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Quality inclusion of students with disabilities in general physical education

Natalie Jean Phillips

QUALITY INCLUSION OF STUDENTS WITH DISABILITIES IN GENERAL PHYSICAL EDUCATION

A Thesis

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

in

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Health Education

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by

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ABSTRACT

A study conducted in one Southern California school district found that students with disabilities are often marginalized when it comes to participating in physically demanding sports and activities. The conclusions reached in this study come despite the fact that previous research has shown that including students with disabilities in all activities benefits both disabled and non-disabled students. In fact, research has shown that physical inactivity could result in severe economic and medical consequences to both the students and society.

The study was conducted to examine the participation levels of students with disabilities in physical education classes. Secondary physical education teachers throughout the school district were surveyed about the inclusion of students with disabilities in their classes. The study was also meant to measure teachers' knowledge and behaviors surrounding inclusive practices of students with disabilities. The survey consisted of 10 questions and was distributed via e-mail. After collecting and analyzing the survey information, it is clear that there is a need for further research in the area of inclusion in order to address teachers' concerns found in this study.

ACKNOWLEDGMENTS

I would like to acknowledge the professors who have inspired me to become a teacher. As a result of their leadership, I will continue to grow as a professional, to acquire more knowledge and pursue higher education. Also, I would like to thank the faculty at California State University San Bernardino, especially my readers, for their time and guidance throughout my thesis.

DEDICATION

This project is dedicated to my students; their everyday struggles are the reason I chose this research topic. In time I hope that they will be openly accepted in all fields of education, so they may have meaningful interactions with their non-disabled peers.

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CHAPTER ONE

INTRODUCTION

A disability can be a major obstacle in child development. Children with disabilities do not always share the same experiences that typically developing children may. In addition, coping with disabilities could be more difficult due to socio-cultural concerns (Block & Horton, 1996; Bauman, 2005; Reeves & Stein, 1996; Sherrill, 2004).

Childhood disabilities are pervasive in the United States. According to the Centers for Disease Control (CDC), about 17% of youth are affected by developmental disabilities (U.S. Department of Health and Human Services, 1996). Developmental disabilities are a result of physical or mental impairments. Individuals dealing with disabilities often have problems associated with activities of daily living. These problems include language, mobility, learning, self-help skills, and independent living. People with disabilities who are unable to perform tasks of everyday living are at risk for physical inactivity. Disabilities impose sizeable financial and social costs for families as well as educational and health care systems (U.S. Department of Health and Human Services, 2000).

People with disabilities are less likely to participate in physical activities than people without. Schools are prime sources for providing physical activities because they reach most children and young adults. Participation in school-based physical education ensures a minimum amount of physical activity for

students. Moreover, it creates a foundation by teaching physical activity tactics that can be carried over into adulthood (U.S. Department of Health and Human Services, 2005). People with disabilities face hardships during physical activity as a result of their unique health conditions or limits to their mobility that restrict their abilities to exercise (Cooper et al., 1999).

Although specific disabilities may differ, students with disabilities share the need to benefit from physical activities and exercise just like their typically developing peers (Bauman, 2005). Therefore, attention to basic health needs and preventative measures for children with disabilities are essential (Cooper et al. 1999; Hogan, Rogers, & Msall, 2000; Newacheck et al., 1998). There should be increased concern with the overall health of children with disabilities (Hogan et al., 2000). It is important that the barriers relevant to their disabilities that could hinder their healthy growth and development are broken down and overcome (Newacheck et al., 1998).

Children with disabilities may be unable to experience the same activities that typically developing children take part in regularly. Consequently, their development might be further affected due to feelings of inadequacy, embarrassment, or poor socialization. The ability for students with disabilities to participate in appropriate physical education and sport activities with their peers would improve their overall health, as well as increase self-esteem, social integration, and team skills important to development (Smith & Thomas, 2006).

Statement of the Problem

Children with disabilities need to be included in recreational activities and physical education in order to increase their overall health. Just like their non-disabled peers, children with disabilities need outlets for their physical energy (Block, Klavina, & Flint, 2007). Physical activities provided in a social setting encourage socialization, which is important to mental health and well-being, and could result in children being more self-sufficient and confident (Smith & Thomas, 2006). Physical activities also increase children's ability to cope with stress and anxiety. Most important, allowing their participation in physical activities would improve their fitness as well as change the current social norm (Sherrill, 2004; Tripp, Rizzo, & Webbert, 2007). Typically, it is uncommon to see students with disabilities in active play with the general population. Further, they are not always appropriately integrated into school-based physical education programs. This could result in segregated play and negative opinions of this subpopulation. Children who vary in cognitive and physical abilities and are educated together, as opposed to being segregated, are more likely to learn tolerance and acceptance (Sherrill, 2004; Smith & Thomas, 2006).

Purpose of the Study

It is essential to understand that providing services to people with disabilities is a collaborative effort and should be a common goal. This concept is critical to advocating health education and health promotion to everyone

(Downie, Tannahill, & Tannahill, 1999). According to Newacheck et al. (1998), the lack of overall health, including the lack of physical activity among students with disabilities, may have great costs to both the individuals and society. The purpose of this study is to determine the quality and quantity of inclusion of students with disabilities in general physical education classes. Research studies and other resources will be cited, to illustrate that there is a need for more inclusive physical education for students with disabilities.

In addition, issues that surround the movement toward inclusion in physical education will be studied. These issues include: teachers' preparation, safety, adaptations, modifications, and other challenges to meet the needs of students with disabilities. Finally, current law will be cited as it is related to inclusion. With recent revisions to existent laws on inclusion, it is necessary that students are placed in their least restrictive environment and not a segregated setting in school (Block et al., 2007). The research offered in support of inclusion has overwhelmingly outweighed the barriers against it (Ammah & Hodge, 2005; Block & Horton, 1996; Menear & Davis, 2007; Reeves & Stein, 1996).

Importance of the Study

Obesity has been defined as a condition characterized by the excessive accumulation and storage of fat in the body. It is an excessively high amount of fat or adipose tissue in relation to lean body mass (Merriam-Webster Dictionary.com). Research has shown that increased morbidity and chronic

disease in adults have been partly from physical inactivity and lazy lifestyles (California Project Lean, 2003; Newacheck et al., 1998). At least one in every five children are obese. Of those obese children, 41% go on to become obese adults, and 80% of those adults remain obese throughout their entire lives (California Project Lean, 2003). One study done by California Project Lean reported that poor dieting and lack of physical activity are among the leading causes of death in the United States. According to the study, these two factors have been responsible for an estimated 400,000 deaths-per-year (California Project Lean, 2003). Children with disabilities are especially vulnerable to health consequences as a result of their inactivity (U.S. Department of Health and Human Services, 2000).

There is a negative correlation between physical activity and age. Approximately half of the children from ages 12 to 21 in the United States are inactive on a regular basis. As the age of a child increases, participation in physical activity steadily decreases (Cooper et al., 1999). Fragala-Pinkham, Haley, Rabin, and Kharasch (2005) found that there are limited programs designed specifically and aimed toward the physical fitness of children with disabilities. They identified people with disabilities and chronic diseases as among the least active of the entire population. Therefore, children with disabilities and chronic disease are at risk to develop secondary conditions as a result of their sedentary lifestyle. Furthermore, the study concluded that safe and effective fitness programs for children with disabilities are needed. Through

strength and endurance training, risks for secondary disorders may be reduced and quality of life increased as a result (Fragala-Pinkham et al., 2005). Healthy Children 2010 reported that people with disabilities have been less likely to participate in physical activities than those without (U.S. Department of Health and Human Services, 2000). The Surgeon General reported that there are 54 million Americans who have dealt with disabilities, and those people have had frequent challenges to obtain good health (U.S. Department of Health and Human Services, 2005).

Assumptions of the Project

The following assumptions have been made regarding this project:

1. After short informal pre-testing for face validity and reliability of the survey instrumentation, it has been assumed to be valid and reliable.
2. It is assumed that respondents answered survey questions truthfully.
3. It was best to study secondary physical education teachers, because they have been assumed to hold a single-subject teaching credential in physical education. As a result of their educational background these teachers may have been more likely to have expertise in the subject matter.

Limitations and Delimitations

During the development of the project, a number of limitations and delimitations were noted. These limitations and delimitations were as follows.

Project Limitations

The following limitations applied to the project:

1. Research was limited to one school district. Thus there were limitations to the generalizability of results.
2. The numbers of schools selected were limited to those that had at least one special day-class that contained special education students with severe disabilities on campus. This also limited the generalizability of the study.

Project Delimitations

The following delimitations apply to the project:

1. No data were collected on individual students.
2. Because data were only derived from teachers, parent and student attitudes were not included in the study.
3. Only credentialed physical education teachers serving in schools that had at least one special day-class for severely disabled students were surveyed.
4. There was no additional review of school policy and resources in this study.

Definition of Terms

The following terms have been defined as they have applied to the project.

Adapted Physical Education (APE) has been defined by several laws, education codes, and regulations which govern education at the federal and state level. In California, adapted physical education has been defined in the California Code of Regulations, CCR, Title 5, under sec. 3051.5(a) and has been listed as a Designated Instruction and Service (DIS) in California Education Code Section 56363(b)(5).

> 5 CCR sec. 3051.5.(a) *Adapted physical education is for individuals with exceptional needs who require developmental or corrective instruction and who are precluded from participation in the activities of the general physical education program, modified general physical education program, or in a specially designed physical education program in a special class. Consultative services may be provided to pupils, parents, teachers, or other school personnel for the purpose of identifying supplementary aids and services or modifications necessary for successful participation in the regular physical education program or specially designed physical education programs.*

Americans with Disabilities Act (ADA): Federal law that prohibits discrimination based on a disability.

Disability: Physical or cognitive handicapping condition that poses limits to physical or educational development.

Education of All Handicapped Children Act of 1975: PL 94-142 and its current reauthorization PL 105-17, Individuals with Disabilities Education Act (IDEA 1997), ensures that all children, regardless of disabilities, receives physical education (20 U.S.C. sec. 1400-1487).

Exclusion: Leaving students out, not allowing students with disabilities to interact with their non-disabled peers. Students are educated in a separate or segregated setting.

Inclusion: Making proper modifications, adaptations, and accommodations so that all children can interact in an integrative setting.

Individual Education Plan (IEP): Legal document developed by a multidisciplinary assessment team to determine special education eligibility.

Individuals with Disabilities in Education Act (IDEA): A law in place to hold institutions accountable for meeting the unique individual needs of students with disabilities.

Least Restrictive Environment (LRE): Placing students in the most appropriate educational environments according to their individual needs.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Evidence is building that even this country's youngest children are becoming more inactive. Studies have shown that children participate in less school physical education as other academics have take priority (Cooper et al. 1999; Fragala-Pinkham et al., 2005; Hogan et al., 2000; Newacheck et al., 1998).

Some children play organized sports; they either play formally, in clubs and teams, or informally, in parks and playgrounds. Generally, these forms of play provide a large volume of activities which incorporate wide varieties of movement and many muscle groups. This also promotes cardio-respiratory development, muscular strength, muscular endurance, speed, power and flexibility (Fragala-Pinkham et al., 2005; Newacheck et al., 1998). However, children with disabilities need the assistance of others to be successful, because they may not be able to exercise independently (Newacheck et al., 1998). These students have impairments that restrict them from playing traditional sports with no modifications. Nonetheless, they should be able to enjoy the same benefits of exercise as students without disabilities. People with disabilities need opportunities for exercise in an inclusive setting with extra assistance if necessary. Responding to the unique needs of individuals with disabilities creates pathways for success (Block et al., 2007).

Students should have the necessary supports in place to be included in structured physical education programs. Documented efforts to adapt and modify physical activities must be kept prior to children with disabilities being placed in a more restrictive environment. Just as general education must be appropriate to all children, physical education needs also needs to be appropriate to the students' developmental levels so they can be successful (Hyatt, 2007).

Fiscal Impact of a Sedentary Life

About 49 million Americans have been affected by disabilities. These disabilities have had a tremendous impact on the country's health care system (Cooper et al., 1999). Research published in the journal *Pediatrics* has shown that people with disabilities have little or no access to supports or health care and often live in home environments with limited resources, which poses economic strains on societies (Newacheck et al., 1998). Evidence also has suggested that people with disabilities have increased risks for developing heart disease. In addition to cardiovascular disease, physical inactivity can lead to other negative health effects like osteoporosis, diabetes, and some forms of cancer. Such conditions are among the most expensive diseases to treat in the country (Cooper et al., 1999).

In general, people with disabilities who cannot perform their tasks of every-day living are at a greater risk of being sedentary, which can lead to other degenerative health conditions. To reduce the onset of these additional

conditions among people with disabilities, proper interventions must be in place to increase their activity levels and reduce the costs at both societal and individual levels (Bauman, 2005; Cooper et al., 1999; Hogan et al., 2000; Newacheck et al., 1998).

Physical Activity Needs for Students with Disabilities

According to the *Healthy Children 2010* (U.S. Department of Health and Human Services, 2000) report, children with disabilities are less likely to participate in physical activity than people without. These children with disabilities and chronic diseases are among the least active of the population, and are at high risk to develop secondary conditions as a result of their sedentary lifestyle (Newacheck et al., 1998). An increase in activity levels could reduce their risks for secondary disorders, and their quality of life should increase (Fragala-Pinkham et al., 2005).

There are few exercise programs specifically for children with disabilities. Thus, safe and effective fitness programs for children with disabilities are needed (Fragala-Pinkham et al., 2005; Newacheck et al., 1998).

Physical inactivity is common in all demographics. However, it is increasingly prevalent among the people with disabilities (Cooper et al., 1999; Fragala-Pinkham et al., 2005; Newacheck et al., 1998). In recent national trends, cigarette smoking, high blood pressure, and cholesterol have gone down, but obesity and inactivity continue to rise (U.S. Department of Health and Human

Services, 1996). According to the Surgeon General's Report on Physical Activity and Health (1996), to maintain good health, moderate activity of 1000 or more kilocalorie expenditure per week is necessary. Activity level is highly correlated with longevity of life and survival. Since disabilities can cause a decrease in mobility, increasing activity levels among people with disabilities could prove to be especially important to their well-being.

Fragala-Pinkham et al. (2005) demonstrated that changes in strength and walking for children with physical and developmental disabilities may be possible with an intervention consisting of a strength and endurance training program twice per week. Fragala-Pinkham's group exercise intervention, incorporated activities in which children were given opportunities to work on strength, endurance, balance, and coordination skills in a purposeful environment (2005).

Benefits of Inclusive Physical Education

There should be an increased concern with the overall health of children with disabilities, with their physical and psychosocial health included, as opposed to a focus solely on the academic aspects of students with special needs. Outside of their classroom environment, they need to be included into other activities for their physical, social, and emotional well-being (Sherrill, 2004; Smith & Thomas, 2006). Just like their typically-developing peers, children with disabilities need an outlet for their physical energy (Fragala-Pinkham et al., 2005).

It is important for students with disabilities to participate in sports and recreational activities with their non-disabled peers, because sports and recreation provides overall health improvement, as well as self-esteem, social integration, and team-skills important to development. Socialization is important to mental health and well-being and could result in children being more self-sufficient and confident. Students can develop a sense of belonging and learn social skills in an inclusive environment (Downing, 2002). Sherrill (2004) emphasizes empowerment. The contention is that by facilitating self-determination, decision-making, and independent living, students will gain control over their lives. As a result, they should develop feelings of responsibility, control over their environment, and sense of independence. As an added benefit to society, typically-developing students may become more accepting of differences, and attitudes toward students with disabilities could possibly improve (Downing, 2002). Research shows that children educated together, as opposed to a segregated setting, are more likely to learn tolerance and acceptance (Tripp et al., 2007).

Quality Inclusion in Physical Education

The key to changing teachers' behaviors is changing attitudes in the field of physical education toward their students with disabilities to promote better quality lives (Sherrill, 2004). In physical education, "best practice" is adapting instruction so that every child can be included without watering down the

curriculum (Reeves & Stein, 1996). Inclusion is more than the placement of students with disabilities with their non-disabled peers. It is an attitude in favor of supporting all individuals, regardless of their abilities, in support of the belief that every learner can come together in a safe non inclusive setting (Block, 2007; Downing, 2002; Turnbull, Turnbull, Shank, Smith, & Leal, 2002).

Multiple strategies should be used for intervention to keep the children in their least restrictive environment where they can be integrated with their peers. Teachers need to incorporate multimodal strategies to convey information into their lessons so that students are able to understand the task (Block & Horton, 1996). Because 95% of students receive their PE in an inclusive setting (Sherrill, 2004), professionals must know how to adapt so that physical needs are met because (Sherrill, 2004). Teachers must adopt teaching strategies that focus on students' strengths instead of weaknesses. That way the teachers can find things that their students with disabilities are able to do well (Weiner, 2006).

Students are not developmentally ready for sports until the latter years of elementary and middle school. Given this, it is more fitting to play lead-up games that will help them with the acquisition of fundamental motor skills they need for sports. Creating positive experiences through physical education should lead to a healthier future for our children, because experiences will be more enjoyable and meaningful (Block, 2007; Block & Horton, 1996; Menear & Davis, 2007).

Reeves and Stein (1996) outlined several principles consistent with good inclusive practices:

- Constant reflection and assessment is essential for modification. Make games successful for all students.
- Skills should be broken down and mastered, as opposed to pushing students through task completion without a solid foundation.
- Diversity is inevitable in today's physical education classes. Therefore, there should not even be a question of whether or not to accommodate to the unique needs of individuals to ensure their success.
- For successful inclusion, there should be interactive teaching. Teachers need to be involved and find the best fit for their classes. Education is more than learning one method and using it on everyone. Instruction and lesson planning should fit the class and its diverse needs whatever they may be.
- Rather than asking how to modify the curriculum for students with disabilities, teachers should be asking how to modify the tasks to facilitate success. Students with disabilities are able to successfully participate with their peers if given the correct supports and skills to do so.

There are many cultural factors surrounding inclusion. Therefore, changing the culture of physical education involves numerous people rethinking how the education is being organized. In an inclusive culture, education focuses on the capabilities and potential of the child, which leads to an overall healthy development (Tripp et al., 2007). Developmentally appropriate pedagogy (DAP)

is the best way to making physical education meaningful and fitting for every type of student (Reeves & Stein, 1996).

Current Laws Regarding Inclusion

Public law (IDEA, 1412(5) (B), 1993) states that a child must be placed in the least restrictive environment in order to receive appropriate physical education (Block & Horton, 1996). According to federal law (PL, 101-336), we cannot discriminate based on disability. The Individuals with Disabilities in Education Act (IDEA) states that students must be able to interact with their non-disabled peers in the least restrictive environment. Inclusion is based on equal educational opportunities as outlined in the principles of IDEA. According to the Americans with Disabilities Act (ADA), all programs and services for people with disabilities must be provided in the most integrated settings possible (Block et al., 2007; Brown et al., 1989; Hyatt, 2007; Sherrill, 2004). Students should only be placed in separate settings when safety risks are of concern, and when students cannot be successful in general physical education (GPE) despite modifications, adaptations, and instructional aides provided for success (Block et al., 2007).

There is also a moral obligation to create equal opportunities for all people (Downing, 2002). Historically, there has been educational and social inequality toward students with disabilities. Exclusion altogether implies that students are not given the basic human right to belong and interact with their peers; rather, participation is earned, more like a privilege (Tripp et al., 2007).

What Teachers Ought to Expect about Inclusion

General physical education teachers need to be better equipped with methods for modifying instruction, so that students with disabilities are receiving more opportunities for physical play and inclusion (Ammah & Hodge, 2005). It has been accepted practice among physical educators to design one curriculum to blanket over the entire student body regardless of individual motor abilities. This is not best practice; it makes physical education (PE) boring and meaningless to students (Reeves & Stein, 1996).

When addressing children with disabilities, it is important for the teacher to understand that participation in physical education and other physical activities needs to be individualized or modified (Block et al., 2007). For inclusion to be meaningful, educators must believe in embracing the diverse needs of everyone so that students are given experiences from which they can learn (Tripp et al., 2007). Many teachers have the attitudes toward students' behavior that the students have the problem. In this way of thinking, misbehaviors are not as a result of the classroom environments or teachers' attitude. Focusing on individuals weaknesses are easier than finding the bigger contributing factors (Weiner, 2006).

Barriers and Other Complications Surrounding Inclusion

Research has found that safety is one of the biggest concerns when trying to include students with disabilities into general physical education. Students with disabilities may not have the same physical or cognitive ability, which leads to the fear that they will be unable to react or understand as fast as their peers (Block & Horton, 1996). Block and Horton (1996) determined that safety is a prevalent concern when dealing with inclusion. It is a shared belief among physical educators that students with special needs may be dangerous to their non-disabled peers because of their assistive equipment or low cognitive abilities.

In most cases, safety should not be the reason that students with disabilities are kept segregated from their non-disabled peers during physical activities. To ensure the safety of students with and without disabilities in general PE, it is crucial that teachers learn as much as they can about their students (Block & Horton 1996). To find this information, teachers can look through the cumulative file, or attend Individual Education Program (IEP) meetings, during which the service providers can share experiences about children with disabilities. PE teachers need to determine every student's abilities to make PE safe and appropriate (Block & Horton, 1996; Stein, 1978).

Some additional barriers may include little or no access to fitness facilities, plus the feelings of insecurity that the students with disabilities may have about

exercising. Also, people with disabilities may need modifications or assistance with exercise equipment (Cooper et al., 1999).

Summary

To minimize disability-related problems and secondary illnesses (obesity, cardiovascular disease, hypertension, etc.), in adulthood, opportunities for activity among the people with disabilities is crucial. This is challenging because accommodation requires time and energy in managing disabilities (Bauman, 2005; Cooper et al., 1999; Hogan et al., 2000).

Students can be fully included in general physical education class with the help of teacher assistants, special education teachers, peer trained tutors, adapted physical education specialists (APE), and parents. Given that proper supports are in place and reasonable modifications are made, there should be no excuses for students with disabilities to be excluded from the general physical education curriculum (Block et al., 2007).

For teachers, modifying knowledge, beliefs, actions, and attitudes toward students with disabilities can lead to enhanced inclusion which should create better learning experiences for all students. Adapting physical activities based on individual abilities is a useful tool applicable to all students, not just to students with disabilities. Teachers need to look at the unique needs of individuals in order to create pathways for success in a non-segregated setting (Block, 2007; Downing, 2002; Sherrill).

It is the intention of this study to determine the extent to which local physical education teachers have the appropriate professional attitudes and preparation to adapt physical education for their students with disabilities, consistent with the tenets of inclusion outlined above.

CHAPTER THREE

METHODOLOGY

The purpose of this study was to determine the quantity and quality in which students with disabilities were participating in general physical education (GPE). When looking at GPE classes and the inclusion of students with disabilities, data were categorized as follows: full inclusion, partial inclusion (i.e., parallel play), functional exclusion (i.e., score keeper), or complete exclusion (separation from the general population). This study investigated the basic knowledge, attitudes, and behaviors of the physical education teachers related to inclusion. The research questions addressed by the study included:

1. What were teacher attitudes and practices toward inclusion?
2. With what barriers were general physical education teachers challenged with when dealing with inclusion?
3. How involved have physical education teachers been with other service providers (IEP team members, including: aides, APE specialist, special education teacher, etc.) regarding students with disabilities?

Project Overview

In one school district in southern California, approximately 50 general physical education teachers were surveyed throughout ten schools (six middle schools, and four high schools). Schools were chosen based on the presence of

the target population (students with disabilities). Each school included in this study had at least one special day-class on campus, which increased the odds that teachers have experienced working with special populations at some time.

This was a one time, non-experimental, cross-sectional survey, and results are non-generalizable. The hypothesis was that while students with disabilities will be included in physical education activities, their participation would be limited to tasks that required minimal physical exertion. Additional hypotheses included:

1. Students were more likely to be excluded if they had a severe disability, as compared to less severe conditions. Severe disabilities have been identified as autism, blind or severely visually impaired, deaf or hearing impaired, severe mental retardation, orthopedically impaired, traumatic brain injury, emotionally disturbed, multiple disabilities, or other health impaired.
2. PE teachers who have attended more professional growth workshops more likely included students with disabilities.
3. Teachers who have had adequate support systems in place (i.e., adapted physical education specialists and aides) more likely included students with disabilities.
4. Teachers with more exposure to students with disabilities more likely included them into general physical education.

5. Teachers with concern about class less likely included students with disabilities into general physical education class.

Data Gathering Method

To begin, a letter was created to describe the study, and permission to conduct research in the school district was requested, then granted. Next, following a mass e-mail which was sent out to the teachers to describe the study and ask for their participation, a short survey was distributed to all general physical education (GPE) teachers at 10 chosen school sites via internet using Survey Monkey, a website designed to create online surveys. After two weeks, a follow-up e-mail was sent out in an effort to encourage teachers to complete the survey if they had not done so already.

The survey was created to address teachers' knowledge, attitudes, and behaviors toward inclusion, as well as their participation in continuing education opportunities and overall job satisfaction. Since a pre-existing survey deemed valid and reliable was not in existence for this study, a survey was created for the purpose of this study. Pre-testing of the instrumentation used in this research was necessary.

To establish validity, two professionals in the field of physical education looked over the survey to ensure that the questions were clear and precise. Upon establishing face validity, the survey was administered to three PE teachers not participating in the study. Two weeks later, they retook the survey

to gauge reliability. As the answers between the first and second testing were similar, reliability was deemed reputable. Once validity and reliability was established, the survey was linked to a mass e-mail and distributed to all the PE teachers included in the study.

The short survey was limited to closed-ended questions, as this was a quantitative study. Teachers responded by choosing the most appropriate response for the question based on a Likert scale. Demographic information gathered included gender, age, years of teaching experience, exposure to students with disabilities, and the grade levels they serviced (middle school or high school).

Data Analysis

All data collected were cross-tabulated, then compared factoring in the variables. The data were then charted to illustrate similarities and variances within the data.

Originality of the Data

All data compiled in this study were unique to the aforementioned study. No other studies, experiments, or data were considered while drawing conclusions.

Limitations of the Data

Results of this study are non-generalizable. Data were taken from one school district in southern California (a convenience sample), and subject selection had been predetermined based on non-random school selection and current teaching assignment.

Summary

In summary, the data gathered in this one time, non-experimental study were analyzed to test the hypothesis that there was a difference between the levels of physical education being received by students with disabilities as compared to typically developing children. The study also addressed whether differences between the levels of physical education were due to teacher preparation and attitudes regarding inclusion. The results were provided to participating teachers who inquired about the findings.

CHAPTER FOUR

RESULTS

Sixty-three secondary physical education teachers were e-mailed an invitation to participate in the study involving inclusion of students with disabilities into general physical education class. Of those teachers, two sent back e-mails that they were off-track, one asked to be omitted from the distribution list, and 14 participated in the survey. Two weeks later, a follow-up e-mail was sent to 62 teachers in an effort to maximize participation. After the second e-mail, another teacher asked to be taken off of the distribution list, which totaled two teachers who refused participation. An additional nine teacher responses were recorded after the second e-mail was sent out. In total, 23 surveys were retrieved.

Results

Survey results showed that 11 male and 12 female physical education teachers participated in this survey (see Figure 1). Of those 23 participants, the age distribution ranged from 20 to over 55 years old, with the most common age range being 36-40 (see Figure 2).

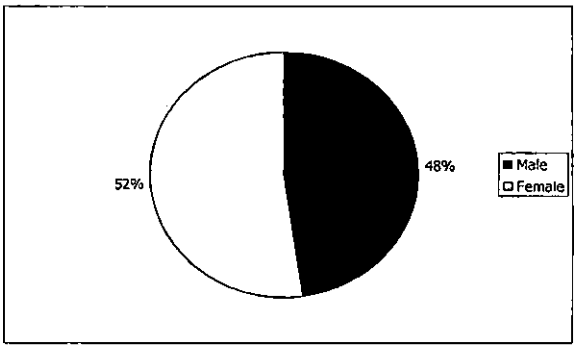


Figure 1. Gender.

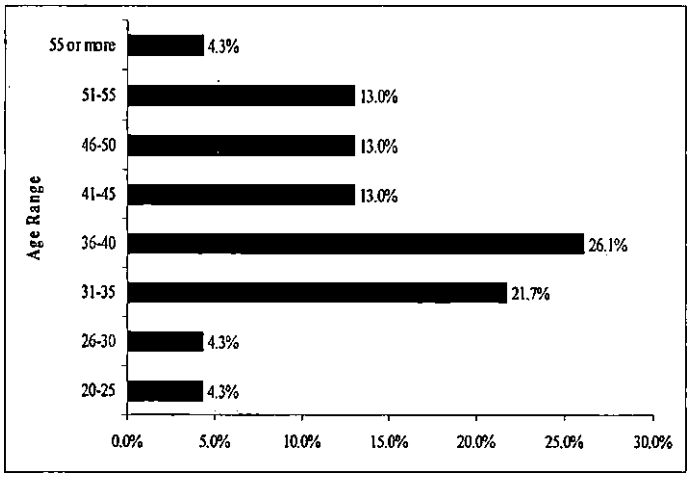


Figure 2. Age.

Teachers were asked how long they had been teaching physical education. Among those who responded, teaching experience ranged from less than five to more than 20 years teaching. The majority of responses were between five and 15 years teaching experience (see Figure 3).

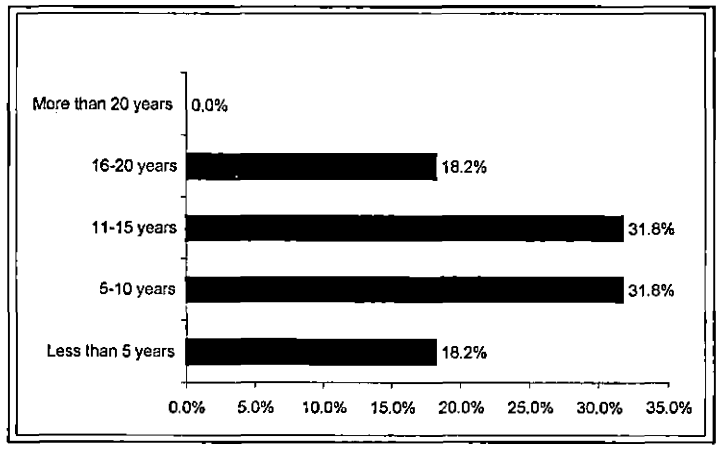


Figure 3. Teaching Experience.

Participants were asked their current teaching assignments. Respondent participation was comparatively similar, with only four percent more middle school participants than high school (see Figure 4). The random nature of the survey responses (as demonstrated in Figures 1-4) indicated that there was no systematic response bias.

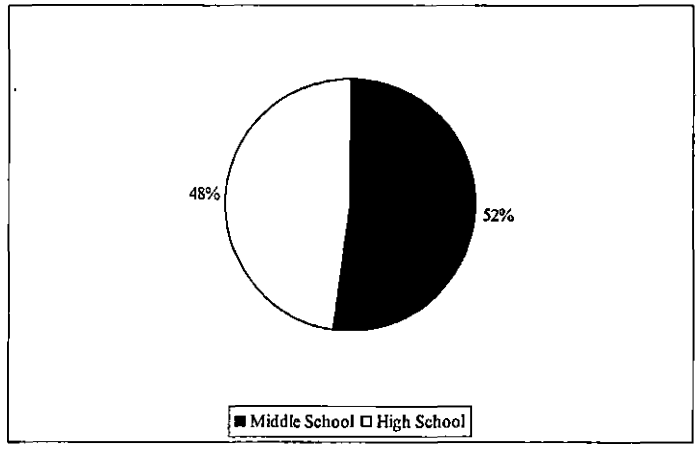


Figure 4. Teaching Assignment.

Presentation of the Findings

Teacher knowledge of students with disabilities was sought in survey question five, "what would you rate your knowledge of students with disabilities?" All respondents that partook in the survey reported to have at least some knowledge of disabilities. The most common answer among participants of the four choices, with more than half of the responses, was having "adequate knowledge of students with disabilities" (see Figure 5).

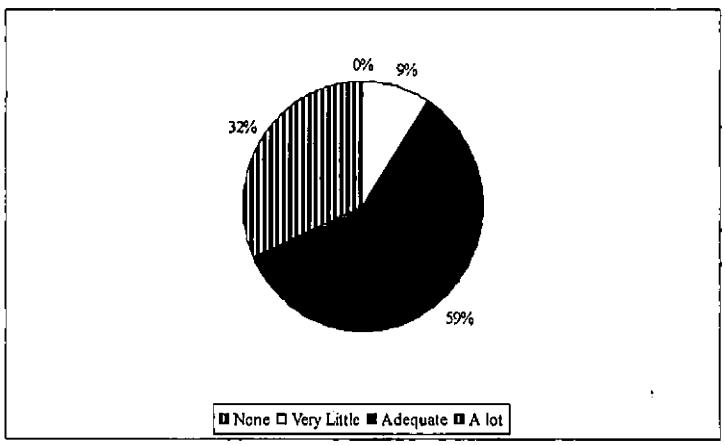


Figure 5. Teacher Knowledge of Students with Disabilities.

Participants were asked how many conferences that have contributed to their professional growth they attend each year. Slightly more than half of the participants responded that they do not attend any conferences for professional growth each year, and the others responded that they attend one per year (see Table 1).

Table 1

Teacher Professional Growth.

Number of Workshops/Conferences Attended Per Year		
Answer Options	Response Percent	Response Count
0	52.2%	12
1	47.8%	11
2	0.0%	0
3 or more	0.0%	0

All teachers who responded to survey question seven (see attached survey in Appendix D) reported that they have had a student with a disability in their general physical education class at some time. Those same respondents also answered that students with disabilities should be included into general physical education class with their non-disabled peers. Furthermore, the majority of teachers responded that students with and without disabilities both benefit from inclusion. Finally, with the exception of one survey respondent, every teacher reported that they have enjoyed having students with disabilities in their physical education classes. In a few areas, teachers' beliefs about inclusion differed:

- Eight teachers responded that students with severe disabilities should not be included into general PE.
- Two teachers did not feel that students without disabilities benefit from inclusion.

- Two teachers responded that they did not feel they had sufficient knowledge to adapt or modify activities to teach students with disabilities.

Other than those three areas, answers were consistent within group (see Table 2).

Table 2

Teacher Attitudes Toward Students with Disabilities.

	Yes	No	Response Count
Have you ever had a student with a disability in your PE class?	17	0	17
Do you feel that students with severe disabilities (i.e.: autism, blind or severely visually impaired, deaf or hearing impaired, mental retardation, orthopedically impaired, traumatic brain injury, emotionally disturbed, multiple disabilities, or other health impaired), should be included in general PE?	8	8	16
Do you feel that students with mild/moderate disabilities (i.e.: developmentally delayed, specific learning disability, or speech and language impaired) should be included in general PE?	17	0	17
Do you feel that students with disabilities benefit from inclusion?	17	0	17
Do you feel that students without disabilities benefit from inclusion?	17	2	19
Do you feel that you have sufficient knowledge to adapt or modify activities to teach students with disabilities?	15	2	17
Do you enjoy having students with disabilities in your PE class?	21	1	22

Inclusive practices, which can also be referred to as teacher behavior, were examined in question eight. Teachers were asked how frequently students with disabilities are allowed participation in various activities during physical education class. The majority of teacher responses collected in the survey (80%) reported that students with disabilities are allowed participation during warm-up activities. The survey further went on to reveal that approximately 37% of teachers assign students with disabilities to be score/time keepers during

sports/activities. Approximately 56% of teachers assign them to a team during sports/activities, and roughly 53% of teachers reported that students with disabilities sit out of sports/activities. Nearly 68% of teachers have their students play off to the side with a partner (parallel play), and 45% of teachers reported that their students are pulled completely from regular PE class (See Table 3).

Table 3

Teacher Inclusive Practices.

	Never	Sometimes	Frequently	Always	N/A	Rating Average	Response Count
Warm-up routines	0	1	3	16	0	3.75	20
Score or time keepers during sports/activities	7	3	3	4	2	2.24	19
Assigned to a team during sports/activities	0	0	8	10	0	3.56	18
Sit out of sports/activities	10	9	0	0	0	1.47	19
Play off to the side with a partner(parallel play)	3	13	3	0	0	2.00	19
Pulled completely from regular PE class	9	8	1	0	2	1.56	20

Although class size, instructional support staff, and ratio of students with disabilities to those without played a role in inclusion, survey results indicated that most teachers (84%) predominantly had concerns regarding safety when including students with disabilities into physical education classes. Second to

safety, teachers responded that the type and severity of the students' disability played a role influencing their beliefs about inclusion (see Table 4).

Table 4.

Factors Affecting Inclusion.

	None	Very Little	Moderately	A Great Deal	Response Count
Class size	3	2	3	10	18
Type and severity of the students disability	2	1	3	12	18
Ratio of students with disabilities to those without	3	3	4	7	17
Available support (i.e.: aides, adapted PE teacher)	2	3	1	11	17
Safety	1	0	2	14	17
Equipment	5	2	7	6	20
Other (please specify)					0

Hypothesis

In Chapter 3, it was hypothesized that while students with disabilities would be included in physical education activities, their participation would be limited to tasks that would require minimal physical exertion. Table three, previously referenced in this study on page 30, supported that students with disabilities have participated in activities such as warm-up routines and scorekeeping, but have been largely left out of the actual physical activities/sports. Although 82% of respondents reported that they had adequate knowledge to adapt or modify physical activities, 47% of teachers responded that their students with disabilities were sitting out of sports and/or physical activities sometimes. While 100% of

survey participants answered that students with mild to moderate disabilities (in this study, mild to moderate disabilities have been defined as developmentally delayed, specific learning disability, or speech and language impaired) should be included into general physical education classes, a high rate of respondents (50%) reported that students with severe disabilities (category includes autism, blind or severely visually impaired, deaf or hearing impaired, mental retardation, orthopedically impaired, traumatic brain injury, emotionally disturbed, multiple disabilities, or other health impaired) should not be included in general physical education classes (see Table 2, p. 29). Approximately 20% of teachers reported that students with disabilities always kept score during sports and/or physical activities, which indicated that their PE time has been spent on the sidelines. Additional sub-hypotheses included:

Sub-hypothesis 1: Students would more likely be excluded if they had severe disabilities, as compared to less-severe conditions. Severe disabilities have been identified as autism, blind or severe visual impairment, deaf or hard of hearing, orthopedic impairment, severe mental retardation, or multiple disabilities. Teachers' knowledge of students with disabilities has an affect on their behaviors for including them into physical activity. According to the data, 100% of survey participants agreed that students with mild to moderate disabilities should be included in general physical education classes, while only 50% believed that students with severe disabilities should be included in general physical education classes. The majority of participants answered that the type

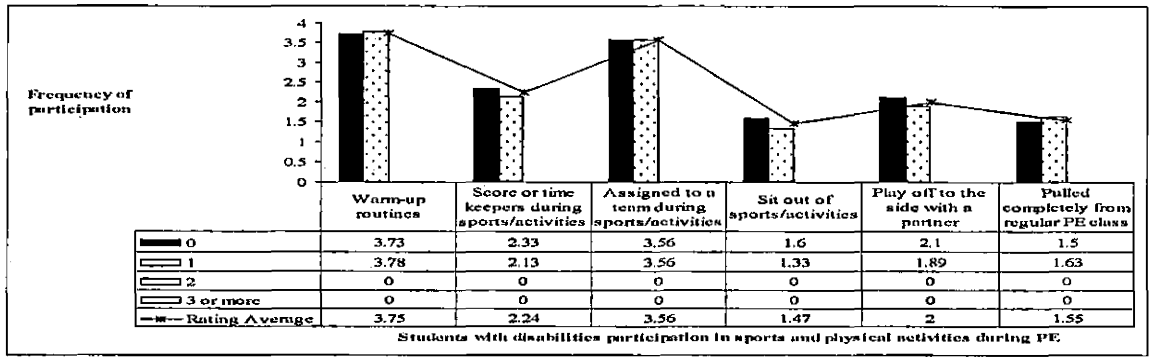
and severity of a disability affected their beliefs about inclusion a great deal. Teachers' knowledge and attitude most definitely influenced their inclusive practices, because only half of the survey participants responded that their students were never pulled from PE class. This indicated that they have been excluded. See Table five below for additional survey information regarding teachers' knowledge and behavior.

Table 5

Teacher Knowledge and Behavior Regarding Inclusion.

Teacher responses regarding how type and severity of a disability affects their beliefs about inclusion:				
	None	very little	moderately	great deal
Type and severity of the students disability	2	1	3	12
Teacher responses regarding beliefs about type disability:				
			Yes	No
Do you feel that students with severe disabilities (i.e.: autism, blind or severely visually impaired, deaf or hearing impaired, mental retardation, orthopedically impaired, traumatic brain injury, emotionally disturbed, multiple disabilities, or other health impaired), should be included in general PE?			8	8
Do you feel that students with mild/moderate disabilities (i.e.: developmentally delayed, specific learning disability, or speech and language impaired) should be included in general PE?			17	0
Teacher responses regarding inclusive practices during PE:				
	Never	Sometimes	Frequently	Always	N/A
Warm-up routines	0	1	3	16	0
Score or time keepers during sports/activities	7	3	3	4	2
Assigned to a team during sports/activities	0	0	8	10	0
Sit out of sports/activities	10	9	0	0	0
Play off to the side with a partner(parallel play)	3	13	3	0	0
Pulled completely from regular PE class	9	8	1	0	2

Sub-hypothesis 2: Physical Education teachers who attend more professional growth workshops would be more likely to include students with disabilities. Teachers who have utilized professional growth were compared to those who did not for inclusive practice in Figure 6. Teachers responded on the survey with answers choices that included; (0) never, (1) sometimes, (3) frequently, (4) always, and (5) not applicable. The trend in the data showed that teachers who had attended at least one workshop toward professional growth sat out their students from sports/activities less often, were less likely to assign their students to be scorekeepers during sports/activities, and were slightly more likely to include them into warm-up routines. Data ranges were slightly different between the two groups in all areas with the exception of assigning students to a team during sports/activities, for which responses included were exactly the same. Although the difference is small, it seems that teachers who attend workshops for professional growth demonstrate slightly more inclusive practices.

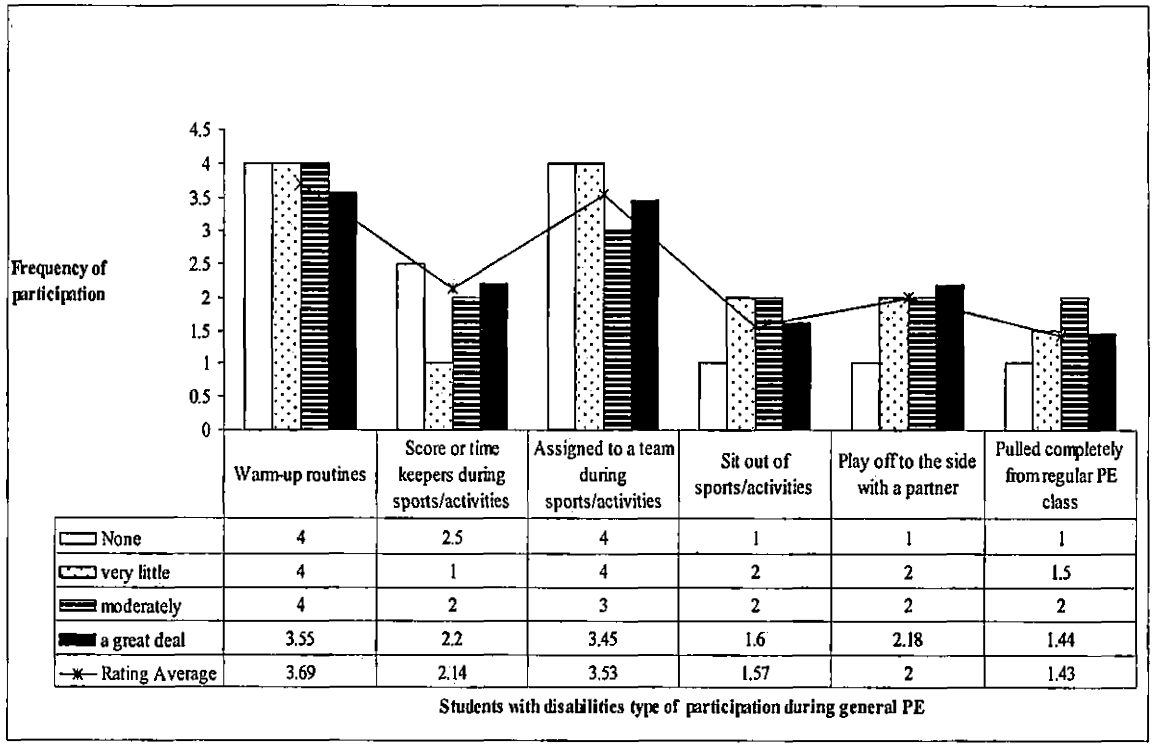


	Warm-up routines	Score or time keepers during sports/activities	Assigned to a team during sports/activities	Sit out of sports/activities	Play off to the side with a partner	Pulled completely from regular PE class
0	3.73	2.33	3.56	1.6	2.1	1.5
1	3.78	2.13	3.56	1.33	1.89	1.63
2	0	0	0	0	0	0
3 or more	0	0	0	0	0	0
Rating Average	3.75	2.24	3.56	1.47	2	1.55

Figure 6. Impact of Participation in Professional Growth Opportunities on Inclusive Practices.

Sub-hypothesis 3: Teachers who have adequate support systems in place (i.e., adapted physical education specialists, and aides) would be more likely to include students with disabilities. The data collected in this area seemed contrary to the above-stated hypothesis. According to the data collected, teachers who reported that having the assistance of support staff does not affect their beliefs about inclusion were less likely to sit out students with disabilities during physical activities and less likely to have their students pulled from class. Conversely, there seems to be a slight negative correlation between those teachers who rely a great deal on support staff, and behavior toward inclusion (see Figure 7). Perhaps one explanation is that teachers who rely heavily on support staff do not have to implement strategies on their own, so they are less likely to do so. Another explanation could be that maybe participants were not honest in their answers, they could have reported what they believed the correct answer should have been. Another possibility is that teachers with heavy support systems are more aware of, or more comfortable expressing their shortcomings.

The trends in the data do not support my hypothesis that teachers who have adequate support systems in place (i.e., adapted physical education specialists, and aides) would be more likely to include students with disabilities. Therefore, teachers who rely on the assistance of support staff are not necessarily more likely to include students with disabilities into general physical education class.



	Warm-up routines	Score or time keepers during sports/activities	Assigned to a team during sports/activities	Sit out of sports/activities	Play off to the side with a partner	Pulled completely from regular PE class
None	4	2.5	4	1	1	1
very little	4	1	4	2	2	1.5
moderately	4	2	3	2	2	2
a great deal	3.55	2.2	3.45	1.6	2.18	1.44
Rating Average	3.69	2.14	3.53	1.57	2	1.43

Students with disabilities type of participation during general PE

Figure 7. Impact of Support Staff on inclusive Practices during General Physical Education.

Sub-hypothesis 4: Teachers with more knowledge of students with disabilities would be more likely to include them in general physical education. According to participant responses, teachers who reported having either adequate or a lot of knowledge of students with disabilities were less likely to sit out their students from an activity, more likely to allow their students to participate in warm-ups, and slightly less likely to have their students parallel play (see Figure 8).

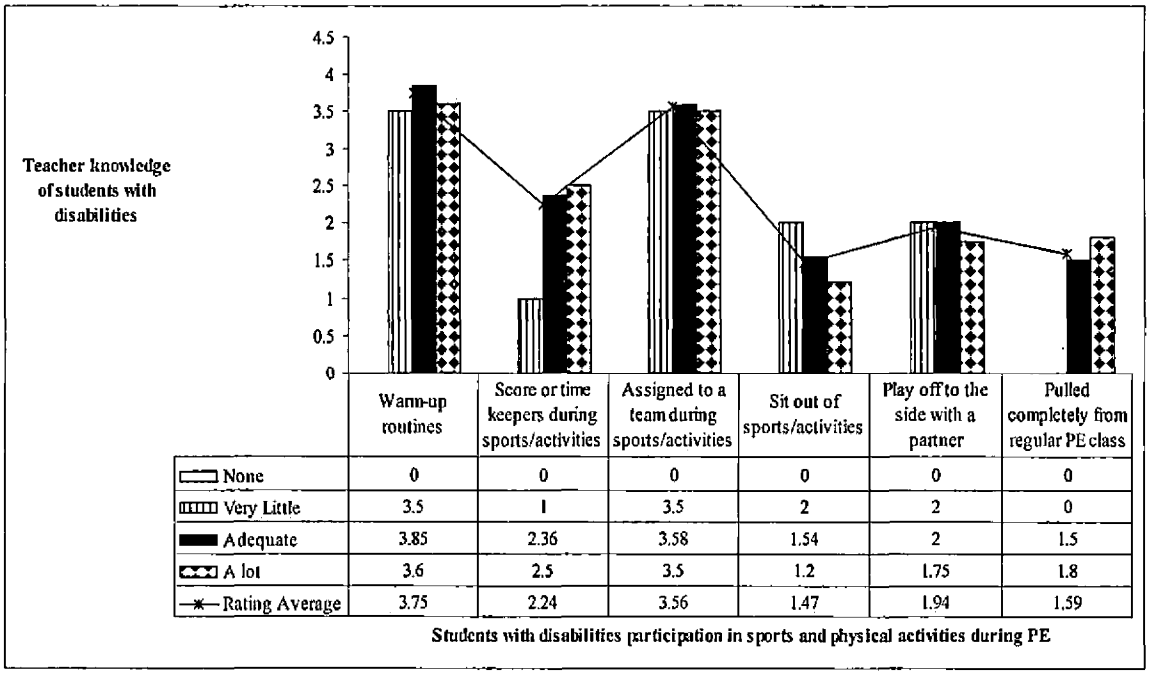


Figure 8. Teacher Knowledge of Students with Disabilities and Inclusive Behavior.

Sub-hypothesis 5: Teachers with concerns about smaller class sizes containing individuals with disabilities would be less likely to include them. As predicted, the data showed that teachers who did not express concerns about class size demonstrated higher inclusive practices toward students with disabilities. Students were assigned to a team more frequently, respondents were also the least likely to have had their students play off to the side (parallel play) or pulled from class. In contrast, teachers who had a great deal of concerns about class size, were more likely to have had their students with disabilities parallel play off to the side, sit out of sports/activities, or excluded (pulled) from PE class (see Figure 9 for more information).

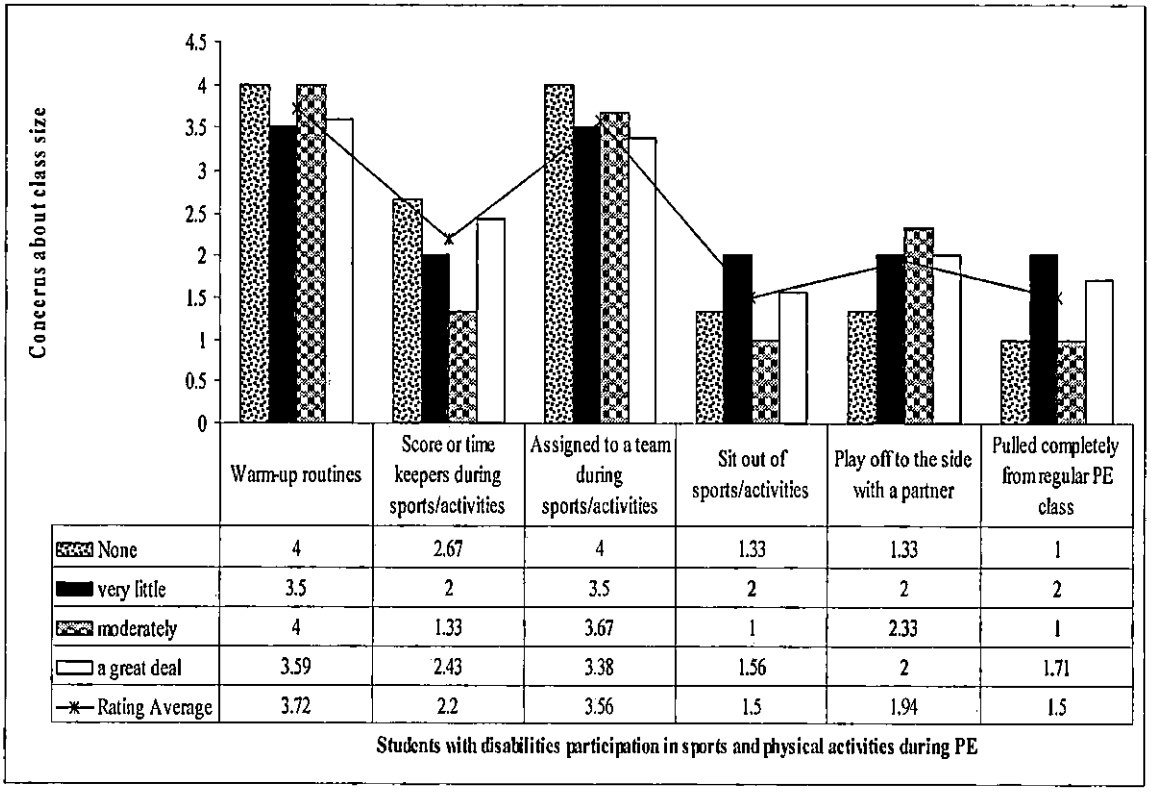


Figure 9. The Impact of Class Size on Inclusive Practice.

In conclusion, this research study has shown that students with disabilities are commonly withheld from physical activities. Also, the study shows that there is a correlation between student inclusion and several other factors. However, these factors were all included in the same data subset. Therefore, one set of data could be affected by another.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study took place over a two-week period in one Southern California school district. Physical education instructors were invited to participate in a brief survey about quality inclusion of students with disabilities enrolled in general physical education classes. The survey instrumentation consisted of ten questions, and was created and administered using a website called Survey Monkey. A link to the survey was embedded in the e-mails sent to each teacher asking for their participation. Confidentiality was not compromised during this study; all survey responses were anonymous in an effort to get honest answers.

Summary and Recommendations

While safety was a major concern among physical educators when including students with disabilities into general PE class, 95% of teachers reported enjoying having students with disabilities in their class. Question 10 asked for any additional thoughts about the inclusion of students with disabilities into general physical education class. Seven teachers chose to respond to the open-ended survey question. The first two responses were in relation to accessing the survey. In the beginning, there were problems with the instrumentation and it did not allow them to check multiple responses in some

questions. Anonymous (personal communication, September 21, 2009 & October 6, 2009) responses have been listed as they were written:

- Participant 1: Ms. Phillips, any question that has a blank should have a mark of yes, a great deal, or always for an answer. I could not get the check marks to mark all of my choices.
- Participant 2: Question seven would not let me mark more than one yes. Question nine would not let me mark more than one in each column
- Participant 3: When the disabled student detracts from the education of the average student, then they should not be in the class on a daily basis.
- Participant 4: Students with disabilities can teach us all a thing or two about attitude, compassion, and enjoying life. I truly enjoy teaching them and, when possible, like to pair them up with general education students and work together. They can't always be in general education classes because of the severity of their disabilities, but we sure can teach them and help them learn to enjoy physical education.
- Participant 5: I have seen great things happen for students of various disabilities when full participation is allowed. Many students offer assistance, guidance, and support to those students who need extra help.
- Participant 6: It is always a pleasure to have students with disabilities, in my class and I believe that no matter the disability, the student should be included in general physical education.
- Participant 7: Depending on the severity of the disability, inclusion is beneficial to both those with the disability and those without. However, severely disabled students need to be provided with a one-on-one aide or APE Teacher who is appropriately trained to meet their needs and can provide them and all their classmates with a safe physical environment. Class sizes of 50-plus make it impossible for a general physical education teacher to give them the attention they need without ignoring the needs of the rest of the class. I think that it is a HUGE liability issue for the district. I have thoroughly enjoyed having these kids in class. They teach each other many important things far beyond physical education, yet I believe first and foremost that each case is different, and the district needs to be realistic and fair to all involved in their expectations.

Based on the results of this research, one recommendation would be to examine the teacher responses individually to address their issues in another study to overcome the barriers to inclusion. Teachers generally seem to share

concerns with safety and the type/severity of the disability that the students have. If these issues could be addressed and resolved to assure safe access to the physical education curriculum, students with disabilities may be included much more during PE with their peers.

Limitations of the Study

One limitation of the study was that only one school district in California was included, so the survey results cannot be generalized. Also, in the beginning stages of the research, there were some problems with the survey instrumentation. Some examples of this are:

- Six surveys were incomplete.
- Two teachers reported that the survey would not allow them to complete all parts of the survey.
- Response rate to the survey was low. Initially only 14 teachers participated (about 22%). Later, another nine responses were added when the follow-up e-mail was sent. The overall percentage of completed surveys was still relatively low, ending at only 37%.

Offering an incentive to each teacher to complete the survey could have increased participation.

If this research were to be conducted again, it might be sensible to post the survey on a physical education (PE) website such as NASPE-Talk (National Association for Sports and Physical Education). Allowing teachers from all over

the country to participate, versus one school district, would increase the number of survey participants. However, voluntary participation could compromise random selection. Only those professionals who choose to network on the internet professional growth websites would be included. Therefore, every type of physical education teacher does not have an equal opportunity to be included. For example, results may be skewed positively due to the type of teachers who sign up for these professional growth websites, as they may demonstrate a more positive attitude when answering survey questions.

Suggestions for Further Research

Based the results of survey question eight, an area for further research would be to look at how students with disabilities participate in PE classes. Question 8 asks how often students with disabilities participate in the following activities during physical education class:

- Warm-up routines
- Score or time keepers during sports/activities
- Assigned to a team during sports/activities
- Sit out of sports/activities
- Play off to the side with a partner (parallel play)
- Pulled completely from PE class.

It would be a more focused look at students' rate of inclusion based on the type of physical activity during physical education class. The research could address

the students' experiences during PE, and the activities they are allowed to participate in, or forced to sit-out from given their specific disability. Research could be more qualitative, getting interviews of both students with and without disabilities. This type of research could give a clear picture of individual student experiences with inclusion during physical education class. A study of this magnitude could greatly affect the way physical education teachers view inclusion. There are few, if any, research studies that include student opinions about their physical education experience.

APPENDIX A

E-MAIL INVITATION TO PARTICIPATE IN A RESEARCH STUDY

Dear PE Teacher:

I am an adapted physical education teacher conducting a non-experimental study for my Master's degree about the inclusion of students with disabilities in general physical education. I selected 10 schools (six middle schools and four high schools) within our school district. The schools chosen were based on the number of special day classes containing students with severe disabilities on campus.

Results for this study are only focused on physical education teachers. You have been chosen based on your school assignment. Prior to completing the survey, please read the attached informed consent. The informed consent gives information about the study's purpose as well as the assumed benefits and risks.

Although participation is encouraged, there will be no negative consequences if you choose to refrain from the study. Completing the survey should take no more than five minutes. Please click on the link below to participate in the survey. Thank you for your time and consideration.
http://www.surveymonkey.com/s.aspx?sm=BiXRZczz9OgxENASTu8Vaw_3d_3d

Sincerely,

Natalie Phillips
Adapted Physical Education Specialist
Division of Special Education
Corona-Norco Unified School District
nphillips@cnusd.k12.ca.us

APPENDIX B

FOLOW-UP E-MAIL

Dear PE Teacher:

This e-mail has been sent out as a reminder to participate in a research project regarding students with disabilities enrolled in general physical education classes. Please read the attached informed consent and follow the link below to participate in the short survey.
http://www.surveymonkey.com/s.aspx?sm=BiXRZczz9OgxENASTu8Vaw_3d_3d

If you have already participated, thank you for your time. Additionally, if you wish to learn the results of this study please email me at nphillips@cnusd.k12.ca.us and I will forward the findings to you.

Sincerely,

Natalie Phillips
Adapted Physical Education Specialist
Division of Special Education
Corona-Norco Unified School District
nphillips@cnusd.k12.ca.us

APPENDIX C

INFORMED CONSENT

Informed Consent

You have been invited to participate in a research project titled, "Quality Inclusion & Students with Disabilities in Physical Education." The purpose of the study is to determine the level that students with disabilities are included into general physical education classes, and teacher beliefs about inclusion.
The level of inclusion for students with disabilities will be categorized into four areas; full inclusion, partial inclusion, functional exclusion, or complete exclusion. In addition, the knowledge, attitudes, and behaviors of the physical education teachers relevant to inclusion will be incorporated in the study. The following research questions will be addressed;

4. What are PE teacher attitudes toward inclusion?
5. What barriers do general physical education teachers face when dealing with inclusion (class size, support, equipment, etc.)?
6. How involved are physical education teachers with other service providers (IEP team, aides, etc.) in relation to students with disabilities?

You will never be asked to provide your name at any point when completing the survey. Neither the participants nor the school district will be mentioned by name in the results, therefore confidentiality will not be compromised.
There are no foreseeable risks to you in this study. It is anticipated that the benefits of this research will be, that the beliefs and struggles of general physical education teachers could be better understood by services providers including the Individual Education Plan (IEP) team. This could lead to better communication between service providers, resulting in a more positive experience for students with severe disabilities participating in general physical education.
I appreciate your time, and encourage your participation. The survey should take approximately 5 minutes of your time. You are not obligated to answer any of the questions, and you may choose to quit at anytime. Thank you for your consideration, please follow the link in the e-mail if you choose to participate in this research project.

APPENDIX D

SURVEY

1. Default Section

1. What is your gender?

- ◯ Male
- ◯ Female

2. How old are you?

[ ]

3. How long have you been teaching physical education?

[ ]

4. What is your current teaching assignment?

- ◯ Middle School
- ◯ High School

5. What would you rate your knowledge of students with disabilities?

◯ None ◯ Very Little ◯ Adequate ◯ A lot

6. How many physical education workshops/conferences do you attend yearly?

◯ 0 ◯ 1 ◯ 2 ◯ 3 or more

7. Please respond to the following questions:

	Yes	No
Have you ever had a student with a disability in your PE class?	◯	◯
Do you feel that students with severe disabilities (i.e.: autism, blind or severely visually impaired, deaf or hearing impaired, mental retardation, orthopedically impaired, traumatic brain injury, emotionally disturbed multiple disabilities or other health impaired), should be included in general PE?	◯	◯
Do you feel that students with mild/moderate disabilities (i.e.: developmentally delayed, specific learning disability, or speech and language impaired) should be included in general PE?	◯	◯
Do you feel that students with disabilities benefit from inclusion?	◯	◯
Do you feel that students without disabilities benefit from inclusion?	◯	◯
Do you feel that you have sufficient knowledge to adapt or modify activities to teach students with disabilities?	◯	◯
Do you enjoy having students with disabilities in your PE class?	◯	◯

8. How often do your students with disabilities participate in the following activities?

	Never	Sometimes	Frequently	Always	N/A
Warm-up routines	○	○	○	○	○
Score or time keepers during sports/activities	○	○	○	○	○
Assigned to a team during sports/activities	○	○	○	○	○
Sit out of sports/activities	○	○	○	○	○
Play off to the side with a partner(parallel play)	○	○	○	○	○
Pulled completely from regular PE class	○	○	○	○	○

9. How much do the following factors influence your beliefs about inclusion of students with disabilities into general physical education class?

	None	very little	moderately	a great deal
Class size	○	○	○	○
Type and severity of the students disability	○	○	○	○
Ratio of students with disabilities to those without	○	○	○	○
Available support (i.e.: aides, adapted PE teacher)	○	○	○	○
Safety	○	○	○	○
Equipment	○	○	○	○

Other (please specify)

10. Do you have any additional thoughts about inclusion of students with disabilities in general physical education class? (optional)

REFERENCES

Ammah, J., & Hodge, S. (2005). Secondary physical education teacher beliefs and practices in teaching students with severe disabilities: a descriptive analysis. *The High School Journal*, December2005/January2006, 40-52.

Bauman, A. (2005). The physical environment and physical activity: moving from ecological associations to intervention evidence. *Journal of Epidemiology and Community Health, 59*(7), 535-536.

Block, M. E. (2007). *A teacher's guide to including students with disabilities in general physical education* (3rd ed.). Baltimore, MD: Paul H. Brookes Publishing Co.

Block, M., & Horton, M. (1996). Include safety in physical education: do not exclude students with disabilities. *Physical Educator, 53*(2), 58-66.

Block, M., Klavina, A., and Flint, W. (2007). Including students with severe, multiple disabilities in general physical education. *Journal of Physical Education, Recreation and Dance*, *78*(3), 29-32.

Brown, L., Lang, E., Udvari-Solner, A., Schwarz, P., Van Deventer, P., Algren, C., Johnson, F., Gruenwald, J., & Jorgensen, J. (1989). Should students with severe intellectual disabilities be based in regular or in special education classrooms in home schools. *The Journal for the Association for Persons with Severe Handicaps*, *14(*1), 8-12.

California Project Lean. *Diet and physical activity facts.* Retrieved October 8, 2003, from http://www.californiaprojectlean.org/consumer/fact/abdiet.html

Cooper, R. A., et. al. (1999). Research on physical activity and health among people with disabilities: a consensus statement. *Journal of Rehabilitation Research and Development*, *36*, 2.

Downie, R.S., Tannahill, C., Tannahill, A. (1999). Objections to health promotion. *Health Promotion: Models and Values* (2nd ed., pp.139-152). New York: Oxford University Press.

Downing, J.E. (2002). *Including students with severe and multiple disabilities in typical classrooms: Practical strategies for teachers* (2nd ed.). Baltimore, MA: Paul H. Brookes Publishing Co.

Fragala-Pinkham, M.A., Haley, S.M., Rabin, J., Kharasch, V.S. (2005). A fitness program for children with disabilities. *Physical Therapy, 85*(11), 1182-1200.

Hogan, D.P., Rogers, M.L., Msall, M.E. (2000). Functional limitations and key Indicators of well-being in children with a disability. *Archives of Pediatrics and Adolescent Medicine,* 154, 1042-1048.

Hyatt, K. (2007). The new IDEA: changes concerns, and questions. *Intervention in School and Clinic*, *42*(3), 131-136.

Menear, K., & Davis, T. (2007). Modifying physical activities to include individuals with disabilities. *Journal of Physical Education, Recreation and Dance*, *78*(2), 37-41.

Merriam-Webster Online Dicationary. Retrieved March 15, 2009, from http://www.m-w.com/dictionary.

Newacheck, P.W., Strickland, B., Shonkoff, J., Perrin, J.M., McPherson, M., McManus, M., Lauver, C., Fox, H., Arango, P. (1998). An epidemiologic profile of children with special health care needs. *Pediatrics,* 102, 117-123.

Reeves, L. & Stein, J. (1996). Developmentally appropriate conclusion: don't put the cart before the horse!. *Physical Educator, 56*(1), 2.

Sherrill, C. (2004). *Adapted physical activity, recreation, and sport; cross disciplinary and lifespan* (6th ed.). New York, NY: The McGraw Hill Companies, Inc.

Smith, A., & Thomas, N. (2006). Including pupils with special educational needs and disabilities in national curriculum physical education: a brief review. *European Journal of Special Needs Education, 21*(1), 69-83.

Stein, J. (1978). Tips on mainstreaming: Do's and don'ts in activity programs. *Practical pointers, 1*(10), 1-16.

Sussman, S., & Petosa, R.. The use of empirical curriculum development to improve prevention research. *American Behavioral Scientist, 39*(7), June/July (1996).

Tripp, A., Rizzo, T., & Webbert, L. (2007). Inclusion in physical education: changing the culture. *Journal of Physical Education, Recreation, and Dance, 78*(2), 32-36.

Turnbull, R., Turnbull, A., Shank, M., Smith, S., & Leal, D. (2002). *Exceptional Lives: Special education in today's schools* (3rd ed.). Upper Saddle River, NY: Pearson Education, Inc.

Weiner, L. Challenging the deficit thinking. *Educational Leadership*. September 2006, pp 42-45.

U. S. Department of Health and Human Services. *Healthy People 2010: Understanding and Improving Health.* (2nd ed.) Washington D.C. U.S. Government Printing Office, November 2000. www.healthypeople.gov

U.S. Department of Health and Human Services. *The 2005 Surgeon General's Call to Action to Improve the Health and Wellness of Persons with Disabilities: Calling You to Action.* U.S. Department of Health and Human Services, Office of the Surgeon General, 2005. www.surgeongeneral.gov

U. S. Department of Health and Human Services. *Physical Activity and Health: A Report of the Surgeon General.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 1996. www.cdc.gov