

## Peer Reviewed Article

### Perceptions of 4th-7th Grade Students Regarding Inclusion in General Physical Education Classes

Grant M. Hill, Ph.D.  
Department of Kinesiology  
California State University,  
Long Beach

Steven Hawn, Ed.D.  
Department of Kinesiology  
California State University,  
Long Beach

Jonathan M. Audett  
Los Angeles Unified  
School District

Julia Rosenmeyer  
Los Angeles Unified  
School District

#### ABSTRACT

The purpose of this study was to examine the attitudes of general education students towards inclusion-based physical education. Participants in this study were enrolled in two different Southern California public schools: School 1: 102 seventh graders and School 2: 246 4<sup>th</sup> through 6<sup>th</sup> graders. A modified version of the Ten Item Children's Attitude toward Inclusive Physical Education - Revised questionnaire (CAIPE-R) was used to collect student's responses regarding how receptive they would be to having a student with an orthopedic impediment in their physical education class. The majority of students at both schools responded positively to all ten survey items, indicating they were receptive to including a student with special needs in their general physical education class, as well as allowing for adaptations to the environment to help that student experience success. The results suggest strong student support for PL-92-142 since most of the students demonstrated inclusive attitudes towards having students with physical limitations in their physical education classes. Several of the eleven elementary school classes demonstrated significantly less support for inclusion than the other classes, suggesting the influence of classroom teachers may be an important factor influencing student attitudes towards inclusion.

#### Introduction

With the recent emphasis on inclusion in public school education, mainstreaming students with disabilities into general physical education classes has become a growing trend (Wilson, Beamer & Block, 2016; Roth, 2015). Social inclusion of students with disabilities among their peers is essential in order to dispel negative attitudes toward physical limitations (Obrusnikova & Block, 2007). For successful inclusion to occur in educational settings, however, peers must extend acceptance towards classmates with disabilities (Obrusnikova, Block, &

Dillon, 2010). Without peer acceptance, students with disabilities may not have a successful experience in physical education, have limited social learning opportunities, and may be marginalized or even bullied by peers (Goodwin & Watkinson, 2010; Hutzler, Fliess, Chacham, & Van den Auweele, 2002; Place & Hodge, 2001). When special needs students have been mainstreamed into general physical education classes, without appropriate accommodations or modifications, they have often felt social isolation and rejection from other students. They have also reported their participation often involved nonphysical activities, such as being a line judge

(James, Kellman, & Lieberman; 2011).

Fortunately, many children without disabilities have positive attitudes toward including classmates with disabilities in physical education and sports activities (McKay, Block, & Park, 2015; Modell, 2007; Verderber, Rizzo, & Sherrill, 2003; Murata, Hodge, & Little, 2000). Some children without disabilities, however, may have negative attitudes towards peers with disabilities in their physical education classes because they have had no prior experience with them (Lindsay, McPherson & Maxwell, 2012). Some may also not want students with disabilities in their physical education classes, because they feel that these students will slow down and reduce the quality of their physical education activities (Obrusníková & Block, 2007).

Despite the emphasis on inclusion in physical education, not all general physical educators are properly prepared or confident to provide an environment that is conducive to their learning (Beamer & Yun, 2014; Lindsay, Proulx, Thomson, & Scott, 2013; Tripp, Rizzo, & Webbert, 2007). If special needs students are placed into general physical education classes without proper supports, modified equipment, or modified curriculum, it is unlikely they will be able to achieve their full potential (Campos, Ferreira, & Block, 2013). Conversely, students who have been assigned to an alternative physical education setting, such as adapted physical education, may not be able to achieve as much success because they are isolated from their general education peers (Roth, 2015). However, when general physical education classes have been properly managed, inclusion into those classes has been reported as a positive, beneficial experience by students with special needs (James, Kellman, & Liebermann, 2011).

The attitudes of the non-adapted physical education students in general physical education classes are critical in insuring a positive experience for students with special needs (Bebetsos, 2013, Obrusnikova & Block, 2007). Consequently, it is important physical education teachers help students in their classes to be accepting and compassionate

towards special needs students who are mainstreamed into their classes. The impact of other students' attitudes towards the mainstreaming of children with special needs into general physical education classes has been studied using the Children's Attitudes toward Inclusion in Physical Education – Revised (Block, 1995). While there have been studies regarding the perceptions of parents and teachers of the effectiveness of including children with special needs in general physical education classes, there is limited research regarding how receptive general education students are towards including children with special needs. The purpose of this research was to use the CAIPE-R questionnaire to examine whether general education students support inclusion-based Physical Education and whether they believe modifications should be made to a team sport activity to make it easier for a special needs student to participate and experience success. The results of this study should provide an assessment of how successful schools have been in helping general physical education students develop positive attitudes towards students with physical limitations. The results should also be useful in determining specific areas in which physical education teachers can help prepare general physical education students prior to attempting to foster inclusion (Campos et. al, 2013). With the increasing importance of inclusion of special needs students in general physical education classes, determining perceptions of non-special needs students towards inclusion should help administrators and teachers develop better strategies to help students with special needs have a more successful transition into general physical education classes.

The CAIPE-R (Children's Attitude toward Inclusive Physical Education - Revised), was developed and validated by Block (1995). CAIPE-R measures students' attitudes towards inclusion in physical education based upon a hypothetical scenario (*see Figure 1*). Specifically, students are read a scenario describing a student with physical limitations. This scenario briefly describes the

student's ability level and visible sign of their disability (i.e. a wheelchair). Following the reading of this scenario, students complete the CAIPE-R which requires them to respond to a series of questions about how willing they would be to incorporate the hypothetical student into their physical education class activities. The CAIPE-R has been utilized in multiple studies of both high school and middle school physical education classes (Block, 1995, Campos et. al, 2003, Hutzler & Levi, 2008). Interestingly, when examining the perceptions of high school students towards inclusion in Physical Education, general education students participating in organized sports had similar perceptions to students who were not participating in organized sports (Hutzler & Levi, 2008). Campos, Ferreira, and Block (2013) found there was little difference between students who were already participating in inclusion based Physical Education vs those who were not. For this study, the five point Likert scale responses were compressed into a "Yes/No" forced choice format. This was deemed appropriate because of the limited understanding children in elementary school have of Likert scale response formats (Mellor & Moore, 2014).

### **Methodology**

Students from two public schools in Southern California completed the CAIPE-R survey to help answer the questions: 1) How receptive are general education students to including students with disabilities into their physical education classes? 2) Do general education students feel the environment in physical education classes should be adapted to help students with disabilities fully participate and experience success? Both schools were selected non-randomly.

### **Participants**

#### *Middle School*

Participants at this school included 102 (out of total of 425) seventh grade general education

students enrolled in four general physical education classes at one middle school. The gender of the respondents was: 44.1% (45) males and 55.9% (57) females. The 2015-16 ethnicity percentages of the total student body for this school were: 66.5% White, 14.7% Latino, 8.7% Asian, and 7.9 mixed.

#### *Elementary School*

Participants at this school included 237 4-6<sup>th</sup> graders enrolled in eleven different classrooms. The student counts by grade level were: 4th grade (83), 5th grade (94), and 6th grade (60). The gender of the respondents was 48.9% (116) Males and 51.1% (121) Females. The 2015-16 ethnicity percentages of the total student body for this school were: 79% Latino, 20% African American, and 1% White.

### **Data Collection Procedure**

For both schools, IRB permission was secured in advance from both the researcher's university and the respective school districts. For the middle school, only students who brought back a signed consent form were allowed to complete a survey. In accordance with the CAIPE-R testing protocol, the researcher read the scenario describing a student with special needs. After the researcher finished reading the scenario to the class, the researcher read the ten survey questions, one at a time, to accommodate differences in students' reading abilities. The students were then asked to complete each of the questions in the demographic section which included items for gender, grade level, self-perceived fitness level, and self-perceived enjoyment of Physical Education. Students were instructed not to enter their names on the surveys, and there were no questions by which they could be personally identified.

For the elementary school, the procedure was similar except the researcher first met with the eleven elementary school teachers as a group and went over the directions regarding how to administer the survey, which was identical to that for the middle school. Each of the eleven teachers

then administered the survey to their class. After all of the surveys for the two schools were completed and collected, the researcher coded the data for entry onto an Excel spreadsheet.

## Results

*Elementary School:* Six percent the of students considered themselves to have a low level of fitness, 60% considered themselves to have a medium level of fitness, and 34% considered themselves to have a high level of fitness. Eight percent the students indicated they had a low level of enjoyment in Physical Education, 46% indicated they had a medium level of enjoyment in Physical Education, and 46% indicated they had a high level of enjoyment in Physical Education. Seventy-four percent of the students indicated they participated in a sport outside of school.

*Middle School:* Five percent the of students considered themselves to have a low level of fitness, 57% considered themselves to have a medium level of fitness, and 38% considered themselves to have a high level of fitness. Twelve percent the students indicated they had a low level of enjoyment in Physical Education, 41% indicated they had a medium level of enjoyment in Physical Education, and 47% indicated they had a high level of enjoyment in Physical Education. Seventy-three percent of the students indicated they participated in a sport outside of school.

Responses for the ten-item CAIPE-R varied across test items and results can be viewed on Table 1. A range of 61.1% to 91.7% of the students concurred with the ten statements. Over 80% indicated they would like to help Peter score a basket (91.7%), allow him to shoot at a lower basket (90.6%), help him practice and play the games (89.4%), talk with him and be his friend (86.7%), and come to their PE class (81.4%).

Chi Square Analysis revealed significant differences for three of the items for the variable of school ( $p < .05$ ). A significantly higher percentage of 7<sup>th</sup> grade students (98.1%) than 4-6<sup>th</sup> grade students

(74.3%) indicated it would be OK having Peter in their PE class. A significantly higher percentage of 7<sup>th</sup> grade students (95.1%) than 4-6<sup>th</sup> grade students (64.6%) indicated they would be willing to make a pass to Peter. However, a significantly higher percentage of 4-6<sup>th</sup> grade students (93.7%) than 7<sup>th</sup> grade students (79.4%) indicated they would be willing to help him practice and play the games if he were in their PE class.

It is interesting that over 75% of the students in each of the eleven elementary classes indicated they would be willing to pass the ball to Peter. However there were dramatic differences in the percentages for several of the other survey items. For the item, "It would be OK having Peter come to my PE class," two of the classes had percentages of less than 50% agreement (40.9% and 47.1% ) while two other classes had extremely high percentages of agreement (89.6% and 95.2%). For the item, "it would be fun to have Peter in my PE class," two of the classes had 38.9% and 45.4% agreement while five of the classes had agreement percentages that exceeded 80%. For the item, "I would pass the ball to Peter," two of the classes had low percentages of agreement (27.8% and 45.4%) while seven other classes had percentages of agreement that exceeded 70%.

## Discussion

Similar to Archie and Sherrill's (1989) findings using the Children's Attitudes Towards Handicapped (CATD), most students in this study were receptive to having a student with orthopedic impairment in their general physical education class. These findings are congruent with James, Kellman, and Lieberman (2011) who found that, with guidance, general education students are willing to work with students with special needs to avoid feelings of social isolation and rejection. It is noteworthy a strong majority of students in two separate schools, that differed dramatically in ethnic composition, indicated they would be accepting of a student with an orthopedic impairment. These

results were also similar to the findings of Campos, Ferreira, & Block (2003) and Hutzler & Levi, (2008).

The findings also indicate general education students are generally willing to implement modifications to class activities in order to facilitate participation for students with special needs. Specifically, a high percentage of the students indicated they would pass the ball to a student with orthopedic impairment and assist a student with orthopedic impairment in scoring on a lower, modified basket. These results further demonstrate that general education students are willing to allow students with special needs to play in games with them and not solely participate in support roles such as score keepers or referees. Regardless of gender, the majority of all students in this study demonstrated a positive attitude towards including students with orthopedic impairment into the general physical education setting.

It is very interesting that the support for inclusion at the elementary school was extremely low in some of the classes, but very high in others. There are several possible explanations for this discrepancy. While the primary researcher distributed the surveys and read the scenario to all of the 7<sup>th</sup> graders, the responsibility of administering the survey to the 4-6<sup>th</sup> graders was given to each of the eleven classroom teachers.

Consequently, it is possible the teachers in those classrooms may have not followed correct procedures for administering the survey. Specifically, they may not have read the scenario or the questions and simply given the survey to the students. It is also possible the teachers in these classes may not have read the story with a sympathetic voice or minimized the importance of the scenario in some way. Variations in class climate may also have affected the results.

The results of this study are limited because of the participation of just two, non-randomly selected schools. While school ethnic information was accessible, individual student ethnicity was unknown, which made comparisons for that variable unfeasible. In addition to the differences in sample size and the percentage of potential respondents who participated at each school, it is important to note both the age and ethnic differences between the two schools. While this study focused on students with orthopedic impairment, more research is needed regarding students with non-visible disabilities such as Autism and Intellectual Disability. Interviews with students from multiple schools in different geographic areas would also help to develop a more complete understanding of general education students' attitudes.

## References

- Archie, V.W. & Sherrill, C.(1989). Attitudes toward handicapped peers of mainstreamed and nonmainstreamed children in physical education. *Perceptual & Motor Skills*, 69 (1), 319-322.
- Beamer, J. A. and Yun, J. (2014). Physical Educators' Beliefs and Self-Reported Behaviors Toward Including Students With Autism Spectrum Disorder, *Adapted Physical Activity Quarterly*, 31, 362-376.
- Bebetsos, E., Derri, V., Zafeiriadis, S., and Kyrgiridis, P. (2013). Relationship among Students' Attitudes, intentions and Behaviors towards the Inclusion of Peers with Disabilities, in Mainstream Physical Education Classes, *International Electronic Journal of Elementary Education*, 5(3), 233-248.
- Block, M.(1995). Development and Validation of the Children's Attitudes Towards Integrated Physical Education – Revised (CAIPE-R) Inventory, *Adapted Physical Activity Quarterly*, 12, 60-77.
- Campos, M., Ferreira, J., Block. M. (2013). An Analysis Into the Structure, Validity, and Reliability of the Children's Attitudes Towards Integrated Physical Education-Revised (CAIPE-R), *European Journal of Adapted Physical Activity*, 6(2), 29-37.
- Goodwin, D.L. & Watkinson, E.J. (2010). Inclusive physical education from the perspective of students with physical disabilities. *Adapted Physical Activity Quarterly*, 17 (2), 144.
- Hutzler, Y., Fliess, O., Chacham, A, & Van den Auweele, Y. (2002). Perspectives of children with physical disabilities on inclusion and empowerment: Supporting and limiting factors. *Adapted Physical Activity Quarterly*, 19 (3), 300.
- Hutzler, Y. and Levi, I. (2008). Including Children With Disability In Physical Education: General and Specific Attitudes of High School Students, *European Journal of Adapted Physical Activity*, 1(2), 21–30.
- James, A. R., Kellman, M., and Lieberman, L. (2011). Perspectives on Inclusion from Students with Disabilities and Responsive Strategies for Teachers, *Journal of Physical Education, Recreation & Dance*, 82(1), 33-54.
- Lindsay, S., Proulx, M., Thomson, N., and Scott, H. (2013). Educators' Challenges of Including Children with Autism Spectrum Disorder in Mainstream Classrooms. *International Journal of Disability, Development and Education*, 60(4), 347-362.
- Lindsay, S., McPherson, A.C. & Maxwell, J. (2012). Experiences of social exclusion and bullying at school among children and youth with cerebral palsy. *Disability & Rehabilitation*, 34 (2), 101.
- McKay, C., Block, M., & Park, J. Y. (2015). The impact of Paralympic school day on student attitudes toward inclusion in physical education. *Adapted Physical Activity Quarterly*, 32 (4), 331.
- Mellor, D. & Moore, K.A. (2014). The use of Likert scales with children. *Journal of Pediatric Psychology*, 39(3), 369-379.



- Modell, S. J. (2007). Student perceptions about sports for persons with physical disabilities – An exploratory study. *Palaestra*, 23 (3), 32.
- Murata, N.M, Hodge, S.R., & Little, J.R. (2000). Students' attitudes, experiences, and perspectives on their peers with disabilities. *Clinical Kinesiology* (Online Edition), 54 (3), 59-66.
- Obrusnikova, I., Block, M. E. & Dillon, S. (2010). Children's beliefs toward cooperative playing with peers with disabilities in physical education. *Adapted Physical Activity Quarterly*, 27 (2), 127.
- Obrusnikova, I. & Block, M. E.(2007). Inclusion in physical education: A review of the literature from 1995-2005. *Adapted Physical Activity Quarterly*, 24 (2), 103.
- Place, K. & Hodge, S. R. (2001). Social inclusion of students with physical disabilities in general physical education: A behavioral analysis. *Adapted Physical Activity Quarterly*, 18 (4), 389.
- Roth, K. (2015) Commit to Inclusion Confusion, *Journal of Physical Education, Recreation & Dance*, 86(3), 3-4.
- Tripp, A., Rizzo, T. L., and Webbert, L. (2007). Inclusion in Physical Education: Changing the Culture, *Journal of Physical Education, Recreation & Dance*, 78(2), 32-48.
- Verderber, J., Rizzo, T. L. & Sherrill, C. (2003). Assessing student intention to participate in inclusive physical education. *Adapted Physical Activity Quarterly*, 20 (1), 26.
- Wilson, W.J., Beamer, J. & Block, M, (2016). Adapted Physical Education in Self-Contained Settings: Planning for Successful Instruction. *Strategies*, 29 (5), 22.

Figure 1. Scenario of a child with an orthopedic impairment

Peter is the same age you are. However, he cannot walk, so he uses a wheelchair to get around. Peter 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.

*Figure 1. Scenario read to students prior to taking the Ten Item CAIPE-R Inventory. From "Development and Validation of the Children's Attitudes Toward Integrated Physical Education – Revised (CAIPE-R) Inventory." By M. Block, 1995, Adapted Physical Activity Quarterly, 12, pp. 60-77.*



Table 1

Percent of elementary and middle school students support of inclusive physical education (CAIPE-R Items).

	Yes		No	
	%	N	%	N
<b>GENERAL STATEMENTS</b>				
If Peter were in my P.E. class, I would like to help him practice and play the games.	89.4	(303)	10.6	(36) *
If Peter were in my P.E. class, I would talk to him and be his friend.	86.7	(294)	13.3	(45)
It would be OK having Peter come to my P.E. class.	81.4	(276)	18.6	(63) *
P.E. would be fun if Peter was in my P.E. class.	76.7	(260)	23.3	(79)
When playing a team sport like basketball, it would be OK having Peter on my team.	67.8	(230)	32.2	(109)
Because Peter cannot play sports very well, he would slow down the game.	61.9	(210)	38.1	(129)
<b>SPORT-SPECIFIC STATEMENTS</b>				
I would be willing to help Peter to score the basket.	91.7	(311)	8.3	(28)
In basketball I would allow Peter to shoot at a lower basket	90.6	(307)	9.4	(32)
In basketball it would be good if nobody could steal the ball from Peter while passing.	77.6	(263)	22.4	(76)
In basketball I would I be willing to make a pass to Peter.	73.7	(250)	26.3	(89) *

\* Chi Square: Significant differences in responses between 4-6<sup>th</sup> graders and 7<sup>th</sup> graders p < 0.05