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Attitudes of Nondisabled Fifth and Sixth Grade Students
Toward Students with Physical Disabilities in
Physical Education Classes

by
Susan S. Lyle

A dissertation submitted to the Graduate Faculty
of Middle Tennessee State University
in partial fulfillment of the requirements
for the degree of Doctor of Arts in Physical Education
December, 2001

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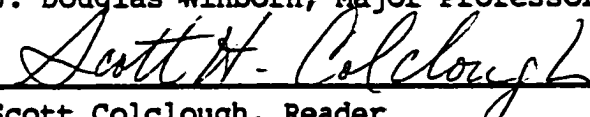
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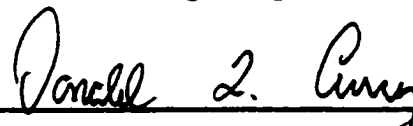
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ABSTRACT

Attitudes of Nondisabled Fifth and Sixth Grade Students Toward Students with Physical Disabilities in Physical Education Classes

Susan S. Lyle

This study was conducted to examine the differences in attitudes of nondisabled students toward students with physical disabilities in physical education classes. The sample consisted of 190 fifth and sixth grade students enrolled in Dupont-Tyler Middle School, Hermitage, Tennessee. The Children's Attitudes Toward Integrated Physical Education-Revised (CAIPE-R) was used to determine if there were attitude differences. The mean total scores for the CAIPE-R survey for contact and noncontact groups were compared using a t-test. A t-test was also used to compare the mean total scores for the CAIPE-R survey for male students and female students. Multivariate analysis of variance was conducted to determine whether students who have had contact with students with disabilities scored differently on the general attitude and sport-specific subscales than students who have not had contact with students with disabilities. Multivariate analysis of variance was also conducted to determine whether male students or female students scored differently on the general attitude and sport-specific attitude subscales.

The scores of students in the contact and noncontact groups, as well as male students and female students, indicated positive attitudes toward students with

disabilities in physical education classes. The results of the study were mixed. The significant difference for the total CAIPE-R reported for the contact and noncontact groups was minimal; however, a significant difference was reported on the total CAIPE-R for the gender groups. The results of the MANOVA for the subscales indicated a statistically significant difference for the contact and noncontact groups; however, the results of the MANOVA for the subscales and gender indicated no statistically significant difference. The results of this study may have been attributed to the tendency for positive responses in the contact and noncontact groups, as well as the gender groups.

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CHAPTER 1

Introduction to the Study

Inclusion is the practice of educating all special education students in all facets of general education programs. Ideally, the practice of inclusion involves the placement of students with disabilities in regular education classrooms to receive educational and related services alongside nondisabled students in neighborhood schools (Miller, 1994). In an inclusive school, students with disabilities are represented in classes in the same proportion as in the general population (Craft, 1994). A social emphasis is also a part of the inclusive program. Students with disabilities have the opportunity to observe and model the social behaviors of nondisabled students (Beakley, 1997).

Prior to the 1940s, educational opportunities for students with disabilities did not exist (Craft, 1994). Segregated private schools were developed in the 1940s and 1950s, which were followed by the establishment of public segregated schools from 1960 through 1980 (Craft, 1994). The movement toward full inclusion had its roots in the principle of Least Restrictive Environment (LRE) found in Public Law 94-142 (Education for All Handicapped Children Act, 1975). Specifically, the Act requires that states educate students with disabilities, to the maximum extent appropriate, in the same instructional setting as students without disabilities.

As parents of children with disabilities began to seek regular class placements for their children, another model, the Regular Education Initiative (REI), was recommended. Although REI was not mandated by law, advocates of educating students with mild or moderate disabilities in regular classrooms continued to support inclusion of students with disabilities in regular classes. By the early 1990s the term "inclusion" replaced the term "REI" (Rizzo & Lavay, 2000).

Inclusion is an encompassing school philosophy that takes place in all curricular areas, including physical education (Kelly, 1994). Physical education is federally mandated as a direct service for students who qualify for special education services (Maguire, 1994). In an ideal inclusive physical education setting, adaptive physical education is conducted by both regular and adaptive physical educators (Rizzo & Lavay, 2000); however, students with varying disabilities are typically placed in regular physical education classes without adequate support personnel or curricular changes. Physical educators and nondisabled students are then required to improvise on a variety of educational problems (Block, 1994).

The attitudes of nondisabled students are crucial to the successful implementation of inclusion of students with disabilities in school programs (Loovis & Loovis, 1997). The social, psychological, and academic growth of students with disabilities can be affected by their attitudes toward themselves. Their attitudes are influenced by the attitudes

and opinions of others. Attitudes are then reflected in classroom interactions which reinforce the self-worth of the students with disabilities. Positive attitudes are developed as a result of (a) equal status relationships, (b) frequent contacts in social and instructional climates, (c) cooperative activities, (d) rewarding and pleasant contacts, (e) the modeling of positive attitudes, and (f) planned and applied persuasion (Horne, 1985). Inclusion provides an opportunity for equal status relationships to develop between students with disabilities and nondisabled students.

Four approaches to attitude change have been identified: (a) contact theory, (b) persuasive communication theory, (c) social cognitive theory, and (d) reasoned action theory. Contact theory, first posited by Allport (1954), suggested that sport related activities reduced prejudice and changed attitudes. Inclusion in physical education classes was assumed to encompass pleasant social contact and to present the opportunity for cooperative activities. In order to create positive attitudes, more than casual interaction is required (Archie & Sherrill, 1989). Contact between people does make a difference in overall attitudes when the contact is frequent, interactive, pleasant, focused on common goals, meaningful, long, and mutually respectful (Horne, 1985; Jones, 1984). The success of students with disabilities can also be related to the understanding, support, and help

received from nondisabled students (Jones, Sowell, Jones, & Butler, 1981).

Opportunities for interactions between students with disabilities and nondisabled students have increased as inclusion practices have become more widespread. Inclusionary practices may or may not promote positive attitudes toward students with disabilities. While advocates of inclusion are involved in the best interests of students with disabilities, the impact of inclusion on students without disabilities is often overlooked (Block & Zeman, 1996).

Statement of the Problem

The purpose of this study was to compare the attitudes of nondisabled fifth and sixth grade students who have had contact with students with physical disabilities in physical education classes to nondisabled fifth and sixth grade students who have never had contact with students with physical disabilities in physical education classes.

Significance of the Problem

A significant body of research has been compiled regarding attitudes of teachers toward students with disabilities (Jarvis & French, 1990; LaMaster, Gall, Kinchin, & Siedentop, 1998; Rizzo & Vispoel, 1992; Siderdis & Chandler, 1997; Tripp, 1988). Attitudes of students without disabilities in inclusive classroom settings have also been studied (Donelson, 1980; Jones, 1984; Voeltz, 1980). Attitudes of nondisabled students in physical education classes toward students with disabilities have also been

researched (Archie & Sherrill, 1989; Block & Zeman, 1996; Kisabeth & Richardson, 1985; Slininger, Sherrill, & Jankowski, 2000; Stewart, 1988). Since students who need wheelchairs for mobility require extra time and attention from the teacher or students, nondisabled students' instructional time, practice time, and activity time occasionally are compromised. The attitudes of nondisabled students could be affected by the addition of students with disabilities to regular physical education classes.

Research Questions

The following research questions were investigated:

1. Do nondisabled students who have had contact with students with disabilities in physical education classes score higher on the Children's Attitudes Toward Integrated Physical Education-Revised (CAIPE-R) attitude survey than nondisabled students who have not had contact with students with disabilities in physical education classes?
2. Do nondisabled students who have had contact with students with disabilities in physical education classes score higher on the CAIPE-R general attitude and sport-specific subscales than nondisabled students who have not had contact with students with disabilities in physical education classes?
3. Do female students score higher on the CAIPE-R attitude survey than male students?

4. Do female students score higher on the CAIPE-R general attitude and sport-specific subscales than male students?

Definition of Terms

Attitude

Attitude as defined by Triandis (1971) is "a predisposition to respond and is represented by consistencies in the responses of individuals to social situations." For the purpose of this study, attitude will be defined operationally by the Children's Attitudes Toward Integrated Physical Education-Revised (Block, 1995).

Children's Attitudes Toward Integrated Physical Education-Revised (CAIPE-R)

The CAIPE-R is an inventory designed to assess attitudes of nondisabled students toward students with disabilities in regular physical education. Users respond on a four-point Likert scale to 11 statements regarding the description of a student with a disability in physical education classes. The inventory is divided into two subscales: (a) general attitude and (b) sport-specific attitude (Block, 1995).

Contact

For the purpose of this study, contact will be defined operationally as the interaction of students with disabilities and nondisabled students. The contact will be either structured or nonstructured.

Contact Theory

Contact theory posits that contact between individuals with differences tends to produce changes in attitudes (Allport, 1954). Positive attitudes are produced when interactions are frequent, pleasant, and meaningful (Sherrill, 1993). Contact theory research provides evidence that environment and peer interaction should be considered in integrated physical activities (Tripp & Sherrill, 1991).

Disability

The World Health Organization (as cited in Sherrill, 1993) defines disability as the loss or reduction of functional ability and/or activity. For the purpose of this study, students with disabilities will be defined operationally as students with disabilities who need wheelchairs for mobility purposes.

Equal status relationships

Equal status relationships are defined as mutually satisfying associations between persons of approximately the same age in which each individual contributes in equal amounts to the relationship, learns from each other, and finds contact self-actualizing (Sherrill, 1993).

Fifth and sixth grade students

For the purpose of this study, fifth and sixth grade students will be defined operationally as those students who are academically placed in fifth and sixth grade classes regardless of their chronological age.

Handicap

Handicap will be defined as the results from actions of a person with a disability or by society (Smith, Austin, & Kennedy, 2001).

Inclusion

Inclusion (sometimes called integration) is defined as a situation in which all students with disabilities are educated with nondisabled students in regular classes (Block, 1994). For the purpose of this study, inclusion will be defined operationally as students with disabilities, regardless of severity, placed in regular physical education classes with typical nondisabled students.

Least restrictive environment (LRE)

Public Law 94-142 (Education for All Handicapped Children Act, 1975) defines least restrictive environment as the following:

...to the maximum extent possible, children with disabilities, including children in public and private institutions or other care facilities, are educated with children without disabilities, and that special classes, separate schooling, or other removal of children with disabilities from regular educational environments occur only when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved.

Least restrictive environment gives students with disabilities a continuum of alternative-learning placement

options in environments that are close to regular class settings (Rizzo & Lavay, 2000).

Mainstreaming

The term mainstreaming is not found in any law or legal document and arose to describe the various placements options afforded to students with disabilities to prepare them for placement in the regular classroom (Rizzo & Lavay, 2000). For the purpose of this study, mainstreaming will be defined as part of the least restrictive environment continuum in which students with disabilities are integrated into regular classrooms and physical education classes (Block, 1994).

Regular Education Initiative (REI)

The term REI is not supported by public law but is an attempt by advocates of students with disabilities to educate such students in regular class settings without other placement options (Rizzo & Lavay, 2000).

Structured Contact

Structured contacts consist of systematic interactions between nondisabled students and students with disabilities, such as responsibility to or interaction with the student with disabilities. Additionally, structured contacts should create a feeling of equal status between nondisabled students and students with disabilities (Favazza & Odom, 1996; Sherrill, Heikinaro-Johansson, & Slininger, 1994; Slininger, Sherrill, & Jankowski, 2000; Voeltz, 1980).

Unstructured Contact

Unstructured contacts are incidental contacts in daily routine activities (Favazza & Odom, 1996).

Delimitations

The study was subject to the following delimitations:

1. Students with disabilities were delimited to students who used wheelchairs for mobility.
2. Subjects were fifth and sixth grade students attending Dupont-Tyler Middle School in Hermitage, Tennessee.
3. The attitude test was delimited to the Children's Attitudes Toward Integrated Physical Education-Revised.

Limitations

The study was subject to the following limitations:

1. Since participation of students in the study was based on parental permission, students were not randomly assigned.
2. No attempt was made to control the amount of contact with students with disabilities outside the school setting.
3. The type of contact, structured or nonstructured, with students with disabilities in the physical education setting was not controlled.

CHAPTER 2

Review of Literature

The purpose of this chapter is to review the literature about attitudes of nondisabled individuals toward individuals with disabilities. The sections of this review are (a) attitudes toward children with disabilities, (b) effects of inclusion on nondisabled children, (c) contact theory and attitude change, (d) contact theory and attitude change in physical activity programs, and (e) contact theory and attitude change in children in physical education programs.

Attitudes Toward Children with Disabilities

Attitudinal barriers are debilitating obstacles to equal opportunity for citizens with disabilities. One facet of this attitudinal prejudice is the stigma attributed to individuals with a different physical appearance in society (Kilbury, Benshoff, & Rubin, 1992). Another barrier may be the perception of what constitutes positive attitudes and behaviors (Makas, 1988).

Full inclusion evolved from a series of social, legislative, and political events which required equal participation by students with disabilities with nondisabled students (Block & Vogler, 1994). Some historians mark the beginning of inclusion with the court ruling from Brown vs. Board of Education in 1954 that states separate is not equal. Separate education is illegal not only to people of both genders and various races, but also to people with disabilities (Craft, 1994). In 1973 Public Law 93-112, the

Rehabilitation Act, made equal participation of individuals with disabilities a civil right. Congress enacted Public Law 94-142, the Education for All Handicapped Children Act (EHCA), in 1975 to provide financial support to states and localities in protecting the rights of, meeting the needs of, and improving the results for persons with disabilities. Public Law 94-142 was reauthorized in 1990, and the name was changed to the Individuals with Disabilities Education Act (IDEA).

The Individuals with Disabilities Education Act is the legislation that guides policies and practices in educating students with disabilities. This legislation is amended every three to five years. The latest reauthorization, Public Law 105-17, was enacted in 1997. School districts are required to provide a free, appropriate public education to students with disabilities in the least restrictive environment (LRE) to the maximum extent appropriate with students without disabilities. Furthermore, removal of students with disabilities from general education should occur only when absolutely necessary (Osborne & Demattia, 1994).

Since Public Law 94-142 required the placement of students with disabilities in general education classes, inclusion practices have not distinguished the differences in types of disabilities. Disabilities may include learning disabled, emotionally disabled, mentally disabled, or physically disabled. Inclusion placement assumes that regular class placement must be considered as a relevant option for

all children, regardless of the severity of their disability (Staub & Peck, 1994). Although the practice of mainstreaming allows for increased social contact between nondisabled students and students with disabilities, the contact may not be enough to promote the social acceptance of children with disabilities (Fox, 1989). Several attitude studies indicated that the type and duration of the disability were significant in the attitudes toward the disabled. Gottlieb and Gottlieb (1977) questioned 56 junior high students regarding their attitudes toward students with mental retardation and physical disabilities. Results of a three-way analysis of variance indicated that regardless of the subject's gender or the gender of the child with the disability, the child with a physical disability was evaluated significantly more favorably than the child with a mental disability.

In a study assessing attitudes of normal children toward children with disabilities, 131 fifth, sixth, and seventh grade students were given a survey regarding types of disabilities (Parish, Ohlsen, & Parish, 1978). The results suggested that the mean ratings of "normal children" were significantly more positive than the mean ratings of "physically handicapped children." "Physically handicapped children" were evaluated significantly more favorably than "learning disabled children." "Learning disabled children" were evaluated significantly more favorably than "emotionally disturbed children."

Fifty children ranging from ages 8 to 10 were subjects in a quasi-experimental study by Maras and Brown (1996). Children with disabilities were consistently rated unfavorably in comparison to nondisabled peers.

Attitudes regarding friendship with and offering help to a person with disabilities were examined in a study of 510 children 8 to 19 years of age. The results indicated that attitudes toward friendship were consistently more negative than attitudes toward help. Over time, however, attitudes toward friendship became more favorable and attitudes toward willingness to help children with physical disabilities became more negative (Weiserbs & Gottlieb, 1995).

Weiserbs and Gottlieb (2000) also examined whether the permanent or temporary status of a disability would influence the attitudes of children without disabilities on the variables of friendship and helping. Participants were 492 students ranging from third grade through the high school grades. The results of this study revealed that the child with a temporary disability received more favorable responses on the variable of friendship than the child with a permanent disability, but attitudes on helping were more favorable than attitudes on friendship toward children with either permanent or temporary disabilities.

In other related research concerning attitudes of nondisabled children toward children with disabilities, Hazzard (1983) and Voeltz (1982) found that girls had significantly more positive attitudes than boys toward

students with disabilities. Other investigators reported no gender differences (Gottlieb & Gottlieb, 1977; Parrish, Ohlsen, & Parrish, 1978).

Effects of Inclusion on Nondisabled Children

Although inclusion is accepted as the standard for delivering special education, opposition to inclusive practices emerged from concerns for the nondisabled students in the classroom. In order to accommodate the needs of a few, the learning opportunities of the majority may be at risk (Sharpe, York, & Knight, 1994). The results of several studies indicated that inclusion does not harm nondisabled students. Staub and Peck (1994) summarized the results of several studies on the effects of inclusion on nondisabled students. The results of these studies indicated that no significant difference was found in developmental outcomes for nondisabled students in inclusive and noninclusive settings and that inclusion was proven to be beneficial to the personal and educational development of nondisabled students.

In order to determine the impact of inclusion on the academic performance of general education students, Sharpe, York, and Knight (1994) conducted a quasi-experimental, pretest-posttest, post hoc study. The performance differences between students in classes with students with disabilities and students in classes without students with disabilities were examined. Archival data were collected from the student files of 143 students in third and fourth grades. The overall

findings did not indicate a decline in academic performance of classmates educated in inclusive classrooms.

Odom, Deklyen, and Jenkins (1984) conducted a study in which 16 nondisabled preschool children were placed in four integrated special education preschool classes. The results of a battery of developmental assessments indicated no significant differences in standardized measures of cognitive, language, and social development in inclusive and noninclusive classrooms; therefore, the authors concluded that the normal acquisition of the developmental skills of nondisabled students was not affected.

Contact Theory and Attitude Change

The attitudes of nondisabled students toward students with disabilities is a factor to consider in placing a student with disabilities in the regular educational setting. The understanding, support, and help received from nondisabled classmates are critical variables for the success of students with disabilities in general education classes (Jones, Sowell, Jones, & Butler, 1981). Many attitude theories have been posited to explain how attitudes are formed (Horne, 1985; Jones, 1984; Triandis, 1971). Allport (1954) was the first authority to recognize the importance of contact in reducing prejudice and changing attitudes. Contact theory suggests that discrimination toward a minority group, such as persons with disabilities, will be reduced when the contact between individuals is designed so that the following conditions are met: (a) the parties involved must share equal

status; (b) the community must support and sanction the change; (c) individuals must pursue common objectives; and (d) the association must be deep, genuine, and intimate. Horne (1985) and Jones (1968) indicated that contact made little difference unless the meaningful interactions were carefully structured.

After analyzing several contact studies, Donelson (1980) also found that structured contact experiences resulted in positive attitude change. Maras and Brown (1996) and Voeltz (1984) recommended that structured social interactions between regular education children and children with severe disabilities should be used in school settings as a process associated with increased acceptance of exceptional children. Lack of contact between people with and without disabilities resulted in negative attitudes and unrealistic perceptions by the latter of the former (Brinker & Thorpe, 1984; Cavallaro & Porter, 1980; Esposito & Reed, 1986; Voeltz, 1980). In a study of 10 attitude change techniques Towner (1984) found that direct contact was the most widely used.

Pre-school and Kindergarten Children

Children form attitudes about individuals at an early age (Favazza & Odom, 1996). In studies involving pre-school and kindergarten age children, contact between nondisabled children and children with disabilities improved attitudes toward persons with disabilities (Esposito & Peach, 1983; Esposito & Reed, 1986; Favazza & Odom, 1996; Favazza & Odom, 1997).

Esposito and Peach (1983) found a significant difference in the pretest and posttest scores of the Primary Student Survey of Handicapped Peers. Attitudes of nondisabled preschool students improved when students with disabilities were integrated in the regular class setting. Esposito and Reed (1986) also reported that contact, whether structured or nonstructured, was related to more favorable attitudes among young children than an absence of such contact. In a study of 36 children attending an inclusive preschool program, Okagaki, Diamond, Kontos, and Hestenes (1998) found that the frequency of actual contact was also a factor related to positive attitudes of preschool children toward children with disabilities.

While most studies focused on assessing attitudes, Favazza and Odom (1997) examined an intervention package for kindergarten children that included direct contact and indirect experiences with people with disabilities. Forty-six students without disabilities and fifteen children with disabilities participated in a nine-week intervention package designed to promote acceptance of people with disabilities. Significant gains in levels of acceptance were reported in the group of children that had contact with a variety of individuals with disabilities.

Elementary Age Children

As services for children with disabilities have become increasingly available in neighborhood schools, children's attitudes toward children with disabilities in integrated

settings have been investigated. In a pretest-posttest design, Rapier, Adelson, Carey, and Croke (1972) investigated the effect of integration on elementary school children's attitudes toward children with orthopedic handicaps. The Children's Attitudes Toward Handicapped Scale, developed by the authors, consisted of 20 pairs of polar adjectives describing children with orthopedic handicaps. After one year of integration of 152 third, fourth, and fifth grade students, the posttest results indicated that nonhandicapped children had developed a more positive attitude toward the children with orthopedic handicaps. The authors concluded that nonhandicapped children's attitudes were changed toward a more positive perception through contact with children with orthopedic handicaps.

Using factor analysis from the responses of the Acceptance Scale attitude survey from 2,392 public school children in grades two through seven, Voeltz (1980) concluded that children's attitudes toward individuals with disabilities were modifiable and that contact with children with severe disabilities was clearly associated with acceptance regardless of gender or grade. In a follow-up study, Voeltz (1982) reported that the results from the Acceptance Scale attitude survey provided additional support for the use of structured social interactions between regular education children and children with severe handicaps in the school setting.

The results of an investigation by Roberts, Pratt, and Leach (1990) of classroom and playground interaction of 95 students with disabilities and 95 nondisabled students also supported the theory that providing contact was not sufficient to build intergroup interactions. Using observations of behavior in the classroom and on the playground, the authors concluded that opportunities for interaction between children with disabilities and nondisabled children should be carefully planned, and all influential factors should be investigated.

After participating in an intervention program, children demonstrated a statistically significant difference in their perception of people with disabilities (Jones, Sowell, Jones, & Butler, 1981). Seventy-four elementary students, ages seven to nine, spent five hours in activities which included simulations, contact with people with disabilities, and discussions. The results of the revised Children's Attitudes Toward Handicapped Scale indicated that children's attitudes toward people with disabilities could be altered.

Research also has been conducted regarding children's attitudes with regard to contact with children with mental retardation (Ballard, Corman, Gottlieb, & Kaufman, 1977; McHale & Simeonsson, 1980; Peterson, 1974; Siperstein, Leffert, & Widaman). The expression of positive attitudes by children toward children with mental retardation was considered to be indicative of the success of inclusion programs (McHale & Simeonsson, 1980). Using Allport's contact

theory, Peterson (1974) investigated 420 students without mental retardation in contact and noncontact groups. The results of the Five Point Rating Scale and the Agree-Disagree Scale attitude surveys were mixed. Results on Agree-Disagree Scale indicated that contact with students with mental retardation resulted in more favorable attitudes, while results on the Five Point Rating Scale indicated no differences. Although the relationships were not strong, the author concluded that students without mental retardation who had contact with students with mental retardation had more favorable attitudes than students not having contact. In a pretest-posttest study of third, fourth and fifth grade students, Ballard, Gottlieb, Corman, and Kaufman (1977) found that the acceptance of children with mental retardation by nondisabled children improved after a treatment of cooperative group projects.

McHale & Simeonsson (1980) designed a study using 28 second and third grade students to assess changes in children's attitudes after experiences with children with developmental disabilities. Nondisabled students expressed positive attitudes toward children with autism confounded by mental retardation prior to the actual contact and maintained the positive attitudes after a week of extensive contact with the children with disabilities.

When 43 children with mental retardation were included in cooperative tasks with children without mental retardation, Siperstein, Leffert, and Widaman (1996) found

that acceptance of children with mental retardation was influenced by the quantity of the child's contact. The results of measures of social acceptance and rejection indicated that children who engaged in sustained interaction with children with disabilities experienced greater social acceptance than children who displayed limited interaction.

Middle and High School Students

Since teenagers may soon be the co-workers, employers, friends, neighbors, and parents of individuals with disabilities, the attitudes of middle and high school students is a significant area of study (Fisher, 1999). Research focusing on teens included the outcomes of integration on the nondisabled, as well as modifying attitudes toward students with disabilities. Feedback from general educators, special educators, and classmates without disabilities in a middle school setting was compiled in a study by York, Vandercook, MacDonald, Heise-Neff, and Caughey (1991). Adolescents were found to have positive attitudes toward their students with disabilities.

Research on relationships between students with and without disabilities by Helmstetter, Peck, and Giangreco (1994) indicated that integration was positive for both students and teachers. The authors conducted a factor analysis of the responses of an open-ended survey administered to students from 45 high schools. The results indicated that integration afforded opportunities for students without disabilities to develop a sense of personal

responsibility and an ethic of caring and commitment to others.

Handlers and Austin (1980) developed a training program for high school students to foster an awareness of problems of people with disabilities and to foster a more positive and accepting attitude toward people with disabilities. Of the five specific awareness activities, direct contact was found to be the most effective method for improving attitudes.

The attitudes of 144 high school students toward individuals with mental retardation was found to be influenced by gender and the frequency of contact. The results of a mental retardation attitude inventory indicated that more frequent contact resulted in more positive attitudes, and females had more positive attitudes than males (Krajewski & Flaherty, 2000). Sheare (1974) also found that females gave more positive ratings to adolescents with mental retardation. The author administered an Acceptance Scale to 400 nondisabled ninth-grade students. The results of a three-way analysis of variance demonstrated that students in the integrated classes had a greater degree of acceptance than those students who were not integrated and that females demonstrated a greater degree of acceptance than males.

Friendships between students with disabilities and nondisabled middle and high school students were examined in a related study. The results of a student friendship survey given to 1,137 middle and high school students indicated that nondisabled students were willing to form friendships when

contact was made during general education classes and outside the school setting (Hendrickson, Shokoohi-Yekta, Hamre-Nietupski, & Gable, 1996).

Fisher (1999) concluded that typical high school students were supportive of inclusive education. The results of the quantitative analysis of student group interviews of 257 high school students indicated that the students believed that inclusive education added value to the educational experience by encouraging them to examine their values, beliefs, and behaviors.

Contact Theory and Attitude Change in Physical Activity Programs

Contact theory and attitude change have also been proven to be important factors in integrating physical activity programs. Findings in regard to contact have been mixed. Kisabeth and Richardson (1985) conducted a study using 41 undergraduate students enrolled in two beginning racquetball classes. The repeated measures analysis of variance for the Attitude Toward Disabled Persons scale revealed no significant differences between the experimental and control groups; however, significant differences were documented in the students' attitudes toward integrating a student with disabilities into recreational and competitive settings.

Another study to determine the influence of contact in the university setting was used to investigate methods of improving the attitudes of nondisabled individuals. Stewart (1988) reported that contact with two university students

with disabling conditions in a weight training class did produce a significant difference between the control and experimental groups on the Attitude Toward Disabled Persons scale. Two students with disabilities were integrated into one of two weight training classes. The results revealed a significant improvement in the attitudes of students who were in the class with the students with disabilities. The investigator concluded that peer interaction appeared to have a positive influence on the nondisabled students toward the students with disabilities.

As students with disabilities have been successful in inclusion in the school setting, parents have sought opportunities in regular recreational programs. Block and Malloy (1998) examined attitudes of the players, their parents, and the coaches of a community fast-pitch softball league for girls. The Attitudes Toward Integrated Sports instrument was administered to a final population of 88 girls, 28 parents, and 5 coaches. The results suggested that players and parents had favorable attitudes toward inclusion and toward modification of game rules to enable players with disabilities to participate. The results also indicated that coaches were undecided about inclusion or rule modifications.

Contact Theory and Attitude Change in Children in Physical Education Programs

One of the considerations for successful inclusion is the attitudes of nondisabled students toward having a student with disabilities in the regular physical education program

(Block, 1994). Peer acceptance can be the critical difference between successful and unsuccessful inclusion (Block & Vogler, 1994; Sherrill, 1993; Sherrill, Heikinaro-Johansson, & Slininger, 1994; Tripp & Sherrill, 1991).

Using Allport's hypothesis that contact would be favorable, Archie and Sherrill (1989) examined the influence of contact on the attitudes of fourth and fifth grade students toward students with handicaps. The handicaps were described as mental, physical, and sensory disabilities. The final sample consisted of 143 mainstreamed students in an integrated school and 86 nonmainstreamed students in a school with no students with handicaps. Data were collected at the end of the school year using the Children's Attitudes Toward Handicapped Scale. The findings indicated no significant difference between contact groups or between genders. The single unidimensional attitude score did not support the theory that contact would be favorable; however, an item-by-item analysis indicated that children from the mainstreamed school believed that children with disabilities were more fun and more interesting than did students in the nonmainstreamed setting. Failure to find more significant differences was attributed to the atheoretical design of the research and the faulty assumption that incidental, spontaneous contact of students with and without disabilities in fun activities would promote positive attitudes (Slininger, Sherrill, & Jankowski, 2000). In addition, while using physical education as the context, the authors examined general attitudes toward

students with disabilities without reference to physical education (Block, 1995).

Contact theory also guided a study comparing attitudes of students toward students with disabilities in integrated and segregated physical education settings. Attitudes toward physical, learning, and behavioral disabilities, as well as general attitude were examined using the Peer Attitudes Toward Handicapped Scale. No differences in overall attitudes toward students with disabilities were apparent between the students who participated in an integrated and segregated physical education setting; however, subscores for the disability type indicated that students who attended the integrated physical education program had significantly less positive attitudes toward physical disabilities than those in the segregated physical education program. Students attending the integrated physical education program had significantly more positive attitudes toward students with behavioral disabilities than those in the segregated setting (Tripp, French, & Sherrill, 1995). The results of the overall attitude scores supported other research which revealed that students who attended an integrated school program did not view students with disabilities differently than did students in a segregated program (Archie & Sherrill, 1989).

Block and Zeman (1996) examined the impact of including three sixth grade students with severe disabilities who were given support services into a regular physical education class. The impact of the inclusion was measured by the

improvement in basketball skills in a three and one-half week unit and the attitudes of nondisabled students toward students with disabilities. Since intact classrooms were used, the quasi-experimental, nonequivalent control group design was used. The physical education environment (inclusion or noninclusion) was the independent variable, and attitudes and skills acquisition were the dependent variables. The disabilities were defined as moderate to severe mental retardation, and the students with disabilities were provided with an adaptive physical educator and two teacher assistants. Students were given pretests and posttests on basketball skills and the Children's Attitudes Toward Integrated Physical Education survey. The results indicated no significant difference between the two groups in passing or shooting. General attitude and sport-specific attitudes (modifying rules) were compared between the two groups. The results demonstrated no significant differences in mean gain scores in general attitude between the two groups or in sport-specific attitude. Using skill improvement and attitudes toward inclusion, the results indicated that including students with severe disabilities with support services did not impact students without disabilities. Attitudes regarding gender were not investigated.

The components of Allport's contact theory guided a study on children's attitudes toward students with severe mental retardation who used wheelchairs (Slininger, Sherrill, & Jankowski, 2000). Three intact physical education classes

were randomly assigned to a treatment of structured contact, nonstructured contact, or no contact. The participants were 131 fourth grade students. The multidimensional components of attitude were measured by the Adjective Checklist that measured the combined cognitive and affective dimensions of attitude and the Intention Scale which measured the behavioral intentions. Qualitative data were also collected from student journals. The classes were taught by the primary investigator and his assistant. In the structured contact class, the instructor encouraged the students to interact as much as possible with the students with disabilities.

In the nonstructured class, the children with disabilities were integrated into the class during the five minute warm-up before going to the sidelines to work with the individual paraprofessionals. In the control, or no contact, class, no children with disabilities were brought to class. Findings were reported separately for males, females, and combined groups as the three-way analysis of variance revealed significant gender differences on both the Adjective Checklist and the Intention Scale. Females scored higher than males on both measures during the pretests and posttests. Due to the significant gender differences, subsequent analyses were two-way ANOVAs (Group x Time) calculated separately for males and females.

Both the three-way and two-way ANOVAs revealed significant time differences for the Adjective Checklist. Overall, the posttest scores on the Adjective Checklist were

significantly better than pretest scores. The three-way and two-way ANOVAs revealed a significant Time x Group interaction for Intention Scale which indicated that the three groups changed differently from pretest to posttest. The two-way ANOVA (Group x Time) done separately for each instrument for male students and female students revealed no significant differences among posttest scores for female students in the three groups; however, the nonstructured group male students scored significantly higher than the control group male students on the posttest Intention Scale. The findings of the study did not support Allport's theory that contact would change attitudes in a positive direction only when the contacts were equal status, cooperative, intimate, and supported with community sanction.

Summary

Attitude is one of the barriers for persons with disabilities. Since the enactment of Public Law 94-142 (Education for Handicapped Children Act), children with disabilities have been integrated into regular class settings. Social contact, however, may not be sufficient for the acceptance of children with disabilities. Results of several studies indicated that the attitudes of nondisabled children were related to the type of disability and the duration of the disability.

The studies regarding gender were mixed. The results of several studies indicated that girls had more positive

attitudes than boys. In other studies no gender differences were found.

The effect of inclusion of children with disabilities has been researched. The studies of the effect of children with disabilities on nondisabled children in regular class settings indicated that inclusion does not have a negative effect on nondisabled children in developmental or academic performance.

Of the many explanations and studies of attitude and attitude change, the equal-status contact theory of Allport (1954) was the one most frequently cited. Research indicated that integration promoted positive attitudes when the interaction experiences were planned and the environment was structured and that lack of contact with people with disabilities resulted in negative attitudes.

The school setting has been made available for the inclusion of children with disabilities. The attitudes of pre-school and kindergarten children toward children with disabilities improved as a result of the type of contact and the frequency of contact between nondisabled children and children with disabilities. Similar results were reported in studies in the elementary, middle, and high school settings. The attitudes of middle and high school students were found to be significant to the success of students with disabilities. Direct contact with students with disabilities led to more positive attitudes by nondisabled students.

In the area of contact theory and attitude change associated with physical activity programs, close personal contact with a person with a physical disability produced significant improvements in attitudes of nondisabled students in the university setting. Players and parents responded positively to including a student with disabilities in a community softball league.

Attitudes of children without disabilities is a factor to be considered when including students with disabilities in physical education classes. Unfavorable attitudes by nondisabled children can affect the overall class environment as well as the ability of the child with disabilities to adjust and feel accepted (Block, 1995). The type of contact, as well as the type of disability, was significant in the results of attitude surveys given to elementary age students.

CHAPTER 3

Methods

Design

This study was designed to compare the attitudes of nondisabled fifth and sixth grade students who have had contact with students with physical disabilities in physical education classes to nondisabled fifth and sixth grade students who have never had contact with students with physical disabilities in physical education classes. In this chapter the methods used in this study are presented under the following headings: (a) subjects, (b) questionnaire instrument, (c) procedure, and (d) data analysis.

Subjects

The subjects for this study were male and female fifth and sixth grade students who attended Dupont-Tyler Middle School located in the Hermitage area of Davidson County, Tennessee. A total of 190 students participated in the study. Although all students were assigned to the fifth and sixth grade for the academic school year, the students' ages ranged from 10-13.

Students were selected due to the feeder school patterns which encouraged assimilation of nondisabled students and students with disabilities. Since Dupont-Tyler lacked wide doorways, ramps, access to upper floors, and accessible restroom facilities, the school was not considered "handicap accessible." Students attending Dupont-Tyler, who had contact

with students with disabilities, attended various feeder schools which had inclusive programs.

Dupont-Tyler contained six sixth grade classes and seven fifth grade classes with an average of 22 students in each class. In order for each class to be ethnically and racially diverse, the principal determined the population of each class at the beginning of the 2000-2001 school year. The population of the school contained 61.4% Caucasian students, 35.9% African-American students, and 2.7% other race students.

Permission was obtained from the research department of Metropolitan Nashville Public Schools (See Appendix B) and the principal of the school (See Appendix C). Verbal permission was also obtained from the physical education teachers at Dupont-Tyler. Parental permission of all students in the targeted classrooms was also obtained, and the rights to privacy were protected by assigning each student an identification number (See Appendix D). Students who did not return the permission form were excluded from the study. In accordance with the policy of the Metropolitan Nashville Public Schools, all students were informed of their right to stop answering questions at any time and to refuse to answer any question on the survey.

Students spent one hour in each physical education class. Each class met two times one week and three times the next week for a total of five times in two weeks. Classes were taught by three different physical education teachers

who used the team teaching approach. Each teacher was responsible for a designated part of the curriculum, and students rotated to each teacher for that area of instruction. Students received instruction from the Metropolitan Nashville Public Schools middle school physical education curriculum. The core curriculum consisted of activities in games and sports skills, rhythms, physical fitness, and educational gymnastics. All students in the study attended regular physical education classes which employed physical education teachers certified by the state of Tennessee. The physical education teachers had autonomy in selecting the activities which fulfilled the requirements of the curriculum.

Instrument

The instrument used in the collection of data for this investigation was selected according to the following criteria: (a) had to be reliable, objective, and valid; (b) had to be applicable to middle school-aged boys and girls; (c) had to be simple to administer, score, and interpret; and (d) had to be easily administered within the limits of a regular one hour class period. The Children's Attitudes Toward Integrated Physical Education-Revised (CAIPE-R) (Block, 1995) met all of the criteria (See Appendix E). Permission from the author to use this scale was received via e-mail correspondence. Other instruments which were reviewed included Bagley and Green's Peer Attitudes Toward the Handicapped Scale (as cited in Tripp, 1989) and the

Children's Attitudes Toward Handicapped Scale (Rapier, Adelson, Carey, & Croke (1972).

CAIPE-R was designed for use in the physical education class setting and described a student who had a physical disability that required the use of a wheelchair. The inventory consisted of 11 statements regarding students' attitudes toward having a student with that particular disability in physical education class. Six of the statements described general attitudes of nondisabled students, and five of the statements described possible rules modifications to softball that would accommodate the student with disabilities in lead-up softball games.

Two preliminary statements in the CAIPE-R inventory ("I live in Virginia" and "We usually have lunch at 9:00 in the morning") were presented to determine whether students understood the directions and were cooperating. Students who answered either of these statements incorrectly were excluded from the study. Of the 195 students who participated in the inventory, five did not answer the first two questions correctly and were removed from the study. The number of subjects thus was reduced to 190.

Students were instructed orally according to the scripted directions provided in the CAIPE-R survey and were read a vignette describing a fictitious student who might be in their physical education class (See Appendix E). The students then responded to each statement read by the examiner. Using a four-point Likert scale that included the

responses "yes," "probably yes," "probably no," and "no," students circled the answer that best described how they felt about the student with disabilities in physical education class. "Yes" was worth 4 points, "Probably Yes" was worth 3 points, "Probably No" was worth 2 points, and "No" was worth 1 point. The scores were totaled. A score of 3 or above reflected positive attitudes toward students with disabilities, and a score of 2 or below reflected negative attitudes toward students with disabilities.

General statement four was phrased in the negative. For coding purposes, positive responses to statement four were reversed.

CAIPE-R contained two subscales: (a) general attitude and (b) sport-specific attitude. The general attitude scale described the general attitude of nondisabled students when a student with disabilities is placed in regular physical education class. The sport-specific scale described how nondisabled students responded to rules modifications to a team sport that would foster inclusion of a student with disabilities.

The author of CAIPE-R provided evidence of adequate construct validity and reliability based on data gathered from a standardization sample of 208 fifth and sixth grade students. Data analysis included separate factor analyses for each subscale of the CAIPE-R to determine construct validity and Cronbach's alpha coefficient to determine internal consistency. Results of an extraction technique indicated

that all six statements on the general attitude subscale clustered around one factor with a range of .37 to .80. Similarly, all five sport-specific attitude statements clustered around one factor with a range of .51 to .76. The results of Cronbach's alpha test for internal consistency indicated a standardized item alpha of .78 for the general attitude subscale and a .67 for the sport-specific subscale.

Procedures

The Children's Attitudes Toward Integrated Physical Education-Revised was administered to the sample during April of the 2000-2001 school year. The researcher made arrangements with the principal and teachers to visit Dupont-Tyler Middle School during March 2001 to discuss the procedure with the teachers and principal and to send parent permission letters home with the students. The researcher asked the students for their consent to participate in the study at this time (See Appendix F).

To keep disruption of classes to a minimum, the exact dates and times to administer the scale were determined by the principal of Dupont-Tyler. Permission forms were distributed to 277 students. The scale was administered to 195 students in the fifth and sixth grade classes who returned the forms granting permission to participate in the study.

Prior to the administration of the scale, the term disabled, as defined operationally in this study, was explained to the students. All students indicated on the

score sheet whether or not they have ever had in their physical education classes a student who had a disability.

The CAIPE-R survey was administered during the physical education class period. While the examiner read the instructions and statements to the subjects, the regular physical education teacher moved about the gym making sure students were doing their own work and filling out the inventory correctly. Students first filled out the general information portion of the CAIPE-R following the instructions of the examiner. The examiner then read the description of the student with a disability and referred the students to the picture on the answer sheet.

Each statement was then read twice, and once all statements had been read, students were allowed to ask for any statements to be repeated. As per requirements of the research department of Metropolitan Nashville Public Schools all students were reminded that they were not required to answer all questions and that they could stop answering questions at any time. Students were encouraged to make one choice for every item. Students were reminded that the scale pertained to the picture and description of the student with disabilities in physical education classes.

Data Analysis

An independent groups t-test was used to compare the total mean scores of the CAIPE-R of fifth and sixth grade students who have had contact with students with disabilities and fifth and sixth grade students who have never had contact

with students with disabilities in physical education classes. An independent groups t-test was also used to compare the total mean scores of the CAIPE-R of fifth and sixth grade male students and fifth and sixth grade female students. A multivariate analysis of variance (MANOVA) was used to compare the mean CAIPE-R general attitude subscale score and the mean sport-specific score of students who have had contact and students who have not had contact with students with disabilities in physical education classes. A MANOVA was also used to compare the mean general attitude subscale score and the mean sport-specific score of male students and female students. Analysis of variance assumptions of normality, independence of observations, and homogeneity of variance were addressed. The alpha level was set at .05.

The statistical analyses for this study incorporated the use of the Statistical Package for the Social Sciences (SPSS 10.1 for Windows). Descriptive data for this study included: (1) numbers, (2) percentages, (3) means, and (4) standard deviations.

CHAPTER 4

Results

The purpose of this study was to compare the attitudes of nondisabled fifth and sixth grade students who have had contact with students with physical disabilities in physical education classes to nondisabled fifth and sixth grade students who have never had contact with students with physical disabilities in physical education classes. All fifth and sixth grade students enrolled at Dupont-Tyler during the 2000-2001 school year were given the opportunity to participate. Data were gathered with the CAIPE-R from 195 students without physical disabilities between the ages of 10 and 13 years (See Appendix E). The number of subjects in the study was reduced to 190 as a result of unusable surveys.

Personal information describing the sample subjects can be found in Table 1. Students who indicated on the general information portion of the survey that they had been in physical education classes with a student with disabilities constituted one group (n=116). Students who had not been in physical education classes with a student with disabilities constituted the other group (n=74). The number of male students (n=73) and female students (n=117) who participated in the study are reported in Table 1.

Subjects in this study tended to have favorable attitudes toward including students with disabilities in regular physical education classes. When the mean scores of the total CAIPE-R, the general attitude subscale, and the

sport-specific subscale were divided by the number of statements, the average response was a score of 3 and above. The results can be interpreted as "probably yes," indicating favorable attitudes toward students with disabilities in physical education classes.

Research Questions

Research Question One

Do nondisabled students who have had contact with students with disabilities in physical education classes score higher on the CAIPE-R attitude survey than nondisabled students who have not had contact with students with disabilities in physical education classes?

The means and standard deviations for the total score of the CAIPE-R for the contact and noncontact groups are presented in Table 2. The means for the contact and noncontact groups were 36.46 and 35.00, respectively. An independent groups t-test was conducted to determine whether a statistically significant difference existed between the two groups. Results are located in Table 4. The results were $t(188) = 1.98$, $p = .049$ in total scores of students who have had contact and students who have had no contact in physical education classes.

Research Question Two

Do nondisabled students who have had contact with students with disabilities in physical education classes score higher on the CAIPE-R general attitude and sport-specific subscales than nondisabled students who have not had

contact with students with disabilities in physical education classes?

The means and standard deviations for the general attitude and sport-specific attitude scores of the CAIPE-R for the contact and noncontact groups are presented in Table 2. The mean general attitude scores for the contact and noncontact groups were 19.74 and 18.58, respectively. The mean sport-specific attitude scores for the contact and noncontact groups were 16.72 and 16.42, respectively.

A multiple analysis of variance (MANOVA) was conducted to determine whether a statistically significant difference existed between the two groups for the subscales. The results are located in Table 6. A MANOVA (Wilks' Lambda = .97, $p = .04$) was reported. Further, a univariate F test resulted in an $F(1,188) = 6.36$, $p = .01$ on the general attitude subscale. The results of a univariate F test on the sport-specific attitude subscale resulted in an $F(1,188) = .57$, $p = .45$.

Research Question Three

Do female students score higher on the CAIPE-R attitude survey than male students?

The means and standard deviations for the total scores of the CAIPE-R for male and female students are presented in Table 3. The means for the male and female groups were 34.81 and 36.56 respectively. An independent groups t-test was conducted to determine whether a statistically significant difference existed between the two groups. The results are

located in Table 5. The results were $t(188) = -2.39$, $p = .02$ in total scores of male students and female students.

Research Question Four

Do female students score higher on the CAIPE-R general attitude and sport-specific subscales than male students?

The means and standard deviations for the general attitude and sport-specific attitude scores of the CAIPE-R for the male and female students are presented in Table 3. The mean general attitude scores for male and female students were 18.63 and 19.70, respectively. The mean sport-specific attitude scores for male and female students were 16.18 and 16.86, respectively.

A multiple analysis of variance (MANOVA) was conducted to determine whether a statistically significant difference existed between the two groups for the subscales. A MANOVA (Wilks' Lambda = .97, $p = .06$) was documented. Further, a univariate F test resulted in an $F(1,188) = 5.360$, $p = .02$ on the general attitude subscale. The results of a univariate F test on the sport-specific attitude subscale resulted in an $F(1,188) = 3.08$, $p = .08$.

CHAPTER 5

Summary, Conclusions, and Recommendations

Summary

The Children's Attitudes Toward Integrated Physical Education-Revised (CAIPE-R) (Block, 1995) was used in the collection of the data. This attitude survey consisted of 11 statements regarding students' attitudes toward having a student with disabilities in physical education classes. The CAIPE-R total score, as well as the general attitude subscale and the sport-specific subscale, were used to make inferences about children's overall attitudes toward students with disabilities in physical education classes.

Subjects in the study were 190 fifth and sixth grade students enrolled at Dupont-Tyler Middle School during the 2000-2001 school year. Students were asked to mark on the general information portion of the survey whether or not they had ever had contact with a peer with disabilities in physical education classes. The response to this question determined the contact and noncontact groups in the study. The contact groups consisted of 116 students. The noncontact group consisted of 74 students. The attitudes toward students with disabilities related to gender were also investigated. Of the 190 students in the sample, 73 were male students and 117 were female students.

The first research question targeted the total score of the CAIPE-R survey for students who had had contact with students with disabilities in physical education classes and

students who had never had contact with students with disabilities in physical education classes. The mean score for the contact group was higher than the noncontact group. The results of the independent groups t-test indicated a low statistically significant difference ($p = .049$). Due to the tendency for positive responses in the survey, the significant difference may not be of value.

The second research question targeted the general attitude and sport-specific subscales for the contact and noncontact groups. A MANOVA was used to analyze the data in order to reduce the chance of Type I errors among the general attitude and sport-specific attitude comparisons for the contact and noncontact groups. The results of the MANOVA indicated a statistically significant difference ($p = .04$) between the contact and noncontact groups. The univariate F test was statistically significant ($p = .01$) for the general attitude subscale but was not statistically significant ($p = .45$) for the sport-specific subscale.

The third research question targeted the total score of the CAIPE-R survey for male students and female students. The mean score for female students was higher than for male students. The results of the independent groups t-test indicated a statistically significant difference ($p = .02$).

The fourth research question targeted the general attitude and sport-specific attitude subscales for male students and female students. A MANOVA was used to analyze the data in order to reduce the chance of Type I errors among

the general attitude and sport-specific attitude comparisons for male students and female students. The results of the MANOVA indicated no statistically significant difference ($p = .06$) for male students and female students. The univariate F test was statistically significant ($p = .02$) for the general attitude subscale but was not statistically significant ($p = .08$) for the sport-specific subscale.

Conclusions

The results of the independent groups t-test and the MANOVA for this study indicated statistically significant differences in attitudes toward students with disabilities in physical education classes between the contact and noncontact groups; however the differences found in this study may have been due to the tendency for positive responses. The researcher interpreted these results as not highly significant based on the mean scores of the total CAIPE-R attitude scale, the general attitude subscale, and the sport-specific attitude subscale. When the mean scores of each scale were divided by the number of statements, results were in the "probably yes" category indicating positive attitudes toward students with disabilities.

These results support the findings by Archie and Sherrill (1989) and Tripp, French, and Sherrill (1995) which indicated no significant differences between the attitudes of students who have had contact and students who have not had contact with students with disabilities in physical education classes. Related research (Block & Zeman, 1996; Kisabeth &

Richardson; Stewart, 1988), which examined the inclusion of a student with disabilities in physical education classes, can also be interpreted as an indication of positive attitudes toward students with disabilities. The attitudes of the nondisabled students toward students with disabilities improved from the pretest scores to the posttest scores.

One possible explanation for the positive attitudes of the students in this sample could be the exposure of the sample students to students with disabilities. Programs for students with disabilities have been implemented in some of the feeder schools for ten years. Some of the nondisabled students in this study have been exposed to students with disabilities since the beginning of their school careers.

Another possible explanation for the positive attitudes of the nondisabled students in this sample may be the exposure to individuals with disabilities in homes and communities. Since Public Law 93-112 (The Rehabilitation Act), Public Law 94-142 (Education for All Handicapped Children Act), and the amendments between 1975 to 1997, individuals with disabilities have had more opportunities to be in public places. The fifth and sixth grade students in this study may have had contact with people with disabilities outside the school setting.

A third possible explanation for the positive attitudes of nondisabled students in this study may be explained by the type of disability described in this study. The student described in the CAIPE-R attitude survey had a disability

which required the use of a wheelchair. The results of several studies (Gottlieb & Gottlieb, 1977; Parish, Ohlsen, & Parish; 1978; Tripp, French, & Sherrill, 1995) indicated that nondisabled students rated students with physical disabilities more favorably than students with other types of disabilities. Tripp et al. (1995) concluded that the portrayal of different disabilities by society through various forms of media may be the explanation for more favorable attitudes toward physical disabilities.

Regarding gender, the results of this study indicated statistically significant differences in attitudes toward students with disabilities between male students and female students. Gender differences in this study supported the results from other studies that indicated girls had significantly more positive attitudes than boys (Block, 1995; Hazzard, 1983; Krajewski & Flaherty, 2000; Sheare, 1974; Slinginger, Sherrill, & Jankowski, 2000; Voeltz, 1982). Block and Malloy (1998) also found that female players in a softball league were willing to include a female player with disabilities in the league and to make modifications to the rules to facilitate her inclusion. To date, there are no studies regarding male athletes in competitive team sports.

The positive attitudes of the nondisabled female students in this sample may also be explained by the exposure to students with disabilities in the feeder schools and to individuals in the communities. In addition, the type of

disability may also have led to the positive responses by the female students in this sample. As previously stated, nondisabled students rated a student with a physical disability more favorably than students with other types of disabilities.

Hazzard (1998) hypothesized that cultural ideals in society have conditioned boys to be strong and active and girls to be nurturing. In order to understand the differences in gender, students would need to provide rationales for their responses. To date no studies which explain gender differences in attitudes toward students with disabilities in physical education classes are available.

The results of the general attitude and sport-specific attitude subscales for gender were of particular interest. When the mean scores of each subscale were divided by the number of statements, the results were in the "probably yes" category indicating positive attitudes of subjects in this study toward students with disabilities.

As previously mentioned, the independent groups t-test for the total CAIPE-R survey indicated a statistically significant difference in the attitudes of the nondisabled male students and female students in this study. The results of the MANOVA for the general attitude and sport-specific attitude subscales indicated no significant difference between the attitudes of the male students and the females students in this study. The researcher interpreted these results as an indication that both male and female students

in this study responded favorably to the modification of rules to facilitate the student with disabilities.

The CAIPE-R was used by Block (1995) and Block and Zeman (1996) to study the attitudes of nondisabled students toward including students with disabilities in physical education classes. The results of the sport-specific subscale also indicated that students were agreeable to changing the rules of the activity to accommodate a student with disabilities. Block and Malloy (1998) also found the same results when including a girl with disabilities in a softball league.

The results of the sport-specific attitude subscale were surprising. Typically, physical education classes contain some degree of competition, either with oneself or with others. According to contact theory, competition fosters negative attitudes. The researcher did not expect nondisabled students to accept rules changes. One explanation could be that the students perceived the rules changes as described in the sport-specific subscale as reasonable. Another explanation could be the limited number of questions on the subscale and the tendency for positive responses.

Based on the results of this study and related research, the researcher concluded that including students with disabilities in physical education classes did not result in negative attitudes of nondisabled students. In fact, attitudes toward students with disabilities were interpreted as very positive.

Despite the statistically significant differences in the attitudes of male and female students, scores from both groups in this sample revealed positive attitudes toward students with disabilities. Since the responses of all of the participants in this sample were positive toward including students with disabilities, a statistically significant difference should be interpreted with caution.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. The study should be replicated using more subjects.
2. A study should be conducted using a student with a behavioral or learning disability in physical education classes.
3. Additional studies should be conducted comparing attitudes toward students with disabilities in various types of contact settings, such as structured and nonstructured.
4. The study should be conducted by including a student with a disability in physical education classes and conducting an experimental pretest-posttest design.
5. Additional studies should be conducted to compare the attitudes of nondisabled students when including students with disabilities in physical education classes who are supported by an assistant and those who are not.
6. Additional studies should be conducted to compare the attitudes of students with disabilities toward nondisabled

students or toward other students with disabilities in physical education classes.

7. A study should be conducted to examine the attitudes of nondisabled male athletes toward including a player with disabilities in a team sport setting.

TABLES

Table 1**Personal Information of Subjects**

	Number	Percentage
<i>Gender</i>		
Males	73	38.4
Females	117	61.6
<i>Has a family member or close friend who has a disability</i>		
Yes	93	48.9
No	97	51.0
<i>Had a student with disabilities in regular education class</i>		
Yes	125	65.8
No	64	33.7
Missing	1	0.5
<i>Had a student with disabilities in physical education class</i>		
Yes	116	61.1
No	74	38.9
<i>Level of Competitiveness</i>		
Very Competitive	18	9.5
Somewhat Competitive	123	64.7
Not Competitive	49	25.8

Table 2**Descriptive Statistics for Total CAIPE-R Scores for Contact and Noncontact Groups**

	<u>Contact</u> n=116		<u>Noncontact</u> n=74	
	Mean	SD	Mean	SD
Total	36.45	5.08	35.00	4.73
General Attitude	19.74	3.07	18.58	3.13
Sports Specific Attitude	16.72	2.70	16.42	2.54

Table 3**Descriptive Statistics for Total CAIPE-R Scores for Male and Female Groups**

	<u>Males</u> n=73		<u>Females</u> n=117	
	Mean	SD	Mean	SD
Total	34.81	5.00	36.56	4.87
General Attitude	18.63	3.08	19.70	3.11
Sports Specific Attitude	16.18	2.76	16.86	2.53

Table 4**Results of the T-test for Total CAIPE-R Scores for Contact and Noncontact Groups**

<u>Group</u>	<u>Number</u>	<u>Mean</u>	<u>SD</u>	<u>t</u>	<u>p</u>
Contact	116	36.46	5.08	1.98	.049
Noncontact	74	35.00	4.73		

Table 5**Results of the T-test for Total CAIPE-R Scores for Male and Female Groups**

Group	Number	Mean	SD	t	p
Male	73	34.81	5.00	-2.39	.02
Female	117	36.56	4.87		

Table 6

Results of the Multivariate Analysis of Variance for
the Contact and Noncontact Groups

<u>Subscale</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
General Attitude				
Between	1	60.82	6.36	.01
Within	188	9.57		
Sport-specific Attitude				
Between	1	3.97	.57	.45
Within	188	6.95		

* The MANOVA (Wilks' Lambda = .97, $p = .04$) was significant at $p = .05$.

APPENDIXES

APPENDIX A

Permission from MTSU Institutional Review Board
to Conduct Research

Elementary and Special Education Department



P.O. Box 69
Middle Tennessee State University
Murfreesboro, Tennessee 37132
(615) 898-2680

To: Susan Lyle

From: Nancy Bertrand, Chair *Nancy Bertrand*
MTSU Institutional Review Board

Re: "Attitudes of Nondisabled Fifth and Sixth Grade Students
Toward Students with Disabilities in Physical Education Class "
Protocol #01-149

Date: March 14, 2001

The above named human subjects research proposal has been re-reviewed and approved. This approval is for one year only. Should the project extend beyond one year or should you desire to change the research protocol in any way, you must submit a memo describing the proposed changes or reasons for extensions to your college's IRB representative for review.

Best of luck in the successful completion of your research.

cc: Dr. Doug Winborn

APPENDIX B
Metropolitan Nashville Public Schools
Research Proposal
and
Response from Director
of Research and Evaluation

June 26, 2005

RESEARCH PROPOSAL

Study of the Attitudes of Nondisabled Fifth and Sixth Grade Students Toward Students with Disabilities in Physical Education Class

SUBMITTED TO: Metropolitan Public Schools
Nashville, Tennessee

Attention: Dr. Bob Crouch, Director
Research and Evaluation

SUBMITTED BY: Susan Lyle, Doctoral Student, Middle Tennessee State University
764 Jaywood Dr.
Old Hickory, TN 37138
Telephone: (615) 847-1293

INTRODUCTION: Since the implementation of inclusion of students with disabilities in regular education classroom in Metropolitan Public Schools, teachers and students have been required to adjust their attitudes toward students with disabilities. The first attempts to include students with disabilities have been in the special area classes of art, music, and physical education. Little, if any, research has been conducted on the attitudes of nondisabled students in the special area classes in Metropolitan Public Schools. Students with physical disabilities that require the use of a wheelchair require the most assistance in physical education class. When special education assistants are not present, peers are needed to assist students with disabilities. When the nondisabled peers are assisting, they are missing instruction, practice, and/or participation.

PURPOSE: Prior research has demonstrated that students with disabilities are more successful if the attitudes of others are positive. The purpose of this study will be to compare the attitudes of nondisabled fifth and sixth grade students who have had contact with students with physical disabilities in physical education class to nondisabled fifth and sixth grade students who have never had contact with students with physical disabilities in physical education class. For the purpose of this study, disabled students will be defined as nonambulatory, requiring a wheelchair for mobility. Other physical, emotional, or learning disabilities will not be considered for this study.

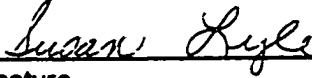
SAMPLE: Approximately 350 male and female fifth and sixth grade students will be needed for this study. Dupont-Tyler Middle School, which is in close in proximity to the researcher and is ethnically and racially diverse, would be best suited for this study.

PROCEDURE: (1) All parents of students who are in the fifth and sixth grade classes at Dupont-Tyler Middle School will be given a letter explaining the survey that will be

administered and providing them an opportunity to excuse their child from participation⁶ in the study. Parents will also be informed that their child will be permitted to stop participating at any time and may refuse to answer any questions for any reason. (2) All students in the study will be asked for their consent. (3) Permission from the principals and the physical education teachers of Dupont-Tyler Middle School will be obtained. (4) The survey will be administered during a regular physical education class period in a group setting to all students in the class. (5) Student's names will be kept confidential by assigning each student an identification number. (6) Students who take part will be rewarded with a special recess time at the completion of the study.

SCHEDULE: If approved by the Metropolitan Public Schools, the survey would be administered in October 2000. Part of one class period for each fifth and sixth grade class would be required to administer the survey.

REPORTING THE RESULTS: The results of this study will be reported in a formal doctoral dissertation and subsequently in professional journals. Copies of this report will be provided to the Research and Evaluation Director of the Metropolitan Public School, principals and teachers of the participating school, and any other interested parties.



Signature



Research Advisor

Enclosures:

1. Completed dissertation proposal
2. Instrument--Children's Attitudes Toward Integrated Physical Education - Revised
3. Copy of parent permission letter

METROPOLITAN NASHVILLE PUBLIC SCHOOLS

Robert C. Crouch, C.M.S.W., Ph.D.
Director of Research and Evaluation

October 02, 2000

Susan Lyle
764 Jaywood Drive
Old Hickory, TN 37138

RE: Approved Research Proposal--
Study of the Attitudes of Non-disabled
Fifth and Sixth Grade Students Toward
Students with Disabilities in Physical
Education Class

Dear Ms. Lyle:

The principal at Dupont Tyler has been notified of your approved project. You may now contact her to set up a schedule for your study.

If we can be of any further assistance, do not hesitate to call. We wish you success in your study.

Sincerely,



Robert C. Crouch, C.M.S.W., Ph.D., Director
Department of Research and Evaluation

RCC:rh

5 [ApResLet.Sam]

APPENDIX C

Approval from Principal of
Dupont-Tyler Middle School to Conduct Research

Metropolitan Public Schools

NASHVILLE-DAVIDSON COUNTY, TENNESSEE

69

Office of the Principal
DUPONT MIDDLE SCHOOL - TYLER

431 Tyler Drive
Hermitage, Tennessee 37076

March 14, 2001

To Whom It May Concern:

Susan Lyle has permission from Metropolitan Public Schools and Dupont-Tyler Middle School to conduct an attitude survey to the fifth and sixth grade students in the physical education classes. She has assured me that the time she will be in class will not be disruptive to the physical education program.

We are excited to be a part of this project.

Sincerely,



Carol Cutsinger

APPENDIX D
Letter to Parents
and
Consent Form

Susan S. Lyle
Physical Education Specialist

Tulip Grove Elementary
441 Tyler Dr.
Hermitage, TN 37076

Penny Franklin
Shirley Johnson
Co-Principals

Spring 2001

Dear Parents,

I am a physical education teacher at Tulip Grove Elementary and a doctoral student at Middle Tennessee State University. I am presently working on my dissertation which is a study of the attitudes of nondisabled fifth and sixth grade students toward students with physical disabilities in physical education class. Information gained from this study will contribute to knowledge about educating all children.

I would like to give an attitude survey to the fifth and sixth grade students at your child's school and need your permission to do so. The principal and physical education teacher have given me permission to be in the school conducting the survey. I will take approximately 30 minutes of your child's physical education class time. Each student's right to privacy will be protected by assigning the students a number. Students may stop participating at any time and may refuse to answer any question for any reason. All of the data will be kept under lock and key.

I need for you to fill out the form on the following page and mark either "yes" or "no" and return the form to your child's physical education teacher. **It is important that you return the form regardless of how you respond.**

Thank you for your cooperation and assistance.

Susan S. Lyle

Susan S. Lyle

Please check one of the following boxes.

Yes, I give my permission for my child to take an attitude survey. I understand that my child's right to privacy will be protected.

No, I do not want my child to take part in the attitude survey.

Child's Name _____

Classroom Teacher's Name _____

Parent's Name (Please Print) _____

Parent's Signature _____

APPENDIX E
Children's Attitudes Toward Integrated
Physical Education-Revised

CHILDREN'S ATTITUDES TOWARD INTEGRATED
PHYSICAL EDUCATION - REVISED (CAIPE - R)
(Child who uses a wheelchair)

Martin E. Block, Ph.D.
Curry School of Education
University of Virginia

CHILDREN'S ATTITUDES TOWARD INTEGRATED
PHYSICAL EDUCATION - REVISED (CAIPE - R)

(Child who uses a wheelchair)

Martin E. Block, Ph.D., University of Virginia

Monitor Instructions:

I need some information from you which will take about 15 minutes to do.

First of all look at your answer sheet. Look where it says "student's name" and write your first and last name in the blank. (Wait a moment to be sure that this is done).

Now circle whether you are a boy or a girl (pause).

Now write your age - you are probably ____- years-old, right (pause)?

Now write your grade - you all should be ____ graders, right (pause)?

Now circle whether or not a person in your family or a very close friend of yours has a disability - you know, someone like your brother or cousin or someone who lives near you who uses a wheelchair, someone who cannot see or hear, or someone who has mental retardation (pause).

Now circle whether or not you ever had a person in one of your regular classes who had a disability - you know, someone who came from a special ed class, someone who could not see or hear, or someone who used a walker or wheelchair to move around (pause).

Now circle whether or not you ever had a person in one of your P.E. classes who had a disability (pause).

Finally, circle whether or not you consider yourself to be:

very competitive (I mean, do you always want to win and you get upset if you lose),

kind of competitive (you like to win and play hard, but winning or losing is not the end of the world),

not competitive (you just like to play to have fun).

OK, now you can turn to the next page of your answer sheet. I am going to ask you to listen to some questions, and I want you to tell me what you think about them. These questions are about a boy named Bart who might come to your P.E. class. You can see a list of number on your paper with yes, probably yes, probably no, and no. For each number, I will read you a sentence out loud. Some of you will agree with the sentence, you should circle yes if you agree. Some of you will not agree with the sentence, you should circle no if you do

CAIPE-R Scale (child who uses a wheelchair)
page 2

not agree. If you think you agree but you are not sure, then circle probably yes. If you think you disagree but you are not sure, then circle probably no.

There are really no “right” answers to any of the sentences; it all depends upon how you feel about what I say. Let me give you an example. Suppose the

sentence I read to you is: “Basketball is my favorite sport.” If this true for you because your favorite sport is basketball, then you should circle yes. If your favorite sport is baseball or some other sport, you disagree and should circle no. If you think that basketball is your favorite sport but you are not sure (maybe you like another sport too), then circle probably yes. If you think that basketball is not your favorite sport but you are not sure (you really like baseball, but you kind of like basketball too), then circle probably no.

Remember, the answer to each question depends on you, and your answers will probably be different from other kids’ answers. When you are done, you’ll probably have some yeses, some probably yeses, some probably nos, and some nos, or your answers could all be one thing. Does anyone have any questions (look around and wait for some questions)?

Ok, lets get started, but first let me tell you something about Bart. Bart is the same age you are. However, he cannot walk, so he uses a wheelchair to get around. Bart likes playing the same games you do, but he does not do very well in the games. Even though he can push his wheelchair, he is slower than you and tires easily. He can throw a ball, but not very far. He can catch balls that are tossed straight to him, and he can hit a baseball off a tee, but he cannot shoot a basketball high enough to make a basket. Because his legs do not work, he cannot kick a ball. When listening to the sentences, think about Bart.

OK, find the number 1 on your answer sheet and I’ll read you the first sentence. (Begin. Read each number and sentence one at a time, and wait until everyone has circled an “answer” before you go on to the next item. Check visually every few sentences to be sure that all numbers have a response circled. Be sure to repeat all instructions as indicated on the list of sentences. Always pause after you read a sentence, and read the instruction just before you read the next sentence.

1. I live in Virginia.
2. We usually have lunch at 9:00 o’clock in the morning.

(Now think about Bart and remember, circle yes if you agree with the sentence, probably yes if you think you agree but you are not sure, probably no if you think you disagree but are not sure, and no if you disagree).

CAIPE-R Scale (child who uses a wheelchair)
page 3

3. It would be OK having Bart come to my P.E. class.
4. Because Bart cannot play sports very well, he would slow down the game for everyone.
5. If we were playing a team sport such as basketball, it would be OK having Bart on my team.
6. P.E. would be fun if Bart were in my P.E. class.

(Don't forget to think about Bart. You should mark how you feel. Yes if you agree, probably yes if you think you agree but you are not sure, probably no if you think you disagree but are not sure, and no if you disagree).

7. If Bart were in my P.E. class, I would talk to him and be his friend.
8. If Bart were in my P. E. class, I would like to help him practice and play the games.

(Don't forget to think about Bart. Remember, circle yes if you agree with the sentence, probably yes if you think you agree but you are not sure, probably no if you think you disagree but are not sure, and no if you disagree).

9-13 Which rule changes to softball during P.E. do you think would be O.K. if a kid like Bart were playing? Remember, circle yes if you agree, probably yes if you think you agree but you are not sure, probably no if you think you disagree but are not sure, and no if you disagree.

9. Bart could hit a ball placed on a batting tee?
10. Someone could help Bart run to first base?
11. The distance between home and first base could be shorter for Bart?

(Don't forget to think about Bart. You should mark how you feel. Yes if you agree, probably yes if you think you agree but you are not sure, probably no if you think you disagree but are not sure, and no if you disagree).

12. Someone could help Bart when he plays in the field?
13. If the ball was hit to Bart, the batter, could only run as far as second base?

You are finished! Thank you for filling this out for me. Please give your answer sheet to me or your teacher.

ANSWER SHEET

School: _____ Date: _____

Teacher: _____ Student's Name: _____

Your Age: _____ Your Grade: _____

Circle one:

BOY **GIRL**

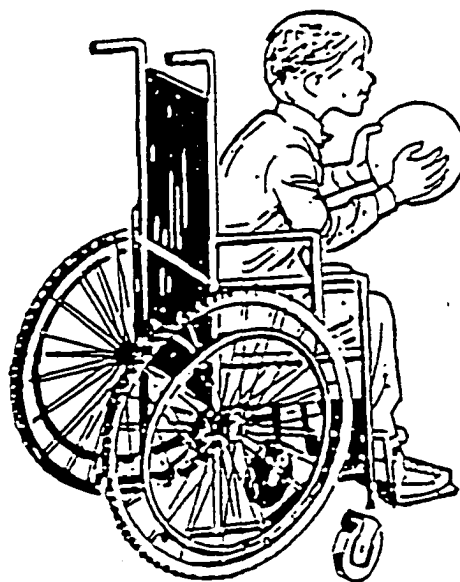
Circle one:

YES, someone in my family or a close friend of mine has a disability.**NO**, I do not have any family members or friends who have a disability.

Circle one:

YES, I had someone in one of my regular classes who had a disability.**NO**, I never had someone in my regular classes who had a disability.

Circle one:

YES, I had someone in one of my P.E. classes who had a disability.**NO**, I never had someone in my P.E. classes who had a disability.

Circle one:

VERY COMPETITIVE
(I like to win, and I get very upset if I lose)**KIND OF COMPETITIVE**
(I like to win, but it is OK if I lose sometimes)**NOT COMPETITIVE**
(It really doesn't matter me if I win or lose; I just play for fun)**-PLEASE TURN TO THE NEXT PAGE-**

NOW LISTEN TO THE MONITOR AND CIRCLE YOUR ANSWER.

1. YES PROBABLY YES PROBABLY NO NO

2. YES PROBABLY YES PROBABLY NO NO

3. YES PROBABLY YES PROBABLY NO NO

4. YES PROBABLY YES PROBABLY NO NO

5. YES PROBABLY YES PROBABLY NO NO

6. YES PROBABLY YES PROBABLY NO NO

7. YES PROBABLY YES PROBABLY NO NO

8. YES PROBABLY YES PROBABLY NO NO

9. YES PROBABLY YES PROBABLY NO NO

10. YES PROBABLY YES PROBABLY NO NO

11. YES PROBABLY YES PROBABLY NO NO

12. YES PROBABLY YES PROBABLY NO NO

13. YES PROBABLY YES PROBABLY NO NO

Thank you! Your are finished!

APPENDIX F
Script of Verbal Consent
from Students

Verbal Consent

(To be asked of the students before conducting the survey)

Boys and Girls,

My name is Mrs. Lyle and I am a physical education teacher at Tulip Grove Elementary. I am also a doctoral student at Middle Tennessee State University. I am doing a study and need your help in collecting some information about your feelings or your attitude concerning having students in your physical education class who use a wheelchair. So that no one will know how you answered the questions, I am going to assign each person a number instead of using your name. I also want you to understand that you may quit taking the survey at any time or you may choose not to answer any question. By helping me with this questionnaire you are helping me and other physical education teachers understand how we can make physical education class better for all students. Before I can ask you the questions on the survey, I need your permission. If you agree to take this survey, please raise your hand high so that I can see everyone's hands. Thank you so much for your cooperation.

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