities as part of the regular physical education and athletic programs. Surveys were distributed to approximately 100 in-service teachers (i.e., classroom teachers, special educators, and physical educators from kindergarten through to grade eight) from an urban school division in Saskatchewan and 100 pre-service teachers enrolled in a college of education at a Western Canadian university to explore their attitudes toward instructing students with exceptionalities as part of the regular physical education/athletic program. Seventy-seven pre-service teachers and 92 in-service teachers completed an adapted version of the Physical Educators' Attitude Toward Teaching Individuals with Disabilities-III (PEATID-III) (Rizzo, 1993).

Descriptive, inferential (analysis of variance), and correlational analyses were used to compare and explore relationships between survey factors and participants' individual characteristics (e.g., independent variables of gender, age, years of experience, number of physical education classes taken). Significant differences were found between teachers' and coaches' years of experience teaching/coaching students with exceptionalities (*no experience to less than six months, 6 months to 2 years experience, and 2 or more years experience*) and teachers' attitudes toward the outcomes of teaching students with specific learning disabilities (SLD), Attention Deficit/Hyperactivity Disorder (ADHD), and mild to moderate cognitive delay (COGN). No statistically significant differences were found between years of experience teaching/coaching students with exceptionalities and the outcomes of teaching students with emotional behavioural disorders (EBD).

Correlational analyses were used to determine relationships between independent variables (e.g., pre-service and in-service teachers'/coaches' years of teaching/coaching) and the outcomes of instructing students with exceptionalities in regular physical education/athletic programs (Factor 1). Both pre-service and in-service teachers rated the overall quality of their teaching/coaching experience with students with exceptionalities as *satisfactory to very good*. Yet, the majority of participants reported a competence rating of *not at all competent to somewhat competent* (e.g., 58.6% of participants had a competence rating of somewhat competent). Inconsistent teacher/coach responses may have been affected by participants answering the questions in a manner which they considered to be in agreement with socially acceptable perceptions of inclusion. Furthermore, educators believed that more training, experience, and education would improve competency levels in effective instruction. Practical implications for practice and direction for future research are discussed.

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DEDICATIONS

This thesis is dedicated to my amazing parents.
For providing endless opportunity, guidance, and support.

For loving without limits.

For being my inspiration.

Thank-you always!

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CHAPTER 1: INTRODUCTION

Physical activity has been widely researched and numerous benefits have been reported (Canadian Diabetes Association, n.d.; Health Canada, 2004; Heart and Stroke Foundation of Canada, 2003; Jakicic & Otto, 2006; Warburton, Nicol & Bredin, 2006). Regular physical activity is linked to enhanced health and reduced risk for the development of several diseases such as heart disease, stroke, and type II diabetes (Sallis, Prochaska, & Taylor, 2000; Schomer & Drake, 2001; Warburton et al., 2006). Being physically active is vital in the primary prevention of cardiovascular disease, and its benefits have been shown to attenuate or reverse the disease process for patients with established cardiovascular disease (Warburton et al., 2006). Regular physical activity has also been associated with a variety of psychosocial effects (i.e., reduction in depression and anxiety) and can improve an individuals' emotional, cognitive, or behavioural functioning (Schomer & Drake, 2001). However, with levels of inactivity increasing, the prevalence and severity of childhood obesity and related health risk increase dramatically (Sallis et al., 2000; Warburton et al., 2006). Being active is associated with a greater than 50% reduction in risks such as cardiovascular disease (Warburton et al., 2006). Similarly, daily physical education and physical activity can assist with decreasing levels of depression and improve activity habits among children and adolescents (Tomson, et al., 2003). Therefore, educating children at an early age about the benefits of being physically active may help to reduce or prevent the tracking of physical inactivity into adulthood.

Schools are a critical foundation for promoting physical activity in children and youth. While the concept of quality physical education proves to have several benefits,

there are several limiting factors that affect the success of physical education programs. For example, lack of teacher training has been identified as a barrier to inclusive physical education programs. Studies have shown that many teachers felt they had insufficient training and support; therefore, they had difficulty adapting or adjusting activities for students with exceptionalities (Smith & Green, 2004). While the benefits of physical activity are noted for all children and adolescents, children with exceptionalities may require some changes in physical education programming in order for their experiences to be valuable to their overall health (Cantu & Buswell, 2003). School programs have the potential to help children and adolescents establish lifelong, healthy physical activity patterns, however, programming for students with exceptionalities can be compromised. Lack of funding within school systems has made it difficult to facilitate quality physical education programs. Therefore, the opportunity to purchase equipment and hire special physical education teachers are often limited (Bulger et al., 2001; DeCorby et al., 2005; McKenzie & Kahan, 2004). The success of physical education programs is often related to teachers' perceptions (i.e., of students' abilities) and their training (Bulger et al., 2001).

There are a wide range of abilities in physical education classes, and teachers are faced with the challenge of providing instruction to meet the needs of all students, including those with exceptionalities. There are teachers who have attitudes of rejection or indifference toward students with exceptionalities, and therefore the students are overlooked and not provided with optimal experiences (Cook, 2001). For example, one study that compared teachers' attitudes toward students with mild or severe exceptionalities indicated that students with hidden (high-incidence) exceptionalities were statistically overrepresented in attitudes of rejection (Cook, 2001). Changes to

teacher education programs may need to be made to enhance teachers' understanding and knowledge of, and prevent insufficient programming for, students with exceptionalities. The undergraduate teacher curriculum should be infused with: an increase in understanding of exceptionalities and equity, experience and exposure to students with exceptionalities, and an increased working knowledge of integration (Bulger et al., 2001). Instructional practices and social attitudes can foster positive or negative experiences for identified students. There is a great deal of research examining pre-service teachers' attitudes toward teaching students with exceptionalities in both general and physical education (e.g., Folsom-Meek & Nearing, 1994; Folsom-Meek & Rizzo, 2002; Kowalski & Rizzo, 196; Kozub & Lienert, 2003; Tripp & Rizzo, 2006). However, the research examining in-service teachers' attitudes toward teaching students with exceptionalities in physical education is limited. An examination of the attitudes of pre-service and in-service teachers may assist teacher education programs and school divisions in finding gaps between training programs and in-service programming.

Statement of Purpose

The purpose of this study was to compare pre-service and in-service teachers' and coaches' attitudes toward instructing children and adolescents with exceptionalities as part of regular physical education and athletic programs. Specifically, the study addressed the following research questions:

1. What are pre-service/in-service teachers' and coaches' attitudes toward instructing children and adolescents with high- incidence exceptionalities as part of the general physical education/athletic program?

2. How are pre-service/in-service teachers' and coaches' attitudes toward instructing students with high-incidence exceptionalities influenced by their individual characteristics?

Definitions

For the purpose of this paper, it is important that terminology be clearly defined as it relates to physical activity and individuals with exceptionalities.

Physical Activity

Physical activity was defined as “any bodily movement produced by skeletal muscles that results in energy expenditure” (Plowman, 2005, p. 143). For example, physical activity encompasses low to moderate intensity activities such as walking, cycling, or swimming, to more vigorous and intense activities such as running, competitive sport, or mountain climbing (Centers for Disease Control and Prevention, 2000).

Individuals with Exceptionalities

Hallahan and Kauffman (2006) defined children and adolescents with exceptionalities as an extraordinarily diverse group in comparison to the general population. “They may have mental retardation [intellectual impairment], learning or attention disabilities, emotional or behavioural disorders, physical disabilities, disorders of communication, autism, traumatic brain injury, impaired hearing, impaired sight, or special gifts or talents” (Hallahan & Kauffman, 2005, p. 8). Children and adolescents with exceptionalities are often labeled as having a disability; however, the term exceptionality will be used to focus on the learners' abilities, rather than their disabilities.

High-incidence exceptionalities

Exceptional children and adolescents may be categorized as having high-incidence or low-incidence exceptionalities. Exceptionalities such as learning disabilities, communication (speech and language) disorders, emotional disturbance, and mild intellectual impairments are referred to as high-incidence exceptionalities based on their relatively high frequency of occurrence (Hallahan & Kauffman, 2006). Disabilities such as low vision or blindness, deafness, deaf-blindness, severe intellectual impairment, and autism are considered low-incidence because they occur relatively rarely (Hallahan & Kauffman, 2006). There are several high-incidence exceptionalities, however for the purpose of this study, four specific exceptionalities were defined.

Emotional behavioural disorder. The term emotional and/or behavioural disorder (EBD) is “characterized by behavioural or emotional responses in school programs so different from appropriate age, cultural, or ethnic norms that the responses adversely affect educational performance, including academic, social, vocational, or personal skills” (Webber & Plotts, 2008, p. 12).

Specific learning disability. "Learning Disabilities refer to a number of disorders which may affect the acquisition, organization, retention, understanding or use of verbal or nonverbal information. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and/or reasoning” (Learning Disabilities Association of Canada, 2005).

Attention Deficit Hyperactivity Disorder. The diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) by a medical doctor refers to an individual who displays characteristics of inattention, hyperactivity, and impulsivity. The individual will display

clear evidence of clinically significant impairments in social, academic, or occupational functioning different from that of their typically achieving peers (Hallahan, Lloyd, Kauffman, Weiss & Martinez, 2005).

Mild to moderate cognitive delay. A student with mild to moderate cognitive delay is one who is delayed in adaptive behaviour and functioning (may require specific instruction for the acquisition of gross and fine motor skills, assistance with development of social skills, memory, problem solving and conceptualizing skills); (British Columbia Ministry of Education, 2007).

Significance of Study

The benefits of physical activity are widely researched, yet physical educators and coaches do not always provide children and adolescents with the skills they require in order to develop a lifetime of quality physical activity (Heath, Case, McGuire, & Law, 2007; Kozub & Porretta, 1998; Tripp & Rizzo, 2006). The skill level or amount of participation for those with exceptionalities may not be equal to that of a typically achieving child or adolescent (Rimmer, 2005). However, if educators and/or coaches understand the importance and benefits of physical activity, they can make informed instructional choices and provide quality physical education or activity for all children and adolescents (Kowalski & Rizzo, 1996; Kozub & Lienert, 2003; Kozub & Porretta, 1998; Rizzo & Kirkendall, 1995). By exploring teachers and coaches' attitudes toward instructing children and adolescents with exceptionalities as part of the regular physical education and athletic programs, barriers of integration (i.e., lack of training, insufficient funding) may be identified and supports that can assist teachers, coaches, and those with exceptionalities (i.e., professional development, strategies and resources to assist with

programming) may become identifiable. The purpose of this study was to examine pre-service and in-service teachers' and coaches' attitudes towards students with exceptionalities as part of the regular school physical education and sport programs.

Chapter Organization

In Chapter 2, a review of the literature identifies the health risks and benefits associated with varying levels of physical activity, and describes how school physical education and sport programs play a large role in determining the level of participation for both learners with exceptionalities and their typically achieving peers. A description of the research methods and procedures used is presented in Chapter 3, while an analysis of the data is presented in Chapter 4. The final chapter, Chapter 5, provides a summary of the findings and discusses limitations of the study, implications for practice, and directions for future research.

CHAPTER 2: REVIEW OF THE LITERATURE

This review of the literature relates to the effects of teachers' and coaches' attitudes on instruction of physical activity and athletics for children and adolescents with exceptionalities, and is organized into four major sections. The first section outlines the influence of physical activity on health, focusing on the benefits and associated risk factors. The second section outlines school programs and opportunities to implement an effective physical education and sport program which encourages children and adolescents of all abilities to be physically active. The final section outlines teachers' attitudes toward teaching physical education and the inclusion of children and adolescents with exceptionalities.

Influence of Physical Activity on Health

Physical activity offers a wide range of benefits for people of all ages and abilities, and is essential for healthy growth and development in children (Health Canada, n.d.). While physical inactivity creates many health barriers, an active lifestyle can provide many benefits for overall health. Some of these benefits include the control of obesity rates and the reduction in the risk of developing disease, such as cardiovascular disease, type 2 diabetes, and a variety of psychosocial effects (i.e., a reduction in depression and anxiety, improvements in self-esteem, and a more positive perception of the self by others) (Schomer & Drake, 2001; Warburton et al., 2006).

Obesity

The prevalence of inactivity is a growing concern in society. According to a health survey conducted by Statistics Canada in 2002, physical inactivity has reached a shocking level of 51% among adult Canadians (Warburton et al., 2006). As alarming as

this statistic is, the influence these adults have over their children, and the risk of children adapting to sedentary lifestyles, becomes a growing concern. A body mass index (BMI) greater or equal to the 95th percentile is considered overweight, while a BMI in the 85th to 95th percentile is considered at risk for overweight (Daniels et al., 2005). In 2006, estimates showed that in excess of 65% of adults in the United States were overweight (Jakicic & Otto, 2006). While levels of inactivity increase, the prevalence and severity of childhood and adolescent obesity have also increased dramatically. Jakicic and Otto (2006) noted that the increase in obesity rates are a concern for the development of numerous chronic health related conditions such as heart disease.

Cardiovascular Disease

According to Health Canada (n.d.), many cases of cardiovascular disease are preventable, yet it remains the number one cause of premature death in Canada. There are several risk factors that independently, or in combination with others, can lead to cardiovascular disease (Health Canada, n.d.). For example, smoking, physical inactivity, being overweight, high blood pressure, and diabetes are all risk factors which can contribute to cardiovascular disease (Heart and Stroke Foundation of Canada, 2003). Therefore, prevention needs to occur at many different levels. The Heart and Stroke Foundation of Canada (2003) identified four essential levels of prevention: controlling risk factors; attempting to reduce the disease by early diagnosis and treatment; limiting the progress or complications of the established disease; and avoiding the emergence of social, economic, and cultural patterns of living which contribute to an increased risk of disease (Heart and Stroke Foundation of Canada, 2003). Physical inactivity is the most prevalent risk factor, and changes in activity levels provide the highest potential to reduce

disease (Health Canada, n.d.). The development of cardiovascular disease can be greatly reduced, and according to a recent investigation of physical activity and fitness, “being fit or active was associated with a greater than 50% reduction in risk” (Warburton et al., 2006, p. 801). While participation in regular physical activity helps in the prevention of developing disease, Warburton et al. (2006) also identified the benefits of physical activity in attenuating or reversing the disease process for established cardiovascular disease patients. At least one in every ten Canadians has three or more risk factors which increase their risk of developing cardiovascular disease (Heart and Stroke Foundation of Canada, 2003). According to the Heart and Stroke Foundation of Canada (2003), “Regular physical activity can reduce body weight, improve serum lipids and cholesterol, blood pressure and diabetes, and thereby reduce overall cardiovascular risk” (p. 24). While an active lifestyle can enhance overall cardiovascular health it can also help to prevent type 2 diabetes.

Type 2 Diabetes

People who are inactive face a greater risk of developing type 2 diabetes, and studies show that two-thirds of Canadians are putting their health at risk due to insufficient levels of physical activity (Public Health Agency of Canada, n.d). According to Health Canada (2004), type 2 diabetes is a lifelong condition where the body cannot use the insulin it produces properly. This creates high blood glucose levels that, over time, can cause blindness, heart disease, reduced blood supply to the limbs, nerve damage, and stroke (Health Canada, 2004). Although there is no single cause of type 2 diabetes, achieving a healthy weight, limiting intake of fat and sugar, eating balanced meals, keeping cholesterol levels within the target level, and maintaining a normal blood

pressure are all ways to minimize the risk of developing the disease (Health Canada, 2004). Many studies have shown that by being physically active, all of the risk factors for developing type 2 diabetes can be managed more effectively (e.g., Canadian Diabetes Association, n.d.; Health Canada, 2004; Warbuton et al., 2006).

The benefits of increasing activity levels are prevalent among individuals at high risk of developing diabetes; specifically those with a high BMI (Warburton, et al., 2006). In a study by Warburton et al. (2006), “a lifestyle intervention that included moderate physical activity for at least 150 minutes per week was found to be more effective than metformin [an antidiabetic drug used to treat type 2 diabetes] alone in reducing the incidence of diabetes” (p. 803). While this research supports the benefits of physical activity as a method of primary prevention, physical activity is also effective in the management of diabetes (Canadian Diabetes Association, n.d.; Health Canada, 2004; Warburton et al., 2006). The majority of people, whether or not they have diabetes, benefit from physical activity and exercise. The Canadian Diabetes Association (n.d.) identified benefits of physical activity to include: strong bones, weight loss or management, improved blood pressure, lower rates of heart disease and cancer, increased energy levels, and positive psychological benefits or improvements. Researchers have not developed guidelines that outline the specific amount or type of physical activity that is required for optimal health benefits in children or youth. However, recommendations emphasize daily physical activity of thirty to sixty minutes per day (Sallis et al., 2000). While physical activity helps prevent and control type II diabetes, daily physical activity also has a positive effect on psychological factors (i.e., depression).

Psychosocial Abnormalities

Regular physical activity has been associated with a variety of psychosocial effects including a reduction in depression and anxiety, improvements in self-esteem, and a more positive perception of the self by others (Schomer & Drake, 2001). While depression is one of the most common factors of mental illness, Schomer and Drake (2001) outlined the biological effects of exercise and physical activity. “The antidepressant effects of exercise are believed to occur on a neurobiological level, and physical activity has been associated with elevated blood endorphin levels, increases in brain blood-flow levels, altered hypothalamic-pituitary-adrenal (HPA) axis activity, and alterations in monoamine systems” (Schomer & Drake, 2001, p. 4). The biological and psychological benefits of physical activity are evident in improving mental health. While these factors do not alleviate the risk for social stigmatization and poor self-esteem, they are imperative to the optimal well-being of individuals.

Obesity and inactivity in children are associated with psychosocial abnormalities, such as depression and stress (Journal of the American Heart Association, 2005). Excessive weight in children and adolescents is reduced, and the risk of developing related psychosocial abnormalities such as depression decreases, with the fulfillment of the recommended amount of daily physical activity (Sallis et al., 2000; Schomer & Drake, 2001; Tomson, Pangrazi, Friedman, & Hutchinson, 2003). Daniels et al. (2005) suggested that overweight children have fewer friends and more isolated relationships in comparison to their normal-weight counterparts. In addition to having fewer friends, Goodman and Whitaker (2002) noted “The social stigmatization associated with obesity is believed to engender chronic embarrassment, shame and guilt, all of which may lead to

affective disorders” (p. 497). The most common affective disorder is depression, which is categorized as a mood disorder and is considered the leading risk factor for suicide in children and youth (Tomson et al., 2003). The psychological effects of physical activity need to be understood and appreciated because they can provide an improvement to an individual’s emotional, cognitive, or behavioural functioning (Schomer & Drake, 2001). While any factor that is noted to improve an individual’s physical or psychological health is considered beneficial, a physically active lifestyle provides positive implications for an individual’s overall well-being.

Physical activity has been shown to improve the mental state of adults and reduce the risk of depression and other affective disorders (i.e., anxiety) (Goodman & Whitaker, 2002; Schomer & Drake, 2001; Tomson et al., 2003). Similar research for children and adolescents is limited. However, Tomson, Pangrazi, Friedman, and Hutchison (2003) conducted a study of 933 eight to twelve year old children which found a strong association between depression and the level of physical activity and health related fitness. Daily physical education and regular physical activity can assist with the prevention of depression and assist in establishing lifetime activity habits among children and adolescents (Tomson et al., 2003). Physical inactivity is the highest of several modifiable risk factors (i.e., smoking and diet) for developing chronic diseases such as heart disease, diabetes mellitus (type 2 diabetes) and psychosocial abnormalities. When modified, physical activity provides several primary (prevention of developing the disease) and secondary (interventions that prevent the disease from worsening) methods of prevention (Health Canada, n.d.; Warburton et al., 2006).

The benefits of an active lifestyle are well known, however the opportunity or desire for children and adolescents to participate in physical activity is dependent on a variety of individual and environmental factors. An individual's confidence in their abilities to engage in physical activity, one's perception of their physical competence, and a positive attitude and enjoyment towards physical activity and education is essential to have individuals take part in physical activity (Guidelines for School, 1997). School programs have both the opportunity, and the challenge, to target all children and provide them with: health initiatives, education of the benefits of physical activity, and quality physical activity programs to help reduce the risk of inactive and unhealthy habits. The health risks of inactivity are substantial; therefore, it is essential to educate children and adolescents at an early age to reduce the possibility of developing physical illness and to prevent tracking of physical inactivity into adulthood. All of these factors can be highly influenced by the education system and more specifically by physical education and physical activity programs.

School Programs

With the rise of child obesity, and the increase in the sedentary and convenient lifestyles among children, schools are required to provide quality physical education classes. According to the National Association for Sport and Physical Education (NASPE), high quality physical education programs include the opportunity to learn meaningful content and appropriate instruction (Fritz, 2003). However, a majority of schools in Canada and the United States continue to hold physical education as a low priority in the curriculum (DeCorby, Halas, Dixon, Wintrup, & Janzen, 2005). There is a great need for high quality physical education programs, as leisure time for children and

adolescents in now inundated with sedentary computer-based activities (Roberts, Foehr, & Rideout, 2005). According to Roberts, Foehr, and Rideout (2005), children and adolescents 8 to 18 years of age are exposed to an average of six hours of media (i.e., television, computers, video games, music, and print) each day. This reiterates the importance of schools as a critical foundation for promoting physical activity in children and youth. That is, physical education in the schools may be the only opportunity for some children to engage in moderate to vigorous physical activity (Faulkner & Reeves, 2000). The concept of quality physical education for children and adolescents provides several benefits, however there are several limiting factors that may affect the success of physical education programs.

General Physical Education

Several factors (i.e., lack of teacher training, funding, and revisions to physical education mandates and curricula), negatively impact effective instruction in physical education and athletic programs (Bulger, Mohr, Carson, & Wiegand, 2001). Teacher education programs are one factor to consider when evaluating the ineffectiveness of many physical education programs (Bulger, Mohr, Carson, & Wiegand, 2001). Bulger et al. (2001) suggested that the course content and instructional methods of some programs do not adequately meet the needs of prospective teachers in regards to physical activity promotion and health-related physical fitness. In a small scale study, Smith and Green (2004) explored teachers' views of inclusion. This study used semi-structured interviews which investigated physical education teachers' views and practices regarding students with exceptionalities from a sociological perspective (Smith & Green, 2004). "The training (or rather, lack of training) teachers received in their initial teacher training and

continuing professional development was perceived to be one of the most constraining influences upon their practice” (Smith & Green, 2004, p. 598). The results of the study indicated that many teachers felt they had insufficient training and support (i.e., resources) to meet students’ needs; therefore, they had difficulty adapting/adjusting activities and tasks for students with exceptionalities (Smith & Green, 2004). Lack of training and resources negatively affect the instruction of quality physical education and athletic programs. Both of these factors are compromised due to limited funding.

Lack of funding within school systems also poses a problem in facilitating quality physical education programs (Bulger et al., 2001; DeCorby et al., 2005; McKenzie & Kahan, 2004). Limited funding affects the purchasing of appropriate equipment, extra-curricular activities, and the hiring of specialized physical education teachers. DeCorby et al. (2005) noted that while school districts rewrote education policy to prioritize time and money for teaching basics such as language arts, math, science, and social studies, physical education was sacrificed. “With less financial support provided by senior levels of government, specialist subjects (music, physical education, drama, art) were conveniently relabelled as nonessential curriculum” (DeCorby et al., 2005, p. 209). These limiting factors make it difficult for teachers to implement successful physical education programs, and in turn decrease the opportunity for children to improve their health and well being. Although obtaining increased funding for physical education is not a likely option due to restricted budgets, changes in physical education curricula and mandates would increase the opportunity for students to engage in more regular physical activity. Increased emphasis of the importance of quality physical education and athletic programs will have significant implications for student well-being.

Physical education has important implications for children's health, education, and general well being. McKenzie and Kahan (2004) noted that in an extensive review of research, the United States National Task Force on Community Preventive Services identified modified physical education in schools as one of only five interventions recommended to increase physical activity behaviours and improve physical fitness. The modifications identified included "revising policies, curricula, and instructional practices in order to increase the number of physical education classes, their length, and the proportion of class time students spend being physically active" (McKenzie & Kahan, 2004, p. 301). According to Bailey (2006), physical education programs in schools can help children and adolescents develop respect for their body, contribute to the development of their entire well-being, understand the role of physical activity in health, positively enhance self-esteem and confidence, and improve social and cognitive development. Although it is a difficult task, it is an essential role of physical education programs to ensure the integration of students of varying abilities.

Physical Education for Students with Exceptionalities

Physical activity is essential for all individuals. However, people with exceptionalities currently participate in less regular and vigorous exercise than their typically achieving counterparts (Rimmer, 2005). The level of inactivity among individuals who have exceptionalities increases with the severity of the disability. However, many secondary conditions such as fatigue, pain, and weight gain related to the exceptionality are considered preventable with maintained physical activity (Rimmer, 2005). Children and adolescents with exceptionalities require equal opportunities to participate in physical activity as their peers without exceptionalities in order to achieve

the same benefits (Heath, Case, McGuire, & Law, 2007). There is a paucity of research that examines the opportunity for individuals with exceptionalities to participate in physical activity. While the benefits of physical activity have been noted, Martin (2006) explained “many individuals with disabilities are often inactive, and the ramifications of being inactive exacerbate the detrimental effects of a disability for many people” (p. 65). While high-incidence exceptionalities are often undiagnosed and more difficult to detect than low incidence exceptionalities, quality physical education programming for all students is dependent on: proper teacher training; adequate funding for resources; and teachers’ attitudes toward the success of the program.

Children or adolescents with high-incidence exceptionalities or more commonly occurring exceptionalities, such as a learning disability, can often blend into regular physical education or physical activity programs because they do not necessarily look or act differently from their peers (Grosshans & Kieger, 2004). Although what is not observable to teachers or program leaders is “when they are presented with challenges to their specific disability, children with learning disabilities often appear to be inattentive, less smart, more active or ‘fidgety’ than their peers” (Grosshans & Kieger, 2004, p. 18). All students, regardless of their abilities or exceptionality, should have access to quality physical activity programs that meet their needs and interests. While the push for inclusion has been the focus of society, there are many occasions where the needs of students with exceptionalities go undetected or are simply not accommodated. For example, students with learning disabilities have average or above average intelligence. However, their impaired social skills often leave them excluded from teamwork situations (Grosshans & Kiger, 2004). Social interactions can be difficult or discouraging

for children with learning disabilities. Similarly, students with attention-deficit/hyperactivity disorder (ADHD) often suffer (i.e., do not achieve optimal fitness levels due to lack of rule or equipment modifications) from the ramifications of poorly programmed physical education classes.

Harvey and Reid (2005) outlined the growing awareness of the physical activity challenges of children with attention-deficit/hyperactivity disorder (ADHD). However, it remains difficult to adapt physical activity to accommodate their difficulties because of lack of research and programming. In a critical analysis of the research used to assess physical activity in children with ADHD, Harvey and Reid (2005) noted that children with ADHD demonstrate poor motor planning, movement skills, and fitness levels. While all of these factors are known, children with ADHD are at risk of not developing to their full potential due to inadequate adaptations of physical education programs. In order to effectively accommodate a student with ADHD in the gym, physical educators need to carefully plan for a successful teaching-learning environment. Physical educators must be part of the programming for that child in order to successfully structure the environment (Lieberman et al., 2004). Rizzo and Davis (1991) noted “If physical education is not specifically mentioned in an IEP [Individualized Education Plan], appropriate physical education services are probably not being provided to students with disabilities” (p. 53). By having physical educators involved in programming for children with exceptionalities, they are able to more clearly understand the child’s needs and make suggestions for equipment and modifications necessary for optimal physical activity. Therefore, it is essential to have trained and qualified physical educators to make physical activity enjoyable for students of all ability levels.

Meeting the needs of children and adolescents in a physical education setting can be difficult. Menear and Davis (2007) noted “Constraints related to equipment, class size, curriculum, and the various ability levels of individuals with and without disabilities can influence the success or failure of participants and instructors” (p. 37). Physical education programs require teachers and staff who are trained to offer developmentally appropriate physical activity experiences. According to the Center for Disease Control and Prevention (2000), quality experiences are dependent on supportive and competent teachers and program leaders. Every individual who is part of a physical activity experience has his or her own limitations and will respond to how the instructor sets up the environment and organizes the task (Menear & Davis, 2007). Therefore, instructors need adequate training to provide beneficial services to individuals with varied abilities:

Understanding the functional and structural constraints demonstrated by the individual enables the instructor to make modifications to the environment and/or adaptations to equipment or rules to ensure the participant’s success. The instructor’s recognition of how the environment and the tasks influence performance is essential to meeting the participant’s unique needs. (Menear & Davis, 2007, p. 37)

Although efforts to improve programs to foster inclusion have been made, school initiatives still require individuals who are qualified and supported to improve physical activity experiences for children and adolescents with exceptionalities (Tripp & Rizzo, 2006).

While teacher training and financial funding are two prominent factors affecting physical education, teachers’ abilities and perceptions also affect the success of a quality

program. The majority of schools in Canada do not hire specialist teachers to teach physical education (DeCorby et al., 2005). In the 2001-2002 school year, merely 18% of schools reported employing a full-time physical education specialist (DeCorby et al., 2005). Trained specialists are essential for planning, implementing, and evaluating physical activity instruction and programs (Guidelines for School, 1997). Lieberman, James, and Ludwa (2004) stated that generalist physical educators may not know how to create an inclusive environment for all students:

Using strategies such as rule modifications, adapted equipment, and disability awareness of peers on a consistent basis can enhance the inclusive environment of a classroom.... Many general physical educators may be unaware of them or not even know that it is their responsibility to make these modifications to include students with disabilities. (p. 37)

While specialists have a greater knowledge base, teachers with a higher self-perception of physical, sport, and conditioning competence have a more positive attitude toward teaching physical education (Faulkner & Reeves, 2000). A combination of high perceived competence, experience with relevant coursework (i.e., adapted physical education classes and special education), and positive experiences teaching students with exceptionalities, foster positive attitudes toward instructing students with exceptionalities (Tripp & Rizzo, 2006).

Physical Education Teachers' Attitudes

There are a wide range of abilities in physical education classes, and the challenge remains for physical educators to provide instruction that considers the needs of students with exceptionalities. In order to meet the challenge of inclusion, modifications or

adaptations may need to be made to physical education programs. Adapted physical education can be delivered in the general setting. As Lieberman et al. (2004) noted “The term ‘adapted physical education’ literally means physical education that meets the unique needs of any child” (p. 38). Teachers can create a culture of inclusion which fosters understanding and acceptance by implementing programs that provide students with varying abilities an opportunity to build social skills and promote physical activity. Students with exceptionalities may not have optimal experiences and opportunities due to teachers’ attitudes (Cook, 2001). There are teachers who have attitudes of rejection or indifference toward students with exceptionalities, and therefore the students are overlooked or unlikely to receive adequate interactions and instruction (Cook, 2001). In a comparison of teachers’ attitudes toward their included students with mild or severe disabilities, Cook (2001) predicted:

Included students with severe and obvious disabilities may be accepted because of, rather than despite, their obvious differences. Alternatively, students with mild or hidden disabilities do not exhibit obvious signs of their disability and are therefore expected to attain modal performance and behavioural standards. Thus, when students with mild disabilities engage in atypical behaviour, they are frequently rejected for violating the modal, or nonadjusted, expectations other group members hold for them. (p. 205)

Given the frequency with which students with mild or hidden exceptionalities were rejected, it can be inferred that many of these students are not provided with an optimal inclusive physical educational environment (Cook, 2001). Through structured interviews, teachers’ attitudes (i.e., attachment, concern, indifference, rejection) were

measured (Cook, 2001). Students with obvious exceptionalities (i.e., low-incidence exceptionalities) were found to be significantly overrepresented in the teachers' attitude of indifference, while students with hidden (high-incidence) exceptionalities were statistically overrepresented in attitudes of rejection (Cook, 2001). Physical education teachers need to recognize the individual needs of their students regardless of a child's ability or the severity of their exceptionality. Teachers need to create a supportive environment that fosters a desire to participate in physical activity. Cook (2001) indicated that the attitudes that teachers held towards children with exceptionalities was influenced by the severity of the exceptionality. This in turn, was shown to affect the frequency, duration, and quality of teacher-student interactions. This is a hindrance to students with high-incidence exceptionalities, such as a learning disability or ADHD, because although their exceptionality is not often physically obvious, positive and supportive interactions are necessary to improve physical education environments.

Positive teacher perceptions of physical activity may affect young people's involvement in physical activity, as they are more likely to promote physical activity and to be physically active themselves. Instructional practices (i.e., rule modification) physical educators are taught through teacher education programs may affect the quality of instruction that they provide to their students. Knowledge of exceptionalities should be infused throughout the undergraduate teacher education curriculum to increase understanding of: exceptionalities and equity; experience and exposure to students with exceptionalities; and increased working knowledge to integrate students with exceptionalities (Bulger et al., 2001). This may require some changes to teacher

education programs to prevent insufficient programming by teachers due to their lack of understanding and knowledge. Bulger et al. (2001) stated:

A physical education teacher's ability to individualize a physical activity program for a child, for example, is at least partially dependent on the integration of theoretical concepts from a variety of subdisciplinary and pedagogical courses, including exercise physiology, motor development, behavioral psychology, teaching methods, and curriculum theory. (p. 408)

Adequate and thorough training (i.e., inclusion of required special education, physical education, and adapted physical education classes) for physical education teachers will provide them with an opportunity to practice better instructional methods. Appropriate instruction for a quality physical education program should be: inclusive to all students; provide maximum practice opportunities for activities; incorporate well designed lessons that facilitate student learning; and should be assessed to monitor and reinforce student learning (Fritz, 2003).

Educators have the ability to provide a quality physical education experience when they identify and accept all children into their program. The wide range of abilities that arise in a physical education setting creates some difficulties for both students and educators. Lower rates of participation in children and adolescents with exceptionalities may be due to environmental barriers such as physical environment, inadequate equipment, instructional practices, or social attitudes (Rimmer, 2005). Physical educators should create the least restrictive environment for all of their students. Lieberman et al., (2004) defined the least restrictive environment as "one in which students with disabilities are educated with their typically developing peers to the maximum extent

possible” (p. 37). According to the United States Rehabilitation Act of 1973, this means that students should only be removed from general education when the nature or the severity of the exceptionality will not allow the child to attain any benefit from the program (Lieberman et al., 2004). While the physical environment is essential to create a positive climate for participation, instructional practices and social attitudes can foster positive or negative experiences for students with exceptionalities.

Researchers have begun to consider pre-service teachers’ attitudes toward teaching students with exceptionalities (Folsom-Meek & Nearing, 1994; Folsom-Meek & Rizzo, 2002; Kowalski & Rizzo, 1996; Kozub & Lienert, 2003; Tripp & Rizzo, 2006). However, literature regarding in-service teachers’ attitudes is limited. Many of the studies that examine attitudes of pre-service teachers have used a version of Rizzo’s (1984) original survey, Physical Educators’ Attitudes Toward Teaching the Handicapped (PEATH) (Folsom-Meek, 1994; Heath et al., 2007; Hodge et al., 2002; Kowalski & Rizzo, 1996; Rizzo & Kirkendall, 1995). Over the years there have been some alterations made to the original PEATH in order to reflect updated and current terminology (i.e., replacing handicapped with disability, and using first-person terminology in the statements) (Folsom-Meek & Nearing, 1994). Each version of the PEATH consists of 12 belief statements in which participants are asked to rate their personal opinion on a 5-point Likert scale (items ranging from strongly disagree to strongly agree), and a section related to demographics and previous experience.

Folsom-Meek and Nearing (1994) used the PEATH II, which was modified for pre-service teachers in the study. The purpose of the study was to assess the relationship between the attitudes of physical educators toward teaching students classified as

behaviorally disordered, mildly cognitive delayed, and learning disabled and the teachers' attributes (i.e., age, number of adapted physical education classes, years in school, special education courses and experience, and educational preparation) (Folsom-Meek & Nearing, 1994). This study identified descriptive statistics for general subject characteristics, professional preparation regarding individuals with exceptionalities, and provided a rating of the quality of professional preparation. The overall results showed that pre-service teachers had favourable attitudes towards teaching students with mild disabilities, they believed themselves to be very competent, and rated their educational training as high (Folsom-Meek & Nearing, 1994). However, the study was limited to pre-service teachers and it did not explore how in-service physical education teachers' attributes influence or relate to their attitudes.

Rizzo and Kirkendall (1995) used the PEATH II to study the attitudes of undergraduate students who were enrolled in an adapted physical education class or a physical education class for children. Researchers compared participants' demographic attributes, and found that favorable experiences working with students with exceptionalities and more specific academic preparation (i.e., more than one adapted physical education course) were associated with increased perceived competence and more favorable attitudes (Rizzo & Kirkendall, 1995). This study demonstrated the need for experience working with students with exceptionalities and specific academic preparation to foster favourable attitudes. However, these results can only be generalized to pre-service teachers who have had coursework in adapted physical education.

While each of the studies noted used one version of Rizzo's (1984) PEATH, there are no studies that have compared the attitudes of pre-service teachers with that of in-

service teachers. In comparing the attitudes of pre-service and in-service teachers, the results may help teacher education programs and school divisions find gaps between training programs and in-service teaching programs.

Summary

Physical education can work as prevention or intervention methods for those who are inactive or at risk of becoming inactive (Bailey, 2006; McKenzie & Kahan, 2004). While there are several factors that affect participation levels of children and adolescents, the role of the physical education teacher is vital for creating an inclusive and supportive instructional environment (Bulger, Mohr, Carson, & Wiegand, 2001; Cook, 2001; Smith & Green, 2004; Menear & Davis, 2007). There is little research indicating how teachers' and coaches' attitudes and skill levels affect their instruction to include students with high-incidence exceptionalities in regular physical education programs, or how their perceptions affect the success of exceptional students. However, as Bulger et al. (2001) noted:

Our growing appreciation for physical activity and its associated health-related benefits supports the definitive need for physical educators who are adequately prepared to facilitate the development of the skills, knowledge, attitudes, and fitness levels that will enable a child to remain physically active across the life span. (p. 404)

Attitudes may be affecting teachers and coaches; however the need for additional and adequate training for physical educators is essential.

The inclusion of students with exceptionalities is common in both classroom and physical education settings, therefore it is imperative to look at training programs for pre-

service teachers. Physical educators and coaches must be prepared to instruct students with a wide range of abilities. One of the most important factors contributing to a successful physical education program is the attitude of the educator; therefore, strategies to assist with effective preparation are essential for educators (Kowalski & Rizzo, 1996). Therefore, this study sought to compare the attitudes of pre-service and in-service teachers'/coaches' toward teaching students with high-incidence exceptionalities as part of the general physical education/athletic programs.

CHAPTER 3: METHODOLOGY

Nature of the Study

The purpose of this study was to identify physical education teachers' and coaches' attitudes toward teaching students with exceptionalities. This study compared the attitudes of pre-service and in-service teachers, and was guided by the following questions:

1. What are pre-service/in-service teachers' and coaches' attitudes toward instructing children and adolescents with exceptionalities as part of the general physical education/athletic program?
2. How are pre-service/in-service teachers' and coaches' attitudes toward instructing students with exceptionalities influenced by their individual characteristics?

Participants

Approximately 100 pre-service and 100 in-service teachers were invited to participate in this study. Pre-service teachers were enrolled in a college of education in a Western Canadian university. The majority of in-service teachers were employed by a large urban school division in central Saskatchewan. Of the eligible participants, 77 pre-service teachers and 92 in-service teachers responded to the survey, resulting in a response rate of approximately 84.5%. Participants ranged in age from 20 to 59 years. Of the 169 participants, it is noteworthy that 74% had not taken any adapted physical education courses, and 39% of participants had not taken any special education courses.

Instrumentation

Original Survey

The instrument used in this study was adapted from the survey, *Physical Educators' Attitude Toward Teaching Individuals with Disabilities—III* (PEATID III; Rizzo, 1993; see Appendix A). The instrument was selected because it was designed to measure the attitudes of physical educators teaching students with specific exceptionalities. This instrument contains a series of 12 statements (half worded positively, half negatively) which express beliefs about teaching individuals with exceptionalities in regular physical education programs. The responses are based on a five-point Likert scale (i.e., strongly disagree, disagree, undecided, agree, strongly agree), and require participants to rate their beliefs toward four specific exceptionalities (Emotional/Behavioural Disorder, specific learning disability, mild-moderate mentally impaired, and moderate-severely mentally impaired; Rizzo, 1993).

The items on the original PEATID-III were categorized into three factors: (1) outcomes of teaching students with disabilities in regular classes; (2) effects on student learning; and (3) need for more academic preparation to teach students with disabilities (Folsom-Meek & Rizzo, 2002). Each of the questions was linked to one of three factors identified in the original survey. Factor one (outcomes of teaching students with exceptionalities in regular classes) was made up of six questions (questions 5, 6, 7, 9, 10, and 12). These questions explored teachers' and coaches' attitudes of instructing students with exceptionalities as part of the regular program (e.g., identified students should be taught with typically achieving students in my regular physical education/athletic program whenever possible). Factor two (effects on student learning)

was made up of four questions (questions 1, 2, 3, and 4). These questions looked at students with varying abilities learning together in physical education (e.g., teaching/coaching identified students in my regular physical education/athletic program will motivate typically achieving students to learn to perform motor skills). Factor three (need for more academic preparation) was made up of two questions (questions 8 and 11). These questions explored the need for more academic training to teach students with exceptionalities (e.g., as a physical education teacher/coach, I do not have sufficient training necessary to teach identified students with typically achieving students in my regular physical education/athletic program).

An article written by Folsom-Meek and Rizzo (2002) reported on the content validity and reliability evidence for the original instrument (PEATID-III). Three thousand four hundred and sixty-four undergraduate students enrolled in an introductory adapted physical education class completed the survey. Reliability was measured and an alpha coefficient of .88 was found for the total score, .73 for behavioural disorders, and .71 for cognitive delay and learning disabilities (Folsom-Meek & Rizzo, 2002). Content validation evidence was collected through consultation with “a panel of six nationally prominent researchers with expertise in adapted physical education research” (Folsom-Meek & Rizzo, 2002, p. 142). The reliability and validity evidence collected to date indicated that the PEATID-III is a tool that can be used with both current and future professionals to investigate their attitudes toward teaching students with exceptionalities in regular settings (Folsom-Meek & Rizzo, 2002). Changes to the original instrument were necessary in order to meet the requirements of this study.

Adapted Survey

A number of changes were made to the original PEATID-III (Rizzo, 1993) in order to facilitate the purposes of this study. First, the labeling conditions were modified to identify only high-incidence exceptionalities (i.e., emotional behavioural disorders or EBD, specific learning disability, Attention Deficit-Hyperactivity Disorder or ADHD, mild to moderate cognitive delay) and to accommodate more current terminology (e.g., the term disability has been changed to exceptionality). The modified survey includes operational definitions of four high-incidence exceptionalities: emotional/behavioural disorder; specific learning disability; ADHD; and mild to moderate cognitive delay. The exceptionality of moderate to severe mental impairment, from the original instrument, was replaced with ADHD as it was more relevant to the study examining teachers' attitudes towards high-incidence exceptionalities.

Second, questions were revised to explore coaches' attitudes toward instructing students with exceptionalities as part of the regular athletic program. This is, statements relating to teachers' attitudes toward teaching students with exceptionalities have been modified to include coaches' attitudes toward coaching students with exceptionalities (e.g., As a physical education teacher/coach, I do not have sufficient training necessary to instruct identified students with typically achieving students in my regular physical education/athletic program). There were no changes (i.e., addition or removal of items) made to the factors from the original survey instrument.

The finalized version of the survey titled, *Physical Educators'/Coaches' Attitudes Toward Instructing Individuals with Exceptionalities*, was used in this study (see Appendix B). This version consists of 48 belief statements and a demographic

information section to obtain information on participants' personal characteristics (i.e., gender, age, and years of teaching physical activity/athletics). Belief statements were rated by respondents using a five-point Likert scale (i.e., strongly disagree to strongly agree). One open-ended question was included to solicit opinions regarding improvements for teachers'/coaches' levels of training relating to physical activity and students with exceptionalities (i.e., What do you feel would improve your level of competency?)

Data Collection

Upon approval from the University of Saskatchewan Behavioural Research Ethics Board (see Appendix C), permission was requested from: (1) the Director of Education from one urban school division in central Saskatchewan; and (2) various university professors teaching undergraduate education courses at the university. Once permission was granted from the school division, a written or verbal request was made to individual principals to invite in-service teachers from their schools to participate in this study. When approval was granted by individual university professors, pre-service teachers were invited to voluntarily participate during course time. The surveys were then delivered in person to the participating schools in the school division and to the university students willing to participate. Pre-service and in-service teachers who wished to participate were asked to complete the survey, which implied consent, and to return the survey in the provided unmarked envelope. Completed surveys were picked up by the researcher within one month of their distribution.

Data Analysis

Data was entered and analyzed using the Statistical Package for the Social Sciences (SPSS Inc., 2010). After the initial data entry, a quality check to ensure accuracy was conducted by two individuals who each checked 50% of the participant responses and demographic data. Average scores were substituted for missing survey data.

Demographic information collected from pre-service and in-service teachers and coaches included: gender, age, training, experience teaching/coaching students with exceptionalities, and perceived level of competency. Descriptive analyses (e.g., mean, standard deviation and variance) were used to examine participants' individual characteristics. The potential dependent variables in this study were the three factors from the survey: (1) outcomes of instructing students with exceptionalities in regular physical education and athletic programs; (2) effects on student learning; and (3) need for more academic preparation to teach students with exceptionalities. Factor one was used as the dependent variable in this study. The questions in this factor explored teachers' attitudes toward the outcomes of including students with exceptionalities as part of the regular program as it relates to the four high-incidence exceptionalities identified in the survey instrument (e.g., EBD, specific learning disability, ADHD, and mild to moderate cognitive delay). Folsom-Meek and Rizzo (2002) explained outcomes of teaching students with exceptionalities in regular classes (factor one) as a factor representing issues that affect teaching and ultimately student learning (i.e., social isolation, social acceptance, classroom harmony). Items in factor two (effects on student learning) were not included in analyses since they did not directly focus on teachers' attitudes. Items in

factor three (need for more academic preparation) were also not used as dependent variables in this study since only two survey items were used to make up this factor. This would be a limitation to the study as having only two statements to make up a factor would decrease the reliability. The open-ended question included in the survey was used to solicit opinions regarding improvements for teachers'/coaches' levels of training and competency was reviewed, and related themes are reported.

Research Question 1

The first research question posed was: what are pre-service/in-service teachers' and coaches' attitudes toward instructing students with exceptionalities as part of the general physical education/athletic program?

Descriptive analyses of participants' individual characteristics (i.e., measures of central tendency and variability) were conducted. Factor one (outcomes of teaching students with exceptionalities in regular classes) was made up of six statements from the survey that measured teachers' and coaches' attitudes of instructing students with exceptionalities as part of the regular program (i.e., identified students should be taught with typically achieving students in my regular physical education/athletic program whenever possible). An analysis of variance (ANOVA) was used to examine the potential differences between participants' individual characteristics (e.g., years of experience teaching/coaching students with exceptionalities) and participants' responses to factor one (outcomes of teaching students with exceptionalities in regular classes). In a review of literature, studies showed mixed findings with respect to experience working with students with exceptionalities as a predictor of more positive attitudes (Kozub & Lienert, 2003). The independent variable (years of experience teaching/coaching

students with exceptionalities) was used to explore these findings. In order to reduce the error rate when running multiple tests, the Bonferroni correction was used to establish a corrected alpha level. This corrected alpha level of .01 was used to judge statistical significance ($\alpha/\text{number of tests run} = 0.05/4 = 0.01$).

The open-ended question, included in the survey to solicit opinions regarding improvements for teachers'/coaches' levels of training and competency, was reviewed and related themes were grouped and reported by popular responses. Thematic analysis was used to identify, analyze and report important themes from the data (Braun & Clarke, 2006). The responses were first transcribed into a table format. The table was then reviewed by the researcher and responses were analyzed to identify common themes. Common responses were then grouped into one of four themes. For example, one participant reported that "taking more classes and getting more experience" would improve his/her level of competency. This response fit into a theme of *more school-based experience* and *more courses and education*, and therefore was categorized into both themes. Several participants did not respond to the open-ended question and were coded as *no response*. Participants with multiple responses had their comments categorized into more than one theme. Therefore, total percentages relating to the categorized responses do not add up to 100%. to 100%.

Research Question 2

The second research question posed was: how are pre-service/in-service teachers' and coaches' attitudes toward instructing students with exceptionalities influenced by their individual characteristics?

The relationship between independent variables (e.g., pre-service and in-service teachers'/coaches' gender; age; years of teaching/coaching; levels of training; and experience teaching/coaching students with exceptionalities) and the dependent variable (e.g., factor one from the survey) was investigated using correlational analyses (e.g., Pearson's correlational coefficient, r) to determine the magnitude and direction of any statistically significant relationships.

Results of the data analyses are presented in Chapter 4 of this study, and the implications are discussed in Chapter 5.

CHAPTER 4: RESULTS

Overview

Pre-service and in-service teachers'/coaches' were surveyed to determine whether or not their reported attitudes and skill levels influenced the outcomes for teaching/coaching students with exceptionalities as part of the regular physical education and athletic programs. An adapted version of the *Physical Educators' Attitude Toward Teaching Individuals with Disabilities-III (PEATID-III)* (Rizzo, 1993) survey was used in this study. This survey contained three factors examining: outcomes of teaching students with exceptionalities in regular classes; effects on student learning; and need for more academic preparation of teach students with exceptionalities. However, only the outcomes of teaching students with exceptionalities in regular classes (factor one) was used for the purposes of this study.

Descriptive, inferential (analysis of variance), and correlational analyses were used to compare and explore relationships between survey factors and the participants' individual characteristics (e.g., independent variables of gender, age, years of experience, number of physical education classes taken).

Participant Characteristics

One hundred and sixty-nine pre-service and in-service teachers participated in this study. Of these participants, 128 were female and 41 were male. Seventy-seven participants were pre-service teachers and 92 were in-service teachers from and elementary school from kindergarten to grade eight (see Table 4.1).

Table 4.1

Participants' Demographic Information

Teaching Experience	N	%
NR	2	1.2
0 years	37	21.9
1-5 years	58	34.3
6-10 years	42	24.9
11+ years	30	17.8
Total	169	100.0
P.E courses taken	N	%
0 courses	37	21.9
1-2 courses	93	55.0
3-4 courses	25	14.8
5+ courses	14	8.3
Total	169	100.0
Adapted P.E. courses taken	N	%
0 courses	125	74.0
1-2 courses	33	19.5
3-4 courses	9	5.3

Table 4.1 continued

5+ courses	2	1.2
Total	169	100.0
<hr/>		
Experience teaching/coaching individuals with exceptionalities	N	%
<hr/>		
None	33	19.5
< 1 year	44	26.1
1-2 years	17	10.1
2+ years	75	44.3
Total	169	100.0
<hr/>		
Rating of experience	N	%
<hr/>		
No experience	30	17.8
Not good	20	11.8
Satisfactory	83	48.5
Very good	36	21.3
Total	169	100.0
<hr/>		
Competence rating	N	%
<hr/>		
NR	2	2.3
Not at all	13	7.7
Somewhat	99	58.6
Very	55	31.4
Total	169	100.0
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Note. N = sample size, % = percentage, NR = no response

Of the 169 participants, it is noteworthy that 74% had not taken any adapted physical education courses, and 39% of participants had not taken any special education courses. In addition, 31.4% of participants felt very competent teaching individuals with exceptionalities, and 21.3% rated the quality of teaching/coaching experience as very good.

Research Question 1

The first research question posed was: what are pre-service/in-service teachers' and coaches' attitudes toward instructing students with exceptionalities as part of the general physical education/athletic program? Potential differences between years of experience teaching/coaching students with exceptionalities and factor one (outcomes of teaching students with exceptionalities in regular classes) were explored. Six belief statements rated by participants using a five-point Likert scale (i.e., strongly disagree to strongly agree) measured teachers' and coaches' attitudes relating to the dependent variable (outcomes of teaching/coaching students with exceptionalities). An analysis of variance (ANOVA) was conducted to explore potential differences in attitude of participants with varying years of experience teaching/coaching students with exceptionalities and outcomes of teaching/coaching students with exceptionalities (Factor 1: ADHD, EBD, SLD, mild to moderate cognitive delay; see Table 4.2). Significant differences were found between teachers' years of experience teaching/coaching students with exceptionalities (*no experience to less than six months, 6 months to 2 years experience, and 2 or more years experience*) and teachers' attitudes toward the outcomes of teaching students with specific learning disabilities [$F(2,163) = 5.205, p < .05$], ADHD [$F(2,163) = 5.087, p < .05$], and mild to moderate cognitive delays [$F(2,163) =$

5.356, $p < .05$]. Scheffé post hoc analyses were used to determine the location of the main effect. The Scheffé method was used since it is both flexible (i.e., can be used for simple pair wise and complex contrasts) and conservative (i.e., experimental error rate will generally be much smaller than α) (Glass & Hopkins, 1996).

Teachers/coaches with *no to less than six months* experience teaching/coaching students with exceptionalities (N=59, M=22.6271) had significantly lower rated attitudes toward the outcomes of teaching students with specific learning disabilities than teachers with *2 or more years* of experience (N=73, M=24.0959) and teachers with *6 months to two years* of experience (N=34, M=24.2353). Teachers and coaches with *6 months to two years* of experience teaching/coaching students with exceptionalities (N=34, M=24.2353) had significantly higher rated attitudes toward the outcomes of teaching students with ADHD than teachers with *no to less than six months* experience (N=59, M= 22.2712).

Teachers/coaches with *6 months to two years* of experience teaching/coaching students with exceptionalities (N=34, M=24.4118) had significantly higher rated attitudes toward the outcomes of teaching students with mild to moderate cognitive disabilities than teachers with *two or more years of experience* (N =73, M = 24.2603) and *no to less than six months* experience (N=59, M= 22.7288). No statistically significant differences were found between years of experience teaching/coaching students with exceptionalities and the outcomes of teaching students with EBD [$F(2,163) = 2.083, p < .05$].

Open- Ended Question

One open-ended question was included in the survey: What do you feel would improve your level of competency? A total of 124 out of 169 participants responded to the open-ended question ($124/169 = 73.4\%$). The responses were reviewed and

organized into four themes based on the majority of responses: (1) Need for More School-Based Experience (working with students with exceptionalities), (2) Need for Specific Training (Professional development and workshops), (3) Need for More Courses and Education (at the University level), and (4) Need for Strategies and Resources to Assist with Programs (i.e., support from trained personnel and appropriate equipment). Based on response content, some responses were categorized into more than one theme. For example, one participant noted the need for “more adapted physical education classes and special education courses, and also more teaching experience.” This participant’s responses were categorized into the following two themes: More school-based experience and more courses and education (university level). Therefore, total percentages do not add up to 100% (see Table 4.3).

Of those participants who answered the open-ended question, 30.6% (i.e., 38/124) of respondents indicated the need for more school-based experience to improve competency levels. Participants indicated that more experience teaching physical education was important; however, the greatest need was for experience working with students with exceptionalities. One respondent noted that “experience in the schools observing and teaching children with these types of exceptionalities (especially in Phys. Ed.)” would be particularly helpful in improving levels of competency. Several respondents agreed that more experience would be beneficial. However, respondents also noted that specific training would be beneficial (i.e., undergraduate classes focused on teaching physical activity to students with exceptionalities).

Table 4.2

Analysis of Variance for Factor 1 by Years of Experience Teaching Students with Exceptionalities

Dependent Variable	Exceptionality (IV)	Mean	F Value	df	Sig.	PC
Outcomes of teaching students with exceptionalities in regular classes (Factor1)	EBD	22.9	2.083	2,163	.128	
	SLD	23.6	5.205	2,163	.006*	1<3,2
	ADHD	23.2	5.087	2,163	.007*	2>1
	COGN	23.7	5.356	2,163	.006*	2>3,1

Note. Significant at the .01 level; PC represents pair wise comparisons using Scheffé post hoc analyses; 1 = teachers/coaches with 0-6 months experience teaching/coaching students with exceptionalities; 2 = teachers/coaches with 6 months to 2 years experience teaching/coaching students with exceptionalities; 3 = teachers/coaches with 2 or more years experience teaching/coaching students with exceptionalities

Table 4.3

Themes from Participants' Responses for Improved Competence

Theme	N	%
More school-based experience	38	30.6
Specific training: professional development and workshops	59	47.6
More courses and education (university level)	46	37.1
Strategies and resources	17	13.7

Note. N=sample size, %= percentage, N value may not add up to 169 due to missing values and some participants suggested more than 1 theme.

Forty-seven percent (i.e., 59/124) of respondents suggested that specific training, such as professional development opportunities and workshops, would improve competency levels of teaching students with exceptionalities in the regular program. Respondents indicated students with exceptionalities are difficult to integrate into physical education programs without an understanding of specific exceptionalities. One respondent expressed a need for “[h]aving PD [professional development] to address specific needs of students with exceptionalities in physical education and [learning] how to make them feel as successful as typically achieving students.” The necessity for specific job training through professional development opportunities was noted by participants, and several respondents acknowledged that more courses and education offered at the university level would be beneficial.

Thirty-seven percent of respondents (i.e., 46/124) identified more courses (i.e., adapted physical education) or education at the university level as being needed to improve competency levels. Some participants noted that they have received instruction on how to accommodate students with exceptionalities in physical education programs; however, instruction was limited to instructing students with low-incidence exceptionalities (i.e., students who are deaf or blind). One participant noted “a course directed at effective strategies to teach students with exceptionalities would help prepare me for teaching all students” and improve his/her level of competency. More courses relating to physical activity and special education seemed to be of great importance to many respondents. While this theme was very closely related to strategies and resources, as courses provide strategies and resources for teachers and coaches to use, the themes were separated because the strategies and resources that respondents noted could be

obtained from areas other than university level education courses (i.e., special education teachers, physical education specialists, administrators).

The provision of strategies and resources was the final theme respondents indicated would improve their levels of competency. Fourteen percent of participants specifically identified the need for information regarding specific exceptionalities (e.g., characteristics of students with EBD) and strategies to assist those students. In order to improve competency levels among educators, one respondent expressed a need for “strategies to control [students’] temper/anger,” while another noted that “more direct information as to what is involved in specific students’ exceptionality” as two key factors. Teachers’ and coaches’ individual characteristics were also examined to see how they related to the outcomes of teaching/coaching students with exceptionalities as part of the regular program.

Research Question 2

The second research question posed was: how are pre-service/in-service teachers’/coaches’ attitudes toward instructing students with exceptionalities influenced by their individual characteristics? Correlational analyses were used to determine the relationship between independent variables (i.e., pre-service and in-service teachers’/coaches’ gender; age; years of teaching/coaching; levels of training; and experience teaching/coaching students with exceptionalities) and the outcomes of teaching/coaching students with exceptionalities as part of the regular program (e.g., factor 1EBD; see Table 4.4). Cohen (1988) identified correlation descriptives from: 0.0 to 0.1 were *very small*; 0.1 to 0.3 were *small*; 0.3 to 0.5 were *moderate*; 0.5 to 0.7 were referenced as *large* or *high*; 0.7 to 0.9 were *very large* or *very high*; and 0.9 to 1 were

Table 4.4

Correlation Matrix – Correlations between independent variables and Factor 1

Variables	1	2	3	4	5	6	7	8	9	10	11
1. age		.618**	.073	.097	.056	.291**	.165*	-.182*	-.052	-.075	.008
2. years experience			.099	.255**	.215**	.340**	.200**	.031	.161*	.123	.184*
3. gender				.035	-.018	.027	-.020	-.036	-.065	.010	-.029
4. P.E.					.558**	.205**	.193*	.003	-.016	.003	-.046
5. A.P.E.						.278**	.212**	.141	.093	.118	.088
6. Sp. Ed.							.171*	.050	.255**	.129	.184*
7. Exp. with Excep.								.037	.094	.040	.076
8. factor 1EBD									.790**	.855**	.737**
9. factor 1 SLD										.823**	.849**
10. factor 1 ADHD											.803**
11. factor 1 COGN											

Note. 1 = age; 2 = years of experience; 3 = gender; 4 = physical education courses taken (P.E.); 5 = adapted physical education courses taken (A.P.E.); 6 = special education courses taken (Sp. Ed.); 7 = years of teaching/coaching individuals with exceptionalities (Exp. with Excep.); 8 = factor 1 specific to emotional behavioural disorder (factor 1EBD); 9 = factor 1 specific to specific learning disability (factor 1SLD); 10 = factor 1 specific to attention deficit hyperactivity disorder (factor 1ADHD); 11 = factor 1 specific to mild to moderate cognitive delay (factor 1COGN).

nearly, practically or almost perfect or distinct (Cohen, 1988). Statistically significant positive correlations were found between the number of special education courses taken and: (1) factor one (specific to SLD), $r(169) = .255, p < .05$; and (2) factor one (specific to COGN), $r(169) = .184, p < .05$. A statistically significant negative correlation was found between age and factor one (specific to EBD), $r(169) = -.182, p < .05$.

A small statistically significant positive correlation was found between years of teaching/coaching experience and: (1) factor one (specific to SLD), $r(169) = .161, p < .05$; and (2) factor one (specific to COGN), $r(169) = .184, p < .05$. Very high statistically significant correlations were found between the specific exceptionalities as they related to factor one (i.e., the correlation between factor one (EBD) and factor one

(ADHD), $r(169) = .855, p < .05$). This very high statistical significance could be explained as each of the exceptionalities were rated very similarly when exploring factor one. None of the remaining correlations between variables were statistically significant.

A detailed discussion of the results and possible implications of the study are presented in chapter five.

CHAPTER 5: DISCUSSION

Purpose and Procedures

The purpose of this study was to explore whether the attitudes of pre-service and in-service teachers/coaches influence the outcomes of teaching/coaching students with exceptionalities as part of the regular physical education and athletic programs. The following research questions were posed: (1) What are pre-service/in-service teachers' and coaches' attitudes toward instructing students with exceptionalities as part of the general physical education/athletic program? and (2) How are pre-service/in-service teachers' and coaches' attitudes toward instructing students with exceptionalities influenced by their individual characteristics? The following is a discussion of the study's findings, limitations, and possible implications for future research.

Summary of Findings

1. Significant differences were found between teachers' years of experience teaching/coaching students with exceptionalities (*no experience to less than six months, 6 months to 2 years experience, and 2 or more years experience*) and teachers' attitudes toward the outcomes of teaching students with specific learning disabilities [$F(2,163) = 5.205, p < .05$], ADHD [$F(2,163) = 5.087, p < .05$], and mild to moderate cognitive delays [$F(2,163) = 5.356, p < .05$].
 - a. Teachers/coaches with *no to less than six months* experience teaching/coaching students with exceptionalities ($N=59, M=22.6271$) had significantly lower rated attitudes toward the outcomes of teaching students with specific learning disabilities than teachers with *2 or more years* of experience ($N=73,$

M=24.0959) and teachers with *6 months to two years* of experience (N=34, M=24.2353).

- b. Teachers/coaches with *6 months to two years* of experience teaching/coaching students with exceptionalities (N=34 , M=24.2353) had significantly higher rated attitudes toward the outcomes of teaching students with ADHD than teachers with *no to less than six months* experience (N=59, M= 22.2712).
- c. Teachers/coaches with *6 months to two years* of experience teaching/coaching students with exceptionalities (N=34, M=24.4118) had significantly higher rated attitudes toward the outcomes of teaching students with mild to moderate cognitive disabilities than teachers with *two or more years of experience* (N=73, M = 24.2603) and *no to less than six months* experience (N=59, M= 22.7288).

2. Fifty-eight percent of teachers/coaches felt somewhat competent teaching/coaching students with EBD, SLD, ADHD, and COGN as part of the regular physical education program; yet 74% of teachers/coaches had not taken any adapted physical education courses.
3. Teachers and coaches reported limited educational training in university courses related to physical education, adapted physical education and special education (e.g., 22% had not taken any physical education classes; 74% had not taken any adapted physical education classes; and 39% had not taken any special education classes).

4. Teachers and coaches reported their competency levels for teaching/coaching students with exceptionalities would improve with: (1) More school-based experience (30.6%), (2) Specific training (professional development and workshops) (47.6%), (3) More courses and education (at the university level) (37.1%) and, (4) Strategies and resources to assist with program (support from trained personnel and appropriate equipment) (13.7%).
5. As teachers'/coaches' age increased, their attitudes toward teaching/coaching students with emotional behavioural disorders in the regular program decreased: $r(169) = -.182, p < .05$.

Research Question 1

The first research question posed was: What are pre-service/in-service teachers' and coaches' attitudes toward instructing children and adolescents with exceptionalities as part of the general physical education/athletic program?

An analysis of variance (ANOVA) was used to explore potential differences in attitude of participants with varying years of experience teaching/coaching students with exceptionalities and outcomes of teaching/coaching students with exceptionalities (ADHD, EBD, SLD, mild to moderate cognitive delay). Statistically significant differences were found between teachers' years of experience teaching/coaching students with exceptionalities (*no experience to less than six months, 6 months to 2 years experience, and 2 or more years experience*) and teachers' attitudes toward the outcomes of teaching students with specific learning disabilities, ADHD, and mild to moderate cognitive delays.

Scheffé post hoc analyses revealed that teachers/coaches with *no to less than six months* experience teaching/coaching students with exceptionalities (N=59, M=22.6271) had significantly lower rated attitudes toward the outcomes of teaching students with specific learning disabilities (SLD) than teachers with *2 or more years* of experience (N=73, M=24.0959) and teachers with *6 months to two years* of experience (N=34, M=24.2353). The outcomes for including students with exceptionalities in the regular classroom were outcomes relating to peer acceptance, classroom harmony, burden placed on teachers, workload for teachers, expended teacher time, and inclusion (Folsom-Meek & Rizzo, 2002). This could be an indication that teachers/coaches with minimal experience may have apprehensions when considering working with students with specific learning disabilities. With minimal experience, the variety of learning disabilities that may affect organization and the understanding or use of verbal or nonverbal information may be overwhelming. This is supported by Cook (2001), who found teachers/coaches expect students with mild or hidden disabilities to attain modal performance due to the fact that they do not exhibit obvious signs of their exceptionality. Teachers/coaches with more experience may be more comfortable making minor adjustments to lessons and activities for students with SLD once they have familiarized themselves with the students' particular needs.

When examining the mean difference between the dependent variable (outcomes specific to ADHD) and years of experience teaching/coaching students with exceptionalities, teachers and coaches with *6 months to two years* of experience teaching/coaching students with exceptionalities (N=34, M=24.2353) had significantly higher rated attitudes toward the outcomes of teaching students with ADHD than teachers

with *no to less than six months* experience (N=59, M= 22.2712). A study by Harvey and Reid (2005) identified the challenges students with ADHD have with motor planning, movement skills, and fitness levels. These challenges may possibly affect beginning teachers'/coaches' attitudes as it is difficult to appropriately adapt the physical education lessons. Teachers'/coaches' attitudes may improve if they have more experience working with students with ADHD and are actively involved in the programming (i.e., knowledge of the individualized education plan).

Similarly, teachers/coaches with *6 months to two years* of experience teaching/coaching students with exceptionalities (N=34, M=24.4118) had significantly higher rated attitudes toward the outcomes of teaching students with mild to moderate cognitive disabilities than teachers with *two or more years of experience* (N =73, M = 24.2603) and *no to less than six months* experience (N=59, M= 22.7288). These findings could imply that beginning teachers with less than six months experience have higher levels of uncertainty towards effective instruction based on their inexperience, and therefore their attitudes are less favourable towards the outcomes of including students with mild to moderate cognitive delay in the regular program. Similarly, teachers/coaches with two or more years of experience working with students with exceptionalities have a clear understanding of the time, effort, and difficulty required to adapt lessons to meet all students' need. Therefore, they tend to have less favourable attitudes as well. These differences in attitudes are important to note as teacher training programs could attempt to better prepare future teachers (i.e., provide more school-based experiences), and school systems could provide more support to in-service teachers/coaches (i.e., support from administration to create collaborative planning teams

for individualized education plans) to help maintain more positive attitudes. Increasing levels of school-based experiences and more support for in-service teachers were two areas that participants indicated would increase competency levels. Literature supports that higher levels of competency were predictors of positive teacher attitudes (Folsom-Meek & Nearing, 1994; Kozub & Lienert, 2003).

The mean differences between the groups were not the same for each specific exceptionality, however it is interesting to note that teachers/coaches with two or more years experience teaching/coaching students with exceptionalities have the least favourable attitudes towards the outcomes of including students with SLD, ADHD, and mild to moderate cognitive delay in the regular physical education/athletic program. While there is not a great deal of literature examining pre-service teachers' attitudes, this finding is supported by Kowalski and Rizzo (1996). This study examined factors influencing pre-service teachers' attitudes toward teaching individuals with exceptionalities in the regular physical education program. University students had high levels of perceived competence and therefore, felt comfortable entering the physical education environment and adapting to the challenge of teaching/coaching a diverse group of students. It is possible that teachers and coaches who had two or more years of experience teaching/coaching students with exceptionalities may then recognize the effects of insufficient training in special education, and/or adapted physical education. Therefore, they have less favorable attitudes toward the outcomes of student and program success. The literature supports that physical education teachers' abilities to individualize programming to accommodate all needs is partially dependent on theoretical concepts and teaching methods obtained from university courses (e.g., Bulger

et al., 2001). Teachers/coaches who have been working in the field for over two years may recognize their own inabilities to program for students with exceptionalities based on their lack of understanding and knowledge.

No statistically significant differences were found between years of experience teaching/coaching students with exceptionalities and the outcomes of teaching students with EBD [$F(2, 163) = 2.083, p < .01$]. That is, teachers/coaches attitudes towards teaching/coaching students with EBD in the regular classroom were not significantly different based on their years of experience teaching/coaching students with exceptionalities. It is interesting that the findings of the study show similar results for students with ADHD, SLD, and mild to moderate cognitive delay (e.g., ADHD [$F(2, 163) = 5.087, p < .01$]; SLD [$F(2, 163) = 5.205, p < .01$]; COGN [$F(2, 163) = 5.356, p < .01$]) yet are different for students with EBD [$F(2, 163) = 2.083, p < .01$]. Often teachers and coaches recognize students with EBD as *bad* students based on the adverse behaviours that they have presented in educational programs. Whether or not teachers and coaches are informed of the student's exceptionality, a common practice is to remove the *bad* students from the regular programming. They are often referred to alternate programs (i.e., behavior modification programs) or sent to the principal's office. Students with EBD present behavioural or emotional responses (i.e., physical or verbal outbursts) that are very different from the appropriate norms of regular school programs. Therefore, the educational performance of students with EBD is compromised (Webber & Plotts, 2008). Students with SLD, ADHD, or mild to moderate cognitive delay often blend into the regular programs because they do not act or look different from their typically achieving peers (Grosshans & Kiegers, 2004; Harvey & Reid, 2005). Students

with SLD, ADHD, and mild to moderate cognitive delay may not be disruptive or may go unnoticed in regular physical education classes; however, students with EBD present more of a challenge for teachers and coaches as their behaviours are often more aggressive or alarming. There was no significant difference found between teachers'/coaches' years of experience teaching/coaching students with exceptionalities and their attitudes towards the outcome of teaching students with EBD [$F(2, 163) = 2.083, p < .01$]. This may be an indicator that regardless of their experience with students with exceptionalities, teachers/coaches have the idea that students who demonstrate behavioural issues should not be their responsibility in regular physical education or athletic programs.

Open-Ended Question Findings

One open-ended question was included in the survey: What do you feel would improve your level of competency? The open-ended question is related to the first research question as it gathered participants' responses that could positively impact teachers'/coaches attitudes. Teachers and coaches reported limited educational training in university courses related to physical education, adapted physical education, and special education. That is, 22% had not taken any physical education classes; 74% had not taken any adapted physical education classes; and, 39% had not taken any special education classes. There are several factors (i.e., teacher attitudes) negatively impacting effective instruction for students with high-incidence exceptionalities in physical education and athletic programs, and lack of teacher training is one factor repeatedly mentioned throughout the literature (Bulger, Mohr, Carson, & Wiegand, 2001; Lieberman et al., 2004; Menear & Davis, 2007; Smith & Green, 2004). Twenty-six

percent of teachers and coaches had not taken any adapted physical education classes at the university level. This is alarming as the majority of classrooms in every school system contain students with high-incidence exceptionalities (either diagnosed or undiagnosed), who in turn suffer from inadequate programming in physical education. Many universities do not require students to take an adapted physical education course (i.e., University of Alberta), and several universities do not even offer the course (i.e., University of Saskatchewan). What often occurs is teachers who are not physical education specialists, and have limited training in the area, end up teaching physical education classes due to lack of funding in school systems. A study in 2002, indicated that a mere 18% of schools in Canada employed a full-time physical education specialist (DeCorby et al., 2005). Physical education is crucial for students as it is often the only opportunity for them to engage in moderate to vigorous physical activity (Faulkner & Reeves, 2000). The involvement of a physical education specialist is important as they are properly trained to plan, implement, and evaluate physical activity programs. Many generalist physical education teachers feel they have insufficient training to meet students' needs; therefore, the adaptation of activities is difficult (Smith & Green, 2004). The absence of a physical education specialist presents challenges for both teachers and students, and ultimately quality physical education is sacrificed. Many schools cannot afford specialist teachers and therefore the need for knowledge of exceptionalities to be infused throughout undergraduate teacher education programs becomes critical. Bulger et al. (2001) indicated that the successful individualization of a student's physical activity program is partially dependent on the integration of theoretical concepts from a variety of interdisciplinary and pedagogical courses.

Teachers and coaches in this study also recognized the need for more educational training to improve their practices (e.g., 37.1% indicated more courses and education were necessary in the open-ended question). This finding aligns with the literature, since teachers have reported they have insufficient training and support to meet the students' needs (Smith & Green, 2004). Teacher education programs contribute to the ineffectiveness of school programs, therefore, strategies for effective teacher preparation are essential for effective teacher preparation and student programming (Bulger et al., 2001; Kowalski & Rizzo, 1996; Smith & Green, 2004). Knowledge of exceptionalities should be infused throughout the curriculum in order for teachers and coaches to have more adequate training and improved competence levels. Positive teacher perceptions of physical activity may affect the involvement of students with high-incidence exceptionalities in physical education and athletic programs and create more inclusive and effective programming. As teacher education programs increase the knowledge of exceptionalities and appropriate instructional methods to support them, pre-service teachers become well trained, more positive in-service teachers. Positive perceived competence levels may have an effect on teachers'/coaches' attitudes towards the inclusion of students with exceptionalities.

Fifty-eight percent of teachers/coaches felt somewhat competent teaching/coaching students with Emotional Behavioural Disorders, specific learning disabilities, Attention-Deficit Hyperactivity Disorder, and mild to moderate cognitive delay as part of the regular physical education program; yet 74% of teachers/coaches had not taken any adapted physical education courses. It could be assumed that teachers/coaches with no training in the area of adapted physical education or special

education would have questions, concerns, or hesitancy teaching/coaching students with exceptionalities. However, these findings show that regardless of limited educational training, teachers'/coaches' rated themselves as competent teaching students with exceptionalities. This could be the result of teachers/coaches being unaware of what the structure of good quality adapted physical education should consist of, or it could be the result of skewed survey results. That is, respondents may have answered the survey questions in a manner which they considered to be socially acceptable. If participant responses are only attempting to satisfy the purpose of the research (i.e., to collect attitudes of including students with exceptionalities in the regular physical education/athletic program), adapted planning and instruction is not likely taking place for students with exceptionalities.

Teachers and coaches reported their competency levels for teaching/coaching students with exceptionalities would improve with: (1) More school-based experience (30.6%), (2) Specific training (professional development and workshops) (47.6%), (3) More courses and education (at the University level) (37.1%) and, (4) Strategies and resources to assist with program (support from trained personnel and appropriate equipment) (13.7%). These results could have a significant impact on pre-service teachers if teacher training programs had mandatory adapted physical education courses and increased the amount of time and exposure their students had working with in schools with students with exceptionalities. School divisions could provide professional development around physical education and instructing students with exceptionalities. This would provide support to in-service teachers and help to improve their competency

levels. If the needs of pre-service and in-service teachers are not met, and more positive attitudes are not fostered, students' health and physical activity levels will suffer.

Research Question 2

The second research question posed was: How are pre-service/in-service teachers' and coaches' attitudes toward instructing students with exceptionalities influenced by their individual characteristics?

Correlational analyses were used to determine the relationship between participant characteristics (e.g., independent variable of age) and the outcomes for teaching/coaching students with exceptionalities as part of the regular program. A statistically significant negative correlation was found between teachers'/coaches' age and their attitudes toward teaching students with EBD in the regular program. That is, as teachers' and coaches' age increased their attitudes toward teaching students with EBD in the regular physical education/athletic programs decreased: $r(169) = -.182, p < .05$. This is an interesting finding that shows the possibility of teachers becoming jaded as they advance in their careers (and age), and having negative attitudes towards the inclusion of students presenting difficult behavior. A study by Rizzo and Kirkendall (2003) showed similar results and suggested that pre-service teachers had more favorable attitudes toward teaching students with behavioural disorders. These results may indicate that as teachers advance in their careers, they have a better understanding of the struggles that students with emotional behavioural disorders demonstrate. Teachers may develop negative feelings towards including students with EBD in the regular classroom as their behaviours are often very disruptive and challenging. This could have detrimental effects on teacher instruction and student learning. Teachers/coaches who struggle with the

behaviours of students with EBD may spend more time on classroom management (i.e., dealing with disruptive behaviours), and therefore students' engagement in physical activity suffers. Similarly, teachers/coaches may choose to remove the student with EBD to eliminate the disruption, which in turn is damaging to the growth and development of that student.

Limitations

The first limitation in this study relates to the generalizability of the results. The pre-service teachers who participated in this study were recruited from a Western Canadian university. Therefore, participants all had similar training and requirements to obtain an education degree. Pre-service teachers from other Western Canadian universities may have had different requirements or additional training in physical education, adapted physical education or special education. In-service teachers were recruited from one centrally located urban school division in Saskatchewan and, this study did not include input from rural or private school divisions. Therefore, this study can comfortably be generalized to pre-service teachers from Western Canadian universities and teachers from this centrally located urban school division in Saskatchewan. Various school divisions may implement different physical education/athletic programming, and may have access to specialized physical education teachers. Therefore, future studies may wish to expand the generalizability of their results by sampling a more diverse population from other universities and school divisions.

A second limitation relates to suspected socially biased reporting from participants. Participant responses to the survey items tended to all be the same

regardless of the exceptionality being examined. It appeared that participants were answering all questions equally in attempt to avoid social bias and to answer to the perceived socially acceptable norm (e.g., on a five point rating scale, consistently close or rating of strongly agree). It can be assumed that participants reported socially acceptable responses, as there was limited variability when looking at participant responses individually and comparatively. Participants may have also failed to read, or had limited understanding of, the described exceptionalities outlined at the beginning of the survey. Therefore, participants may have answered each question without differentiating between exceptionalities. Based on the vast differences between exceptionalities, it seems unlikely that participants would have similar attitudes toward each. By incorporating a social desirability scale as part of the survey instrument, responses may not have changed however, the lack of variability in responses may have been better accounted for and understood. This instrument could be further adapted to include items that account for social desirability (e.g., Please rate your level of understanding of the defined exceptionalities).

Conclusion

This study examined how teachers' and coaches' attitudes influenced the outcomes for including students with high-incidence exceptionalities as part of the regular physical education and athletic programs. As there is little to no research in the area of physical activity for children or adolescents with high-incidence exceptionalities, this study explored the role of physical educators and coaches and the influence of their attitudes. One significant finding from this study showed differences between teachers'/coaches' years of experience teaching/coaching students with exceptionalities

and their attitudes toward the outcomes for students with exceptionalities as part of the regular physical education/athletic program. For the most part, beginning teachers with less than two years of experience had the most favorable attitudes towards the outcomes of teaching/coaching students with exceptionalities as part of the regular physical education/athletic programs.

It is well documented in the literature that effective physical education programming for students with exceptionalities is dependent on teachers' attitudes, teacher education training programs, and teachers' competency levels (Bulger et al., 2001; Kowalski & Rizzo, 1996; Smith & Green, 2004). Teachers and coaches must have a combination of high perceived competence, experience with relevant coursework (i.e., adapted physical education courses and special education courses), and positive experiences teaching students with exceptionalities in order to provide effective programming for all students. This study found that while just over half of participating teachers/coaches felt somewhat competent teaching/coaching students with exceptionalities, 22% had no physical education training, 74% had no training in adapted physical education, and 39% had no special education training. This would suggest that effective physical education programming is being compromised at the expense of insufficient training, which in turn affects teachers'/coaches' attitudes and competency levels.

It is necessary to promote health within school systems, and physical activity plays a vital role in improving health. An increase in the collaborative relationship between pre-service education programs and in-service education programs will enable a more inclusive and supportive environment for all children in physical education classes.

With collaboration and support, educators can strive to prevent increasing levels of inactivity, and to create a society that is healthier both physically and mentally.

Implications for Practice

Physical inactivity is a growing concern among students, particularly those with exceptionalities (Harvey & Reid, 2005; Martin, 2006; Rimmer, 2005). Yet few studies address this issue. Improving teachers' and coaches' attitudes toward instructing students with exceptionalities as part of the regular physical education/athletic program is imperative. It is essential that there is training for teachers and coaches to improve competency levels in effective instruction. Participants commented on a number of areas that would improve their competency levels when planning and implementing physical activity programs for students with high-incidence exceptionalities. For example, more school-based experiences provided to pre-service teachers would allow them to experience working with students with high-incidence exceptionalities and to seek resources to assist them. Specific training and professional development around supporting students with high-incidence exceptionalities needs to be offered by both university programs and school divisions. Teacher education programs need to infuse the knowledge base for working with students with exceptionalities in regular physical education/athletic programs throughout the curriculum. The curriculum needs to incorporate kinesiology, special education, and adapted physical education courses (DePauw & Doll-Tepper, 2000; Kowalski & Rizzo, 1996). Teacher programs need to be re-evaluated as it is essential that physical educators are prepared to teach students with exceptionalities as part of the regular physical education/athletic programs (Folsom-Meek & Rizzo, 2002). Bridging the gap between training programs and in-service

programming occurring in schools will improve teachers/coaches the levels of competency, which in turn has been shown to improve teacher/coaches attitudes (Bulger et al., 2001).

Implications for Future Research

There is limited research that has been published pertaining to physical education programming for students with high-incidence exceptionalities. Future researchers may wish to explore teachers'/coaches' attitudes towards the outcomes of including students with exceptionalities as part of the regular program in more depth by expanding their participant sample to include teachers and coaches from rural and private school divisions. It would also be of interest to look at other Canadian universities to explore whether differences in teacher training programs influence or alter teachers'/coaches' attitudes toward the outcomes of including students with exceptionalities as part of the regular physical education/athletic program. Future researchers may also wish to add social desirability items to the PEATID-III instrument to account for the lack of variability in responses. Participants may have answered the questions without differentiating between exceptionalities. However, the by including social desirability items on the survey, the lack of variability may be better understood. It would be interesting to look directly at student involvement and success in physical education and athletic programs to determine the effects that teachers' and coaches' attitudes had on the quality of their programming. This may help identify barriers for students who are not engaged in physical education/athletic programs. As there is limited research examining physical education programs for students with high-incidence exceptionalities, it may be

worthy for researchers to investigate current programming for students with high-incidence exceptionalities to identify the need for adaptations in physical education.

School systems strongly promote inclusive practices (Bulger et al., 2001; Cook, 2001; Lieberman et al., 2004; Smith & Green, 2004); therefore, the inclusion of adapted physical education courses as a partial requirement for an education degree could only improve practice. Future studies may wish to investigate undergraduate and graduate programming at various universities in order to bridge the content teachers are learning to their practice with students with exceptionalities in physical education.

APPENDIX A:
PHYSICAL EDUCATOR'S ATTITUDE
TOWARD TEACHING INDIVIDUALS WITH DISABILITIES - III
(ORIGINAL SURVEY)

Information on PEATID III

Physical Educators' Attitude Toward Teaching Individuals with Disabilities-III

(Terry L. Rizzo, 1993)

General Directions

This study contains a series of statements which express beliefs about teaching individuals with disabilities in your regular physical education classes. There are no right or wrong responses. Circle the response that best describes your beliefs about each statement for each disability.

Enclosed is an explanation of four disabling conditions found in the survey to assist you in your response. Read the descriptions carefully before you begin the study. It is important to respond to the statements using only these descriptions.

**DO NOT SKIP ANY QUESTIONS.
CIRCLE ONLY ONE RESPONSE PER DISABILITY.
ALL RESPONSES WILL BE KEPT CONFIDENTIAL.
DESCRIPTIONS OF DISABILITIES**

Emotional/Behavioral Disorder: The term refers to a condition characterized by one or more of the following behavior clusters: severely deviant disruptive, aggressive or impulsive behaviors, withdrawn or anxious, general pervasive unhappiness, depressed or wide mood swings, delinquency, hyperactivity, social maladjustment, hypersensitivity. It is usually serviced with a behavior management program.

Specific Learning Disability: "A specific learning disability is a disorder within the individual which affects learning relative to that individual's potential. The disability interferes with the acquisition, organization, and/or expression of information such as in listening, reading, writing, thinking, and movement. In physical education this student could have difficulty with spacial awareness."

Mild-Moderate Mentally Impaired: This student would be considered to have an IQ score in the range of 50 to 80 on standardized intellectual tests. The student will probably develop communication skills and social skills but will lag behind their peers. the student usually can learn vocational and daily living skills but may need guidance and/or assistance in these areas. These students may have difficulty in performing motor skills, and exhibit a short attention span.

Moderate-Severely Mentally Impaired: This student would be significantly subaverage in intellectual functioning. They would have an IQ score below 50 on standardized tests. They may or may not be able to verbally communicate. There is little socialization or interaction. They are totally dependent on others for self-care.

Please circle the response which best corresponds to your agreement with each statement and for each labeled disability. Do NOT skip any.

=====
=====

KEY
SD=STRONGLY DISAGREE
D=DISAGREE
U=UNDECIDED
A=AGREE
SA=STRONGLY AGREE

=====

One advantage of teaching students labeled in my regular physical education classes with nondisabled students is that all students will learn to work together toward achieving goals.

- | | |
|---|--------------------|
| 1. Emotional/behavioral disorder | SD D U A SA |
| 2. Specific learning disability | SD D U A SA |
| 3. Mild-moderate mentally impaired | SD D U A SA |
| 4. Moderate-severe mentally impaired | SD D U A SA |

Teaching students labeled in my regular physical education classes will motivate nondisabled students to learn to perform motor skills.

- | | |
|---|--------------------|
| 5. Emotional/behavioral disorder | SD D U A SA |
| 6. Specific learning disability | SD D U A SA |
| 7. Mild-moderate mentally impaired | SD D U A SA |
| 8. Moderate-severe mentally impaired | SD D U A SA |

Students labeled will learn more rapidly if they are taught in my regular physical education class with nondisabled students.

- | | |
|--|--------------------|
| 9. Emotional/behavioral disorder | SD D U A SA |
| 10. Specific learning disability | SD D U A SA |
| 11. Mild-moderate mentally impaired | SD D U A SA |
| 12. Moderate-severe mentally impaired | SD D U A SA |

Students labeled will develop a more favorable self-concept as a result of learning motor skills in my regular physical education class with nondisabled peers.

- | | |
|--|--------------------|
| 13. Emotional/behavioral disorder | SD D U A SA |
| 14. Specific learning disability | SD D U A SA |
| 15. Mild-moderate mentally impaired | SD D U A SA |
| 16. Moderate-severe mentally impaired | SD D U A SA |

Students labeled will not be accepted by their nondisabled peers in my regular physical education classes.

- | | |
|---------------------------------------|-------------|
| 17. Emotional/behavioral disorder | SD D U A SA |
| 18. Specific learning disability | SD D U A SA |
| 19. Mild-moderate mentally impaired | SD D U A SA |
| 20. Moderate-severe mentally impaired | SD D U A SA |

Students labeled in my regular physical education classes with nondisabled students will disrupt the harmony of the class.

- | | |
|---------------------------------------|-------------|
| 21. Emotional/behavioral disorder | SD D U A SA |
| 22. Specific learning disability | SD D U A SA |
| 23. Mild-moderate mentally impaired | SD D U A SA |
| 24. Moderate-severe mentally impaired | SD D U A SA |

Having to teach students labeled in my regular physical education classes with nondisabled students places an unfair burden on teachers.

- | | |
|---------------------------------------|-------------|
| 25. Emotional/behavioral disorder | SD D U A SA |
| 26. Specific learning disability | SD D U A SA |
| 27. Mild-moderate mentally impaired | SD D U A SA |
| 28. Moderate-severe mentally impaired | SD D U A SA |

As a physical education teacher, I do not have sufficient training necessary to teach students labeled with nondisabled students in my regular physical education classes.

- | | |
|---------------------------------------|-------------|
| 29. Emotional/behavioral disorder | SD D U A SA |
| 30. Specific learning disability | SD D U A SA |
| 31. Mild-moderate mentally impaired | SD D U A SA |
| 32. Moderate-severe mentally impaired | SD D U A SA |

Teaching student labeled in my regular physical education classes with nondisabled students means more work for me.

- | | |
|-----------------------------------|-------------|
| 33. Emotional/behavioral disorder | SD D U A SA |
|-----------------------------------|-------------|

- 34. Specific learning disability SD D U A SA
- 35. Mild-moderate mentally impaired SD D U A SA
- 36. Moderate-severe mentally impaired SD D U A SA

Students labeled should not be taught in my regular physical education classes with nondisabled students because they will require too much of my time.

- 37. Emotional/behavioral disorder SD D U A SA
- 38. Specific learning disability SD D U A SA
- 39. Mild-moderate mentally impaired SD D U A SA
- 40. Moderate-severe mentally impaired SD D U A SA

As a physical education teacher, I need more course work and training before I will feel comfortable teaching physical education classes with students labeled with nondisabled students.

- 41. Emotional/behavioral disorder SD D U A SA
- 42. Specific learning disability SD D U A SA
- 43. Mild-moderate mentally impaired SD D U A SA
- 44. Moderate-severe mentally impaired SD D U A SA

Students labeled should be taught with nondisabled students in my regular physical education classes whenever possible.

- 45. Emotional/behavioral disorder SD D U A SA
- 46. Specific learning disability SD D U A SA
- 47. Mild-moderate mentally impaired SD D U A SA
- 48. Moderate-severe mentally impaired SD D U A SA

=====

A FEW FINAL QUESTIONS ABOUT YOURSELF

Identify your gender. Female Male

What is your age?

How many years have you taught physical education?

What grade levels are you presently teaching?

Do you have a Developmental/Adapted Physical Education teaching license? Yes No

Have you taken any Developmental/Adapted Physical Education courses?

Undergraduate? Yes No If so, how many courses?

Graduate? Yes No If so, how many courses?

Have you taken any Special Education courses?

Undergraduate? Yes No If so, how many courses?

Graduate? Yes No If so, how many courses?

Have you had any experience teaching individuals with disabilities? Yes No

How many years have you taught individuals with disabilities? Number of years

Rate the quality of your teaching experience for individuals with disabilities.

- No experience
- Not good
- Satisfactory
- Very good

If you have been around or worked with individuals with disabilities, what disability(ies) did they have?

How competent do you feel teaching students with disabilities?

- Not at all
- Somewhat
- Very

THANK YOU FOR YOUR HELP!

+++++

APPENDIX B:
PHYSICAL EDUCATORS;/COACHES' ATTITUDES TOWARD TEACHING
INDIVIDUALS WITH EXCEPTIONALITIES
(ADAPTED SURVEY)

Physical Educators'/Coaches' Attitudes Toward Instructing Individuals with Exceptionalities – Adapted from PEATID III (Rizzo, 1993)

General Directions

This study contains a number of statements which express beliefs about teaching/coaching individuals with exceptionalities in regular physical education/athletic programs. There are no right or wrong responses. Circle the response that best describes your beliefs about each statement for each exceptionality. All responses will be kept confidential.

Enclosed is an explanation of four exceptionalities found in the survey to assist you in your responses. Read the descriptors carefully before you begin this study. It is important to respond to the statements using only these descriptions. Please:

*DO NOT SKIP ANY QUESTIONS.
CIRCLE ONLY ONE RESPONSE PER EXCEPTIONALITY.*

Descriptors of Exceptionality

Exceptionality: Students with exceptionalities are an extraordinarily diverse group in comparison to the general population (Hallahan and Kauffman, 2006). While students with exceptionalities are often labelled as having a disability, the term exceptionality will be used to focus on the students' abilities, rather than disabilities.

Identified Student: A student who has been identified with, or labelled as having, an exceptionality (e.g., emotional/behavioural disorders, specific learning disability, attention deficit hyperactivity disorder, mild to moderate cognitive delay).

Emotional/Behavioural Disorder (EBD): The term EBD is “characterized by behavioural or emotional responses in school programs so different from appropriate age, cultural, or ethnic norms that the responses adversely affect educational performance, including academic, social, vocational, or personal skills” (Webber & Plotts, 2008, p.12).

Specific Learning Disability: "Learning Disabilities refer to a number of disorders which may affect the acquisition, organization, retention, understanding or use of verbal or nonverbal information. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and/or reasoning" (Learning Disabilities Association of Canada, 2005).

Attention Deficit Hyperactivity Disorder (ADHD): A student with ADHD typically displays characteristics of inattention, hyperactivity, and impulsivity. The individual will display clear evidence of clinically significant impairments in social, academic, or occupational functioning different from that of their typically achieving peers (Hallahan, Lloyd, Kauffman, Weiss & Martinez, 2005).

Mild to Moderate Cognitive Delay: A student with mild to moderate cognitive delay is one who is delayed in adaptive behaviour and functioning (may require specific instruction for the acquisition of gross and fine motor skills, assistance with development of social skills, memory, problem solving and conceptualizing skills) (British Columbia Ministry of Education, 2007).

Key
SD=Strongly Disagree
D=Disagree
U=Undecided
A=Agree
SA=Strongly Agree

One advantage to instructing identified students in my regular physical education/athletic program with typically achieving students is that all students will learn to work together toward achieving goals.

- | | |
|--|--------------------|
| 1. EBD | SD D U A SA |
| 2. Specific Learning Disability | SD D U A SA |
| 3. ADHD | SD D U A SA |
| 4. Mild to moderate cognitive delay | SD D U A SA |

Teaching/coaching identified students in my regular physical education/athletic program will motivate typically achieving students to learn to perform motor skills.

- | | |
|--|--------------------|
| 5. EBD | SD D U A SA |
| 6. Specific Learning Disability | SD D U A SA |
| 7. ADHD | SD D U A SA |
| 8. Mild to moderate cognitive delay | SD D U A SA |

Identified students will learn more rapidly if they are taught in my regular physical education/athletic program with typically achieving students.

- | | |
|---|--------------------|
| 9. EBD | SD D U A SA |
| 10. Specific Learning Disability | SD D U A SA |
| 11. ADHD | SD D U A SA |
| 12. Mild to moderate cognitive delay | SD D U A SA |

Identified students will develop a more favourable self-concept as a result of learning motor skills in my regular physical education/athletic program with typically achieving peers.

- | | |
|---|--------------------|
| 13. EBD | SD D U A SA |
| 14. Specific Learning Disability | SD D U A SA |
| 15. ADHD | SD D U A SA |
| 16. Mild to moderate cognitive delay | SD D U A SA |

Identified students will not be accepted by their typically achieving peers in my regular physical education/athletic program.

- | | |
|---|--------------------|
| 17. EBD | SD D U A SA |
| 18. Specific Learning Disability | SD D U A SA |
| 19. ADHD | SD D U A SA |
| 20. Mild to moderate cognitive delay | SD D U A SA |

Identified students in my regular physical education/athletic program with typically achieving peers will disrupt the harmony of the class.

- | | |
|---|--------------------|
| 21. EBD | SD D U A SA |
| 22. Specific Learning Disability | SD D U A SA |
| 23. ADHD | SD D U A SA |
| 24. Mild to moderate cognitive delay | SD D U A SA |

Having to teach/coach identified students in my regular physical education/athletic programs with typically achieving students places an unfair burden on teachers/coaches.

- | | |
|---|--------------------|
| 25. EBD | SD D U A SA |
| 26. Specific Learning Disability | SD D U A SA |
| 27. ADHD | SD D U A SA |
| 28. Mild to moderate cognitive delay | SD D U A SA |

As a physical education teacher/coach, I do not have sufficient training necessary to teach identified students with typically achieving students in my regular physical education/athletic program.

- | | |
|---|--------------------|
| 29. EBD | SD D U A SA |
| 30. Specific Learning Disability | SD D U A SA |
| 31. ADHD | SD D U A SA |
| 32. Mild to moderate cognitive delay | SD D U A SA |

Teaching identified students in my regular physical education/athletic program with typically achieving students means more work for me.

- | | |
|---|--------------------|
| 33. EBD | SD D U A SA |
| 34. Specific Learning Disability | SD D U A SA |
| 35. ADHD | SD D U A SA |
| 36. Mild to moderate cognitive delay | SD D U A SA |

Identified students should not be taught in my regular physical education/athletic program with typically achieving students because they require too much of my time.

- | | |
|---|--------------------|
| 37. EBD | SD D U A SA |
| 38. Specific Learning Disability | SD D U A SA |
| 39. ADHD | SD D U A SA |
| 40. Mild to moderate cognitive delay | SD D U A SA |

As a physical education teacher/coach, I need more course work and training before I will feel comfortable teaching/coaching physical education/athletic programs to identified students together with typically achieving students.

- | | |
|---|--------------------|
| 41. EBD | SD D U A SA |
| 42. Specific Learning Disability | SD D U A SA |
| 43. ADHD | SD D U A SA |
| 44. Mild to moderate cognitive delay | SD D U A SA |

Identified students should be taught with typically achieving students in my regular physical education/athletic program whenever possible.

- | | | | | | |
|--------------------------------------|----|---|---|---|----|
| 45. EBD | SD | D | U | A | SA |
| 46. Specific Learning Disability | SD | D | U | A | SA |
| 47. ADHD | SD | D | U | A | SA |
| 48. Mild to moderate cognitive delay | SD | D | U | A | SA |

A FEW FINAL QUESTIONS ABOUT YOURSELF

Identify your gender (circle one). (1) Female (2) Male

What is your age? _____ years

How many years have you taught/coached physical education/athletics?
_____ years

In your training, have you taken any (circle one):

Physical education classes? (1) None (2) 1-2 (3) 3-4 (4) 5 +

Adapted physical education classes? 1) None (2) 1-2 (3) 3-4 (4) 5 +

Special education courses? (1) None (2) 1-2 (3) 3-4 (4) 5 +

Please indicate the experience you have had teaching/coaching individuals with exceptionalities (circle one)?

- (1) None
- (2) Less than 6 months
- (3) 6 months to 1 year
- (4) 1-2 years
- (5) 2+ years

Rate the quality of your teaching/coaching experience for individuals with exceptionalities: (1)No experience (2)Not good (3)Satisfactory (4)Very good

How competent do you feel teaching students with exceptionalities?

(1) Not at all (2) Somewhat (3) Very

What do you feel would improve your level of competency?

THANK YOU FOR YOUR HELP!

APPENDIX C:
STUDENT APPLICATION FOR APPROVAL
OF A RESEARCH PROTOCOL
TO THE OFFICE OF RESEARCH SERVICES

University of Saskatchewan

APPLICATION FOR APPROVAL OF RESEARCH PROTOCOL

To

University of Saskatchewan

Advisory Committee on Ethics in Behavioural Science Research

1.) Name of Advisor and Related Department

Dr. Laureen McIntyre, S-LP(C), CCC-SLP
Department of Educational Psychology and Special Education
University of Saskatchewan

1a.) Graduate Student

Cari Anning
Graduate Student
Department of Educational Psychology and Special Education

1b.) Phase I: Anticipated start date of research is April, 2008.
Phase II: Expected completion of study is April, 2009.

2.) Title of Study

Physical Activity in Children and Adolescents: The Role of School and Athletic Programs

3.) Abstract

The purpose of this study is to determine whether the perceptions and skill levels of pre-service and in-service teachers/coaches' influences the integration of children and adolescents with exceptionalities into school physical education and athletic programs. Approximately 100 educators (i.e., classroom teachers, special educators, and physical educators) and 100 Undergraduate Education students will be approached to complete an adapted version of the Physical Educators' Attitude Toward Teaching Individuals with Disabilities-III (PEATID-III) (Rizzo, 1993; see Appendix A) in order to answer the following questions:

1) What are preservice/in-service teachers' and coaches' attitudes toward instructing children and adolescents with exceptionalities as part of the general physical education/athletic program?

2) How are preservice/in-service teachers' and coaches' attitudes toward instructing students with exceptionalities influenced by their individual characteristics?

4.) **Funding**

Funding is not required for this research.

5.) **Expertise**

Not applicable

6.) **Conflict of Interest**

The graduate student is an employee of the participating school division who may grant permission for this research to be conducted. Participation is completely voluntary, and to ensure that the participants do not feel coerced to participate, it is emphasized in the survey (Appendix A), the letter requesting permission from the director, professors of various education classes, and event organizers (see Appendix B), the letter of instruction for the principals and university professors (see Appendix C). The decision to participate or not is completely up to the participant, and they will be able to withdraw without penalty from the research at any point during the process.

Incentives to complete the survey will be presented to the participants. Upon completion of the survey, participants will have the option to enter their name into a random drawing for their choice of a \$100 gift certificate to Lulu Lemon Athletica or a \$100 gift certificate for Willows Golf and Country. The participants' survey responses will be not be associated with the monetary incentive in any form.

7.) **Participants**

The research will be pertaining to in-service and pre-service teachers/coaches to obtain their attitudes of instructing students with exceptionalities as part of the general physical education and athletic programs. Directors of school divisions in Saskatchewan will be delivered a letter requesting permission to conduct research. Upon approval from Directors, a request will be made to school principals, in person or by letter, to invite educators to complete a survey of physical educators'/coaches' attitudes toward the inclusion of students with exceptionalities.

University Professors of Undergraduate Education classes at post-secondary institutions (e.g., University of Saskatchewan) will be delivered a letter outlining the researcher's intent and requesting permission to conduct research. Upon approval from professors, a request will be made to undergraduate students (e.g., pre-service teachers) to invite them to complete the survey.

It will also be requested from the Director of the school division that permission be granted to access teachers engaged in professional development/workshops, and with approval, permission will be requested from organizers to approach participants. Upon approval from head of organizations hosting professional development, the researcher will set up a table at the conference/workshop to collect surveys.

Individuals will not be coerced to participate; this will remain an entirely voluntary act. All responses will remain anonymous and confidential. If additional questions or concerns arise beyond the survey, the researcher will provide an email address (clh644@mail.usask.ca) as well as the telephone number of her Supervisor, Dr. McIntyre (306-966-5266), and the telephone number of the University of Saskatchewan Research and Ethics Board (306-966-2084).

6.) Informed Consent

Once permission has been granted, the researcher will meet with school principals, university professors, and event organizers to inform them of the research project. Once principals, university professors, or event organizers agree, packages and of surveys and a letter of instruction will be provided in person or by mail (see Appendix C). In addition, a consent form (see Appendix D) will be provided to each participant explaining that they are free to withdraw at any time without penalty and if so, all of their data sources from the interview will be destroyed. Contact information of the researcher and the researcher's supervisor will be provided on the consent form in the event that participants have any questions they need addressed.

7.) Methods/Procedures

The survey, Physical Educators' Attitude Toward Teaching Individuals with Disabilities-III (PEATID-III) (Rizzo, 1993) has been adapted for this research and is attached (see Appendix A). Adaptations that have been made include the addition of coaches' attitudes as well as educators, and use of the term exceptionality in place of disability.

Packages of the survey will be distributed to principals, university students, and workshop attendees in person or by mail upon the approval from the Director of the school division, the University professors, and event organizers. A letter of instruction addressed to the principals (see Appendix E) and university professors (see Appendix F) requesting assistance in distributing the surveys will be included. The survey should only take approximately ten minutes to complete. Completed surveys can be returned to the self-addressed, stamped envelope that will either be mailed or picked up by the graduate student. The optimal return period will be a two-week period upon receipt of the survey packages. In

addition, the personal email address of the graduate student (clh644@mail.usask.ca), the telephone number of her Supervisor, Dr. Lauren McIntyre (306-966-5266) and the telephone number of the University of Saskatchewan Research and Ethics Board (306-966-2084) will be included on the letter of instruction if further correspondence is required. It will be noted that participation is voluntary and that all data will remain confidential and anonymous throughout the research. A follow-up phone call or visit will be arranged for principals approximately three weeks after the receipt of the survey packages.

8.) **Storage of Data**

Procedures for safeguarding and storing the data.

The data (i.e., hard copy of surveys and computer data files) will be locked, secured, and stored by Dr. McIntyre at the University of Saskatchewan for a minimum of five years as required by the University of Saskatchewan guidelines. The data will be destroyed at the end of the five-year period.

9.) **Dissemination of Results**

Description of the dissemination of results.

The results of the graduate student's study will be used to complete thesis requirements for the Master degree in Educational Psychology and Special Education. The information gathered will be the faculty of Educational Psychology and Special Education and the Education Library at the University of Saskatchewan. The data may also be shared with professionals, educators, and parents. The data may also be shared at professional conferences and may be used in research presentations and/or publications. Results will only be reported in aggregate form.

10.) **Risk or Deception**

There are no perceived risks or deceptions involved in this study. The participants will be made aware of the purpose of the study and why they are asked to participate.

11.) **Confidentiality**

The participants will be informed that participation is voluntary and that all responses will be completely anonymous in respect to all and any potentially identifying information in all forms of correspondence (e.g., print, email, and telephone). Each survey will be accompanied by an addressed envelope in which respondents will be asked to seal their completed surveys. Principals will be requested to place the return envelope in his/her mailbox so that anonymity may be enhanced. Envelopes will be then be returned to school principal and the researcher will pick all surveys up.

12.) Data/Transcript Release

This study will not require individual signatures of participants. Completion of the survey remains a voluntary act that will secure anonymity in every form of correspondence because individual identification is irrelevant to the study and will not be noted anywhere.

13.) Debriefing and Feedback

The consent form and letter of instruction (see Appendices C & D) will inform the participants that public access of the results of the study will be available through the University of Saskatchewan upon the completion of the thesis.

14.) Required Signature

(1) Student Signature

Cari Anning
Master's Student
Department of Educational Psychology and Special Education
University of Saskatchewan

(2) Supervisor Signature

Dr. Lauren McIntyre, S-LP(C), CCC-SLP
Department of Educational Psychology and Special Education
University of Saskatchewan

(3) Department Head Signature

Dr. David Mykota, Department Head
Department of Educational Psychology and Special Education
University of Saskatchewan

APPENDIX D:
LETTERS OF INTENT

Cari Anning



April 1, 2008

Attention: _____, Director of Education

I am a teacher in the Greater Saskatoon Catholic School Division, and a graduate student at the University of Saskatchewan in the Department of Educational Psychology and Special Education. As part of the requirements for the completion of my master's degree, I am conducting a research project that will examine educators'/coaches' attitudes toward instructing students with exceptionalities as part of the regular physical education and athletic programs. There is a vast amount of literature that indicates that students with exceptionalities are not as physically active as their typically achieving peers, and therefore health risks become a great concern (Rimmer, 2005).

The focus of my research involves delivering a survey to elementary classroom teachers, pre-service education students, resource room teachers/learning assistance teachers, coaches, and administrators to complete (please see attached survey). These individuals have been chosen as part of the target group as they are the ones who do the programming, instructing, and evaluating of students with exceptionalities. The beliefs and opinions provided by the participants will provide insight in this subject matter, as well as it may provide insight for future directions to pursue in regard to improving physical activity levels among students with exceptionalities. Participation is both entirely voluntary and anonymous. Completion of the survey will only require about ten minutes. Participants are able to withdraw at any time from completing the survey. Information identifying that participant is of no significant value to this study and thus will remain confidential and anonymous. If participants require additional assistance, information, or they wish to withdraw from the study they will be able to contact myself, Cari Anning, at clh644@mail.usask.ca, my Supervisor, Dr. Laureen McIntyre at (306) 966- 5266, or the University of Saskatchewan Research and Ethics Board (306) 966-2084.

All data will be made available upon completion of my thesis from the Education Library at the University of Saskatchewan on or before May 1, 2009. In addition, the results may be published and/or used for conferences and seminars. The dissemination of the results may benefit school divisions' policies and practices of physical education and athletic programs by indicating areas of strength, possible directions for improvement, and considerations for alternatives. This project has been approved on ethical grounds on

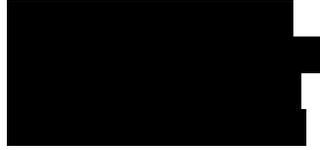
, 2008 by the Behavioural Research Ethics Board of the University of Saskatchewan (Ethics Approval #:).

Thank you for your thoughtful consideration. I look forward to hearing from you at your earliest convenience.

Sincerely,

Cari Anning, B. Ed.
Graduate Student
Department of Educational Psychology and Special Education
University of Saskatchewan

Cari Anning



April 1, 2008

Attention: Professor _____

I am a teacher in the Greater Saskatoon Catholic School Division, and a graduate student at the University of Saskatchewan in the Department of Educational Psychology and Special Education. As part of the requirements for the completion of my master's degree, I am conducting a research project that will examine educators'/coaches' attitudes toward instructing students with exceptionalities as part of the regular physical education and athletic programs. There is a vast amount of literature that indicates that students with exceptionalities are not as physically active as their typically achieving peers, and therefore health risks become a great concern (Rimmer, 2005).

The focus of my research involves delivering a survey to elementary classroom teachers, pre-service education students, resource room teachers/learning assistance teachers, coaches, and administrators to complete (please see attached survey). These individuals have been chosen as part of the target group as they are the ones who do (or are training to do) the programming, instructing, and evaluating of students with exceptionalities. The beliefs and opinions provided by the participants will provide insight in this subject matter, as well as it may provide insight for future directions to pursue in regard to improving physical activity levels among students with exceptionalities. Participation is both entirely voluntary and anonymous. Completion of the survey will only require about ten minutes. Participants are able to withdraw at any time from completing the survey. Information identifying that participant is of no significant value to this study and thus will remain confidential and anonymous. If participants require additional assistance, information, or they wish to withdraw from the study they will be able to contact myself, Cari Anning, at clh644@mail.usask.ca, my Supervisor, Dr. Laureen McIntyre at (306) 966- 5266, or the University of Saskatchewan Research and Ethics Board (306) 966-2084.

All data will be made available upon completion of my thesis from the Education Library at the University of Saskatchewan on or before May 1, 2009. In addition, the results may be published and/or used for conferences and seminars. The dissemination of the results may benefit school divisions' policies and practices of physical education and athletic programs by indicating areas of strength, possible directions for improvement, and considerations for alternatives. This project has been approved on ethical grounds on

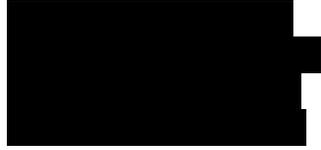
, 2008 by the Behavioural Research Ethics Board of the University of Saskatchewan (Ethics Approval #:).

Thank you for your thoughtful consideration. I look forward to hearing from you at your earliest convenience.

Sincerely,

Cari Anning, B. Ed.
Graduate Student
Department of Educational Psychology and Special Education
University of Saskatchewan

Cari Anning



April 1, 2008

Attention: _____, Event Organizer

I am a teacher in the Greater Saskatoon Catholic School Division, and a graduate student at the University of Saskatchewan in the Department of Educational Psychology and Special Education. As part of the requirements for the completion of my master's degree, I am conducting a research project that will examine educators'/coaches' attitudes toward instructing students with exceptionalities as part of the regular physical education and athletic programs. There is a vast amount of literature that indicates that students with exceptionalities are not as physically active as their typically achieving peers, and therefore health risks become a great concern (Rimmer, 2005).

The focus of my research involves delivering a survey to elementary classroom teachers, pre-service education students, resource room teachers/learning assistance teachers, coaches, and administrators to complete (please see attached survey). These individuals have been chosen as part of the target group as they are the ones who do the programming, instructing, and evaluating of students with exceptionalities. The beliefs and opinions provided by the participants will provide insight in this subject matter, as well as it may provide insight for future directions to pursue in regard to improving physical activity levels among students with exceptionalities. Participation is both entirely voluntary and anonymous. Completion of the survey will only require about ten minutes. Participants are able to withdraw at any time from completing the survey. Information identifying that participant is of no significant value to this study and thus will remain confidential and anonymous. If participants require additional assistance, information, or they wish to withdraw from the study they will be able to contact myself, Cari Anning, at clh644@mail.usask.ca, my Supervisor, Dr. Laureen McIntyre at (306) 966- 5266, or the University of Saskatchewan Research and Ethics Board (306) 966-2084.

All data will be made available upon completion of my thesis from the Education Library at the University of Saskatchewan on or before May 1, 2009. In addition, the results may be published and/or used for conferences and seminars. The dissemination of the results may benefit school divisions' policies and practices of physical education and athletic programs by indicating areas of strength, possible directions for improvement, and considerations for alternatives. This project has been approved on ethical grounds on

, 2008 by the Behavioural Research Ethics Board of the University of Saskatchewan (Ethics Approval #:).

Thank you for your thoughtful consideration. I look forward to hearing from you at your earliest convenience.

Sincerely,

Cari Anning, B. Ed.
Graduate Student
Department of Educational Psychology and Special Education
University of Saskatchewan

APPENDIX E:
LETTERS OF INSTRUCTION

Cari Anning
[REDACTED]

April 1, 2008

Dear Principal,

I am a graduate student in the Department of Educational Psychology and Special Education at the University of Saskatchewan. I have received permission from _____, Director of Education, to distribute surveys to all of the elementary schools in your division to assist with the requirements for my thesis. Specifically, I am researching teachers'/coaches' attitudes toward instructing students with exceptionalities as part of the general physical education and athletic programs.

There is a vast amount of literature that indicates that students with exceptionalities are not as physically active as their typically achieving peers, and therefore health risks become a great concern (Rimmer, 2005). It would be greatly appreciated if you would please provide a copy of my survey to your classroom teachers, resource room teachers/learning assistance teachers, coaches, and administrators. These individuals have been chosen as part of the target group as they are the ones who do the programming, instructing, and evaluating of students with exceptionalities. Multiple copies have been included for your convenience. The survey should require no more than 10 minutes to fully complete. Participation is both entirely voluntary and anonymous. Furthermore, participants are able to withdraw from completing the survey at any time. Information identifying that participant is of no significant value to this study and thus will remain confidential and anonymous. The dissemination of the results may benefit school divisions' policies and practices of physical education and athletic programs by indicating areas of strength, possible directions for improvement, and considerations for alternatives.

For your convenience I have also provided a self-addressed, stamped return envelope. To enhance anonymity please inform your staff of a discrete location in which they can place their completed surveys in to the return envelope. If participants require additional assistance, information, or they wish to withdraw from the study they will be able to contact myself, Cari Anning, at clh644@mail.usask.ca, my Supervisor, Dr. Lauren McIntyre at (306) 966- 5266, or the University of Saskatchewan Research and Ethics Board (306) 966-2084. Any and all additional correspondence will remain confidential.

Please be informed that this project has been approved on ethical grounds on _____, 2008 by the Behavioural Research Ethics Board of the University of Saskatchewan (Ethics Approval #: _____). It would be greatly appreciated if the collection and return of the surveys could be done as soon as possible with a return date on or near May _____, 2008. Data regarding my study will be available for those

interested in the Education Library at the University of Saskatchewan upon completion of this project.

Thank you for the anticipated assistance of your staff, it is very much appreciated.

Sincerely,

Cari Anning
Graduate Student
Department of Educational Psychology and Special Education
University of Saskatchewan

Cari Anning


April 1, 2008

Dear Professor,

I am a graduate student in the Department of Educational Psychology and Special Education at the University of Saskatchewan. With your approval, the distribution of surveys to all of the undergraduate education students in your class would assist with the requirements for my thesis. Specifically, I am researching teachers'/coaches' attitudes toward instructing students with exceptionalities as part of the general physical education and athletic programs.

There is a vast amount of literature that indicates that students with exceptionalities are not as physically active as their typically achieving peers, and therefore health risks become a great concern (Rimmer, 2005). It would be greatly appreciated if you would please provide a copy of my survey to your students. These individuals have been chosen as part of the target group as they are the future teachers who will do the programming, instructing, and evaluating of students with exceptionalities. Multiple copies have been included for your convenience. The survey should require no more than 10 minutes to fully complete. Participation is both entirely voluntary and anonymous. Furthermore, participants are able to withdraw from completing the survey at any time. Information identifying that participant is of no significant value to this study and thus will remain confidential and anonymous. The dissemination of the results may benefit school divisions' policies and practices of physical education and athletic programs by indicating areas of strength, possible directions for improvement, and considerations for alternatives. Similarly, the results of this study may also provide insight to post-secondary institutions on effective training practices for instructing students with exceptionalities in physical education.

For your convenience I have also provided a self-addressed, stamped return envelope. To enhance anonymity please inform your students of a discrete location in which they can place their completed surveys in to the return envelope. If participants require additional assistance, information, or they wish to withdraw from the study they will be able to contact myself, Cari Anning, at clh644@mail.usask.ca, my Supervisor, Dr. Laureen McIntyre at (306) 966- 5266, or the University of Saskatchewan Research and Ethics Board (306) 966-2084. Any and all additional correspondence will remain confidential.

Please be informed that this project has been approved on ethical grounds on _____, 2008 by the Behavioural Research Ethics Board of the University of Saskatchewan (Ethics Approval #: _____). It would be greatly appreciated if the collection and return of the surveys could be done as soon as possible with a return date on or near May _____, 2008. Data regarding my study will be available for those

interested in the Education Library at the University of Saskatchewan upon completion of this project.

Thank you for your anticipated assistance, it is very much appreciated.

Sincerely,

Cari Anning
Graduate Student
Department of Educational Psychology and Special Education
University of Saskatchewan

APPENDIX F:
CONSENT FORM

Title of Study:

Physical Activity in Children and Adolescents: The Role of School and Athletic Programs

Researcher and Supervisor:

Cari Anning, Master of Education candidate in the Department of Educational Psychology and Special Education at the University of Saskatchewan.

E-mail: clh644@mail.usask.ca

Home Telephone: 306-653-2226

Dr. Lauren McIntyre, Department of Educational Psychology and Special Education, University of Saskatchewan.

E-mail: lauren.mcintyre@usask.ca

Office Telephone: 306-966-5266

Purpose of the Study:

You are invited to participate in a study, the purpose of which is to survey teachers' and coaches' perceptions of instructing students with high-incidence exceptionalities as part of the general physical education and athletic program. This survey will be used to collect the attitudes and opinions of participants in order to provide insight for future directions in regard to improving physical activity levels among students with exceptionalities. There are no known risks in this research study. The results will be used for the purposes of this thesis, and may also be used in publications, and presentations to teachers, parents, and professionals.

As a participant in this study:

1. You are asked to sign this consent form and complete the survey titled, *Physical Educators'/Coaches' Attitudes Toward Teaching Individuals with Exceptionalities*. The survey may take approximately 10 minutes to complete. Data will be kept confidential. Consent forms will be stored separately from the survey completed by participants. Participants will not be identified and responses will remain anonymous and confidential.
2. You have the right to refuse to answer individual questions.
3. You have the right to withdraw from this study at any time. If you choose to withdraw, the data you provided will be removed from analysis and destroyed.
4. Your data will be stored in locked cabinet accessible only by the researchers' supervisor, and safeguarded for a minimum of five years.
5. You have the option to enter your name into a random drawing for your choice of \$100 gift certificate from Lulu Lemon Athletica or \$100 gift certificate from Willows Golf and Country (upon the completion of the survey).

If you have any questions concerning the study, please feel free to contact the researcher. This study was approved by the University of Saskatchewan Behavioural Research Ethics Board has approved this study on _____. Any questions regarding your rights as a participant may be addressed to that committee through the Office of

Research Services (966-2084). Results will be available through the University of Saskatchewan Library upon completion of the thesis.

I have read and understand the description above. I have been provided with contact information in order to have any questions addressed. I consent to participate in the study described above, understanding that I may withdraw this consent at any time.

Name of Participant (please print): _____

Signature: _____

Date: _____

Signature of Researcher: _____

Cari Anning
Masters Candidate, University of Saskatchewan

Please enter my name for the following \$100 gift certificate drawing:

_____ Lulu Lemon Athletica _____ Willows Golf and Country

Name (please print): _____

Phone #: _____

Note: The draws will be made upon the completion of the researcher's data collection.

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