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Abstract

The purpose of this study was to examine typical students' attitudes toward inclusion of students with disabilities in physical education (PE) classes. The participants were between 10 – 16 years of age and their grade level from fifth grade to ninth grade in the Eastern province in Saudi Arabia. The participants were 614 typical students in elementary and middle schools. Participants responded to Children's Attitudes Toward Integrated Physical Education-Revised (CAIPE-R). The findings of this study indicated that the overall means scores of attitudes of all participants toward the inclusion of students with disabilities in physical education classes was 2.99, indicating normal attitudes toward the inclusion of students with disabilities in PE classes. In general, female students had more positive attitudes toward the inclusion of students with disabilities in PE classes than male students as well as students who had a family member or a close friend with a disability had more positive attitudes toward inclusion than students who did not have. Moreover, very competitive students had less attitudes toward inclusion than not competitive students did, and very competitive students who had students with disabilities in their schools had more positive attitudes toward inclusion than very competitive students who did not have students with disabilities in their schools. Finally, students who attended schools with students with disabilities had more positive attitudes toward inclusion than students who did not have students with disabilities in their schools.

Keywords: Attitude, Disabilities, Physical Education, Saudi Arabia, Inclusion

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مستخلص البحث

هدفت الدراسة إلى الكشف عن اتجاهات الطلبة نحو دمج ذوي الإعاقة في درس التربية البدنية. اشتملت عينة الدراسة (614) طالبا من غير ذوي الإعاقة، من بينهم (332) طالبا في المرحلة الإبتدائية، و(282) طالبا في المرحلة المتوسطة. استخدمت استبانة اتجاهات الطلبة نحو دمج ذوي الإعاقة في درس التربية البدنية من أجل جمع البيانات. وأظهرت نتائج الدراسة إلى أن المتوسط العام لاتجاهات الطلبة تجاه دمج ذوي الإعاقة كان 2.99 من 4.00، مما يشير إلى أن المشاركين كانت اتجاهاتهم طبيعية تجاه دمج ذوي الإعاقة في درس التربية البدنية. وكذلك أشارت النتائج إلى أن الطلبة الإناث يكون لديهم اتجاهات أكثر إيجابية نحو دمج ذوي الإعاقة في درس التربية البدنية من الطلبة الذكور، وكذلك الطلبة الذين لديهم فرد من الأسرة أو صديق مقرب من ذوي الإعاقة يكون لديهم اتجاهات إيجابية نحو دمج ذوي الإعاقة أكثر من الذين لم يكن لديهم. إضافة إلى ذلك، الطلبة الذين يتمتعون بمنافسة شديدة في الأنشطة البدنية لديهم اتجاهات أقل إيجابية نحو الدمج من الطلبة غير المتنافسين في الأنشطة البدنية، وأيضا الطلبة الذين يتمتعون بمنافسة عالية في الأنشطة البدنية ومدموجون مع الطلبة من ذوي الإعاقة في نفس المدارس يكون لديهم اتجاهات أكثر إيجابية تجاه الدمج من الطلبة ذوي القدرة التنافسية العالية الذين لم يكن لديهم طلبة من ذوي الإعاقة في مدارسهم. أخيرًا، الطلبة الذين يدرسون مع الطلبة من ذوي الإعاقة في نفس المدارس يكون لديهم مواقف أكثر إيجابية تجاه الدمج من الطلبة الذين لم يكن لديهم طلبة من ذوي الإعاقة في مدارسهم.

الكلمات المفتاحية: الاتجاهات، ذوي الإعاقة، التربية البدنية ، الدمج، المملكة العربية السعودية

Introduction

Saudi Arabia (SA), located in the Middle East has put lots of effort into developing educational standards that are equal to the standards in developed countries in terms of performance, curriculum, and learning outcome. This effort includes standards for offering a quality education to students with and without disabilities. As a result of these efforts, Saudi Arabia has made great strides toward moving students with disabilities from an isolated environment into the public school environment. Public education (grades 1-12) has three stages, elementary education (grades 1-6), intermediate education (grades 7-9), and secondary education (grades 10-12). However, there is no coeducational system in SA, so males and females study separately. In addition, for about two decades, students with mild and moderate disabilities have been studying in regular public schools with their counterparts without disabilities so that students with disabilities can improve socially, academically, emotionally, and physically. Students with mild and moderate disabilities are placed in regular classrooms or special classrooms within public schools. In addition, between 1960 and 1987, the government opened about 27 special day schools and residential institutions for male and females with visual and hearing impairments, and for those with intellectual disabilities. Between 1987 and 2000, another 54 schools and institutions were opened to serve students with disabilities. According to Al Mousa (2010), between 1990 and 2000 students with mild and moderate disabilities, including autism, intellectual disabilities, hard of hearing and hearing impairment, attended classes with their peers without disabilities in public schools, but they studied in separate classrooms. Currently, there are more than 740 programs that use special classrooms in public schools to serve students with mild to moderate disabilities. However, most students with severe and profound disabilities still study in special schools or residential institutions (Aldabas, 2015). In Saudi Arabia, there are two laws that enhance education for students with disability: The Saudi

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Disability Code and the Regulations of Special Education Programs and Institutes (RSEPI). The Saudi Disability code of 2000 insures free education, health care, and rehabilitation to people with disabilities. Likewise, the RSEPI provides many services that help people with disabilities reduce or overcome barriers that face them in their daily lives, including as they pursue an education (Aldabas, 2015). According to Al-Mousa (2010), who has organized special needs in Saudi Arabia, approximately 90 % of male and 65 % of female students with disabilities were inclusive in public schools in Saudi Arabia in 2007. As a results, Saudi Arabia has made a major effort achieve inclusion in public schools.

Least restrictive environment (LRE) requirement of the Individual with Disabilities Education Act (IDEA) provides a continuum of placement options determined by an individual's abilities to function in physical education classes. The LRE strives to have students with disabilities participate in general physical education (PE) class whenever possible, even when some modifications for all students are necessary. At times, some modification may be necessary for the student with a disability that will make it possible for participation in general PE (Block & Obrusnikova, 2007). In Saudi Arabia, however, the decision to have full inclusion for a student with a disability depends more on the type of disability than on providing the least restrictive environment possible. Therefore, students with a learning disability, students with a physical disability, students with a behavior and/or emotional disorder, and students with visual impairment are fully included, or mainstreamed, with students without a disability. On the other hand, students with hearing impairment, students with autism, and students with an intellectual disability are self-contained in the same school with students without a disability (Al-Mousa, 2010). Therefore, some students with disabilities participate in PE with their peers, and other students with disabilities participate in separate PE classes in the same public school.

Inclusive education has many benefits for students with disabilities. Proponents of inclusion believe that the teachers and specialists in special education can assist students with disabilities to help them learn more, gain social skills, and improve their self-esteem and independence (Fuchs & Fuchs, 1998). Inclusion enhances social skills between students with and without disabilities and leads to increasing social acceptance with their counterparts without disabilities. Most students with disabilities do not feel social acceptance because they have limited opportunities to interact with their society. Hence, when students with disabilities join the regular classroom, students without disabilities often change negative attitudes toward them. There is a relationship between academic achievement and social acceptance. Students with disabilities who have high academic achievement in public schools experience more social acceptance than students with disabilities who have low academic achievement (Mpofu, 2003). According to Rafferty et al. (2003), in inclusion schools, social interaction and acceptance were greater for students with disabilities than they were in non-inclusion schools. Therefore, inclusion may enhance social acceptance and interaction for students with disabilities because they have opportunities to display their positive abilities and achievements.

In Saudi Arabia, many studies have been conducted on citizens' attitudes toward inclusion. Alquraini (2011) conducted a study in order to determine the attitude of teachers toward inclusion of elementary students with severe disabilities. The findings showed that participants had few negative attitudes towards elementary students with severe disabilities. In addition, the researcher found that there was a significant difference in participants' attitudes toward inclusion of elementary students between teachers who had previous teaching experiences and also who did not have previous teaching experience with students with disabilities. Teachers who had previous teaching experiences with students with disabilities had more attitudes toward inclusion than teachers who did not have previous teaching

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experience. The researcher also found that male participants had better attitudes than female participants toward inclusion of elementary students with severe disabilities. However, grade level taught, teacher's level of education, or teacher's training did not significantly impact their attitudes toward inclusion. Also, Alabdaljabbar and Masoud (2003) conducted a study to know the perspective of school principals, general education teachers, and special education teachers toward inclusion. The findings indicated that school principals and special and general education teachers agreed that there were positive effects of the inclusion program on students with disabilities. Moreover, Alajami and Alasif (2013) conducted a study to examine parents' attitudes of students without disabilities toward inclusion of students with intellectual disability with their children in public schools. The findings showed that parents' attitudes toward inclusion their children with children with intellectual disability were negative regarding the psychological and educational dimension.

Having students with and without disabilities in the same regular classes is a good opportunity for them to get to know each other. There are many factors, such as gender, previous exposure, adaptations, competitiveness, type and level of disability, and grade level that influence positively or negatively the attitudes of students without disabilities toward inclusion of students with disabilities in general PE classes. Loovis and Loovis (1997) examined attitudes of students without disabilities toward students with disabilities in elementary school before and after they took a disability awareness unit in PE. The findings of this study indicated that after students without disabilities participated in the disability awareness unit exercises, they had a more positive attitude toward students with disabilities. Also, this study reported that female students had a more positive attitude than male students toward their counterparts with disabilities after they took the disability awareness unit. Block (1995) also found that 5th and 6th grade students had a positive perception toward inclusion of students with a

physical disability in general physical education. Also, participants who were not competitive in sports had a positive attitude toward integration of students without disabilities in general PE. Likewise, participants who had previous exposure or experience with disabilities, such as with friends, family members, or neighbors had a favorable attitude toward inclusion in general PE classes.

Bebetsos et al. (2014) examined the attitudes of 5th and 6th grade male and female students' attitudes toward inclusion of students with a disability in general PE classes. This study reported that participants had positive attitudes toward inclusion of students with disabilities in the modification of sports rules. In addition, Van Biesen et al. (2006) examined attitudes of students without disabilities before and after Paralympic School Day (PSD) with three Belgian elementary schools toward inclusion of students with disabilities. This study showed that female students had favorable attitudes toward inclusion of students with disabilities in PE. Likewise, students who had a low level of competitiveness had positive perceptions toward inclusion of students with disabilities in PE classes. This study also found that after students participated in PSD, two out of three schools had students with a more positive attitude toward inclusion in PE classes. Tripp, French, and Sherrill (1995) examined different attitudes between segregated and inclusive elementary school students toward students with disabilities in PE classes. The inclusive elementary school had three types of disabilities, students with physical, behavioral, and learning disabilities, while the segregated elementary school did not have any students with a disability. The researchers found that female students in both schools had a more positive attitude toward inclusion of students with disabilities in PE classes than male students did. Also, they showed that students who participated in inclusive PE classes had a more positive attitude toward students with a behavioral disability than students in segregated PE classes**.** Therefore, contact between students with and

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without disabilities may create positive conditions that lead to good relationships and positive attitudes and experiences of each other.

In conclusion, the studies above indicate that a low level of competitiveness, adaptation of rules, types and levels of disability, interaction, and experiences may play a pivotal role in improving attitudes of students without disabilities toward their peers with disabilities in PE classes. Positive attitudes of students without a disability toward inclusion of students with disabilities in PE classes help students with disabilities effectively participate in general PE and give them a sense of belonging and social acceptance. Thus, inclusion can be successful and help students with disabilities develop a favorable attitude toward PE.

Most Saudi students with disabilities were studying PE in the same schools with their peers, but they were studying in separate classrooms. This study aims to integrate students with disabilities into regular PE classes, where they receive their education alongside their peers. Thus. This study focused on identifying the difficulties and challenges facing integrating students with disabilities in regular PE classes from the perspectives of their peers. The purpose of the study was to investigate the influential factors of students' attitudes toward inclusion of students with disabilities in regular PE classes. Thus, the research questions included the flowing: (1) Do male and female students who have and who do not have students with disabilities in their schools differ on their attitudes toward inclusion of students with disabilities in regular PE classes? (2) To what extant do the level of competitiveness influence attitudes of students who have and who do not have students with disabilities in their schools toward inclusion of students with disabilities in regular PE classes? (3) Is there a significant difference between attitudes of students who have a family member with a disability and who do not have toward inclusion of students with disabilities in regular PE classes? (4) Do elementary and middle school students who have and who do not have students with disabilities in their schools differ

on their attitudes toward inclusion of students with disabilities in regular PE classes? Answers to these questions might support inclusion of students with disabilities in regular PE classes and pinpoint ways to design additional teacher training programs so that teachers can more effectively integrate students with disability into regular PE classes.

Method

Participants

The participants were 614 nondisabled students in the elementary and middle schools in the Eastern province in Saudi Arabia. A group of participants that were in the inclusive schools included students with intellectual disabilities, students with autism, and students with sensory impairments, and they were placed in self-contained classrooms. The other group of participants were in non-inclusive schools. Thus, there were 11 elementary schools, including six inclusive schools, and five non-inclusive schools, and there were nine middle schools, including five inclusive schools and four non-inclusive schools. All participants were between 10-16 years of age and their grade levels from 5^{th} grade to 9^{th} grade. Data were collected by using cluster random sampling because the study include multiple elements, such as elementary and middle schools, types of school settings and different genders. Thus, the experimental design was used in this study that included several independent variables that could manipulate and examined their influences on the dependent variable. Also, experimental design could make predictions that were testable.

Instrument

Attitudes of students without disabilities toward inclusion of students with disabilities in regular physical education classes were evaluated via the use of Children's Attitudes Toward Integrated Physical Education-Revised (CAIPE-R). The CAIPE-R was a reliable survey with coefficient alpha of 0.87 for the general attitude, and 0.66 internal

coefficients for sport-specific attitude scale. Also, The CAIPE-R survey had good validity because the general attitude scale had a range of loading between 0.55 to 0.81 and sport specific attitude scale had a range between 0.61 to 0.78 (Block, 1995). The CAIPE-R was translated from English to Arabic language by some teachers whose major was English literature. The modified CAIPE-R questionnaire consisted of two parts: personal information and general and sport specific statements that included a description of a student with Down syndrome participating in soccer, the most popular game in Saudi Arabia (soccer instead of baseball in sport-specific attitude section). The questionnaire contains 11-items with four Likert scale (4= yes, 3= probably yes, 2= probably no, 1= no). Specifically, general questions consisted of six statements that related to the inclusion and sport-specific questions consisted of five statements that related to rule modifications in order to accommodate students with a disability. Thus, the total scores range from 11-44 for overall attitudes. After the scores were calculated, they were divided by 11 to obtain a range from 1-4. A score of four indicated a high positive attitude of students without disability toward inclusion of students with disabilities in regular PE classes, while a score of one indicated a relatively low attitude.

Coefficient alpha was computed to examine the internal consistency for attitude scales. We found that the test for overall attitude scale (11 items) resulted in coefficient alpha score of 0.81 which indicates moderate consistency for these scales. Also, factor analysis of the modified CAIPE-R was conducted for validation of general attitude and sport specific attitude. All six items of general attitude scale had a range of loading between. 0.58 to 0.82 and five items of sport specific attitude had a range of loading between 0.67 to 0.83. Therefore, it seems that the modified CAIPE-R questionnaire measures one construct for general students' attitudes toward inclusion students with disabilities in PE classes as well as to measure one construct for sports-specific modifications statements

Procedure

This study was conducted in public schools in the Eastern Province after permission was obtained from the Ministry of Education in SA. Two groups of schools (inclusive and non-inclusive schools) took the modification CAIPE-R survey in their schools during their physical education period. The Principal Investigation (PI) administered the questionnaire in all male students' respective classes, and some female teachers administered the questionnaire for female students because there was no coeducation in Saudi Arabia. Before students responded to the questionnaire, investigators read the instructions and statements to them and gave them an example of how to answer the 4-point Likert scale in order to ensure students' understanding of directions. Participants first answered a personal information part. Then, they were given a brief description of a student with Down syndrome who may participate in their physical education classes. After that, the investigators read general and sport specific statements for each one of the statements and students were entitled to ask for any of the statements to be repeated. This questionnaire might take about 15 minutes.

Data Analysis

The SPSS Statistics 23 was utilized to analyze the data and descriptive statistics to measure personal information and outcomes measures for the study variables. Two- way ANOVA tests were conducted to measure the effect of gender or school levels on attitude of students who had and did not have students with disabilities in their schools toward inclusion of students with disabilities in PE classes. Also, multiple regression test was used to examine if attitudes of students toward inclusion students with disabilities in PE class related to the level of competitiveness and inclusive schools and non-inclusive schools. Also, independent t- test was conducted to examine the difference between students who had or did not have a family member or a close friend with a disability on their attitudes toward inclusion of students with disabilities in PE classes. Statistical significance was set at $P < 0.05$.

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Results

The sample consisted of 614 participants who were between 10 and 16 years (*M* = 12.91, *SD* = 1.87). Approximately 53% of participants were male students, and 47 % of participants were female students, including elementary school (5th - 6th grade), and middle school (7th - 9th grade). A family member or close friend who has a disability was approximately 23% and most participants were somewhat competitive in PE class. (See Table 1).

Table 1

Demographic Characteristics of Participants

Variable		Frequency	%
Gender	Male	327	53.33
	Female	287	46.74
Inclusion	Yes	344	56.03
	No	270	43.97
Family member with disability	Yes	140	22.80
	No	474	77.20
Level of competitiveness	Not competitive	100	16.29
	Somewhat competitive	342	55.70
	Very competitive	172	28.01
School levels	Elementary school	332	54.07
	Middle School	282	45.93

A two-factor 2 × 2 ANOVA (type of school × gender) was conducted to evaluate the effect of attitudes of female and male students without disabilities who had students with disabilities or did not have in their schools toward inclusion of students with disabilities in regular PE classes. The two independent variables in this study were type of schools and gender. The dependent variable was the attitude of students toward inclusion of students with disabilities in regular PE classes, with higher scores indicating more positive attitudes. The means and standard deviations for the attitude measure as a function of the two factors are presented in Table 2.

The results for the two-way ANOVA indicated no significant interaction between type of schools and gender, F (1, 610) = 0.070, p = 0.792, partial η^2= 0.001, but showed significant main effects for the type of schools, F (1, 610) = 12.32, p < .001, partial η^2= 0.020, and gender, F (1, 610) = 8.161, p = 0.004, partial η^2= 0.013. The gender main effect indicated that female students had more positive attitude toward inclusion of students with disabilities in regular PE classes (M = 3.05, SD = 0.55) than male students (M = 2.92, SD = 0.60). Likewise, students who had students with disabilities in their schools had more favorable attitude toward inclusion of PE classes (M = 3.05, SD = 0.51) than students who did not have students with disabilities in their schools (M = 2.89, SD = 0.64).

Table 2

Means and Standard Deviations on the Dependent Variable for the Male and Female Students Who Integrated in Regular School or Not

Gender	Inclusion of students with disabilities in public school	*N*	Attitude	
			Mean	Std. Deviation
Male	Yes	188	2.98	0.56
	No	139	2.83	0.64
	Total	327	2.92	0.60
Female	Yes	156	3.13	0.44
	No	131	2.95	0.64
	Total	287	3.05	0.55
Total	Yes	344	3.05	0.51
	No	270	2.89	0.64
	Total	614	2.99	0.58

A multiple regression analysis was conducted to predict the attitudes of students toward inclusion of students with disabilities in regular PE classes. Analysis included three level of competitiveness (not competitive, somewhat competitive, and very competitive) and the two types of school settings (inclusive schools and non-inclusive schools). The result of this analysis indicated that level of competitiveness and type of schools were meaningful predictors of students' attitudes toward inclusion of students with disabilities in PE class, F (3, 610) = 14.89, p < 0.001, R^2 = 0.068,

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indicating approximately 7% of the variance of attitudes of students toward inclusion students with disabilities in PE class can be accounted for the level of competitiveness and the type of school settings. The intercept was the reference group for students who were in non-inclusive schools and were not competitive. The slope for students who were in inclusive schools was a significant (B= .123, t (612) = 2.67, p = 0.008), indicated that every one-point increment on this variable, the reference group for attitudes increased by 0.123 point. The slope for the somewhat competitive dummy variable was not significant (B= -0.07, t (612) = -1.10, p = 0.271), indicating no significant difference in the reference group for the "not competitive" and "somewhat competitive" level of competitiveness. However, the slope for the very competitive dummy variable was significant (B= -.338, t (612) = -4.78, p < 0.001), indicating a significant difference between the "not competitive" and "very competitive" level of competitiveness. In other words, attitudes of very competitive students had significantly less favorable attitudes toward inclusion of students with disabilities in regular PE class compared to not competitive students. Also, the result indicating that very competitive students who had students with disabilities in their schools had more positive attitudes toward inclusion of students with disabilities in regular PE classes than very competitive students who did not have students with disabilities in their schools. (See Table 3 & 4).

Table 3

Means and Standard Deviations of the Dependent Variables for the Two Groups of Schools in Three Levels of Competitiveness

Competitiveness levels	Inclusion of students with disabilities in public school	*N*	Attitudes	
			Mean	Std. Deviation
Not competitive	Yes	62	3.15	0.50
	No	38	3.08	0.64
	Total	100	3.12	0.55
Somewhat competitive	Yes	204	3.04	0.50
	No	138	3.06	0.57
	Total	342	3.05	0.53
Very competitive	Yes	78	3.00	0.55
	No	94	2.57	0.61

Competitiveness levels	Inclusion of students with disabilities in public school	*N*	Attitudes	
			Mean	Std. Deviation
	Total	172	2.76	0.62
Total	Yes	344	3.05	0.51
	No	270	2.90	0.64
	Total	614	2.98	0.58

Table 4

Predictors of Attitudes of Students with Disabilities toward Inclusion Students with Disabilities in Regular PE Class

Dependent Variable	Variables	Unstandardized Coefficient			
		B	Std Error	t	Sig
Students' attitudes toward inclusion	Intercept	3.05	0.06	48.58	0.01
	Very competitive	-0.34	0.07	-4.78	0.01
	Somewhat competitive	-0.07	0.06	-1.10	0.27
	Inclusive schools	0.12	0.05	2.67	0.01

An independent-samples *t* test was conducted to evaluate the hypothesis that students who had a family member with disabilities had more positive attitudes toward inclusion of students with disabilities in regular PE class as opposed to students who did not have a family member with disabilities. The test was significant, t (612) = 3.245, $p < 0.001$. Therefore, students who had more experiences with people with a disability have more favorable attitudes (M = 3. 12, SD = 0.55) than students who did not have experiences with people with disabilities (M = 2.94, SD = 0.58). (See Table 5).

Table5

Means and Standard Deviation for Students Who Have a Family Member with Disability

Family member with a disability	*N*	Mean	Std. Deviation
Yes	140	3.12	0.55
No	474	2.94	0.58
Total	614	2.98	0.58

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A two-factor 2 × 2 ANOVA (type of schools × school levels) was conducted to evaluate elementary and middle school students who had or did not have students with disabilities in their schools on how their attitudes toward inclusion of students with disabilities in regular PE classes differed. The two independent variables in this study were type of schools (students who had students with disabilities in their school, and students who did not have students with disabilities in their school) and school levels (elementary and middle school). The dependent variable was the attitude of students toward inclusion of students with disabilities in regular PE classes, with higher scores indicating more positive attitudes. The means and standard deviations for the attitude measure as a function of the two factors are presented in Table 6.

The results for two-way ANOVA indicated no significant main effects for the school levels, F (1, 610) = 0.068, p = 0.795, partial η^2 = 0.001, but significant main effect for the type of schools, F (1, 608) = 10.322, p < 0.001, partial η^2 = 0.017. Also, there was significant interaction between the school levels and two type of schools, F (1, 610) = 5.916, p = 0.015, partial η^2 = 0.010. Because the interaction between the groups of students and school levels was significant, the groups simple main effects was examined, that is, the differences between attitudes of elementary school students and middle school students for each of the two type of schools. To control for type I error rate across the two simple effects, alpha level for each was set at 0.025 (0.05/2) by using the Bonferroni approach. The results indicated that there was a significant difference between attitudes of elementary school students who had students with disabilities in their schools and elementary school students who did not have student with disabilities in their schools toward regular PE classes, F (1, 610) = 17.199, p < .001, partial η^2 = .027. Attitudes of elementary school students who had students with disabilities in their schools (M = 3.10, SD = 0.54) had more positive attitudes toward inclusion of students with disabilities in regular PE classes than attitudes of elementary school students who did not have students with disabilities in

their schools (*M* = 2.83, *SD* = 0.65). However, there were no significant differences between attitudes of middle school students who had students with disabilities in their schools and middle school students who did not have students with disabilities in their schools toward regular PE classes, *F* (1, 610) = .284, *p* = .594, partial η^2 = .001. (See Table 6).

In addition, school levels were examined for simple main effects. To control for type I error across the two simple main effects, alpha level for each was set at .025 (.05/2) by using the Bonferroni approach. There was no significant difference between attitudes of elementary school students and middle school students who had students with disabilities in their schools toward inclusion of student with disabilities in regular PE classes, *F* (1, 610) = 2.667, *p* = .103, partial η^2 = .004. Also, there was no significant difference between attitudes of elementary and middle school students who did not have students with disabilities toward inclusion of student with disabilities in regular PE class, *F* (1, 610) = 3.249, *p* = .072, partial η^2 = .005. (See Table 6).

Table 6

Means and Standard Deviations on the Dependent Variable for the Two Types of Schools and School Levels

School levels	Integrated students with disability in public school	*N*	Attitude	
			Mean	Std. Deviation
Elementary schools	Yes	191	3.10	0.54
	No	141	2.83	0.66
	Total	332	2.98	0.61
Middle schools	Yes	153	2.99	0.47
	No	129	2.96	0.62
	Total	282	2.98	0.54
Total	Yes	344	3.05	0.51
	No	270	2.89	0.64
	Total	614	2.99	0.58

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Discussion

The purpose of this study was to evaluate the attitudes of students without disabilities toward the inclusion of students with disabilities in PE classes. In general, the findings of this study indicated that the overall means scores of attitudes of all participants toward PE classes was 2.99, indicating that the participants had natural attitudes toward PE. The current finding agrees with several previous studies that revealed that students had positive attitudes toward PE (Block, 1995; Tripp et al., 1995; Bebetsos et al., 2014; McKay et al., 2015).

In this study two groups of students participated, students who had students with disabilities in their schools and students who did not have students with disabilities in their schools. The result of this study found that students who attended an integrated school program had more favorable attitudes than students who did not attend an integrated school program with students with disabilities. Likewise, very competitive students who had students with disabilities in their schools had more positive attitudes toward inclusion than very competitive students who did not have students with disabilities in their schools. These results support the contact theory that indicated that “Prejudice may be reduced by equal status contact between majority and minority groups in the pursuit of common goals” (Allport, 1954, p.281). Researchers found that students who had contact with students with disabilities positively changed on their attitudes toward students with disabilities (Murata et al., 2000). Thus, interaction among people with differences may lead to changes in their attitudes toward each other.

The second result of this study was female students had more positive attitudes toward inclusion of students with disabilities in PE classes than male students. The current study agrees with several previous studies that indicated that female students would like to participate with students with disabilities more than male students (Block, 1995; Tripp et al., 1995; Van Biesen et al., 2006; Olaleye et al., 2012). That may be attributed to girls

having more social interaction and empathic nature than male counterparts do. Furthermore, very competitive students had less favorable attitude toward inclusion of students with disabilities in PE classes than no competitive and somewhat competitive students. Researchers found that very competitive students had negative attitude toward integrated students with disabilities in PE classes (Block, 1995; McKay, 2013; Van Biesen et al., 2006;). Therefore, nondisabled students who were more competitive might reject the inclusion of students with disabilities in PE classes because they would like to win and they thought activities would be more boring and slow when students with disabilities participated in regular PE classes. Furthermore, students who had a family member or a close friend with a disability had more favorable attitudes toward inclusion of students with disabilities in regular PE classes than students who did not have a family member or a close friend with disabilities. The current study was consistent with a previous study (Block, 1995). This may be attributed to students who have more experiences and exposure to students with a disability and therefore have a more positive attitude toward them.

This study examined the influence of students' attitudes toward inclusion of students with disability in regular PE classes. The present CAIPE-R of all participants to indicate more positive attitudes toward inclusion of students with disabilities in PE classes. The study shows that female students had more favorable attitudes toward inclusion of students with disabilities in PE classes than male students, as well as students who had a family member or a close friend with a disability had more positive attitudes toward inclusion than students who did not have family members with a disability. Also, very competitive students had less favorable attitudes toward inclusion than not competitive or somewhat competitive students, and students who attended school with students with disabilities had more positive attitudes than students who did not attend school with students with disabilities. Thus, the study indicated that most participants appeared

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to be ready to accept students with disabilities in PE classes. According to the findings of this study, the researcher provides recommendation for improvement of integrated students with disabilities in PE classes. (1) The ministry of education should implement the LRE concept in order to mainstream students with disabilities in regular physical education classes whenever possible as well as the ministry of education should provide services based on IEP that helps students with a disability effectively participate in PE classes. Furthermore, the ministry of education should employ PE teacher that hold an adapted PE certification or have attended several workshops specifically dealing with physical education for teaching students with disabilities. (2) The researcher recommended that students with disabilities be featured social media and a program create for students with disabilities such as Paralympic Day School in order to raise awareness about integrated students with disabilities in PE classes. (3) Adapted physical education teachers should offer positive educational environment through using cooperative methods, equal status, and personal interaction when they integrate students with and without disabilities in PE classes. Also, they should be a member of an IEP team so that they can design an appropriate curriculum for each student with a disability as well as APE teachers may use good instructional strategies such as peer tutoring in order to help enhance social interaction, acquired skills, and gain knowledge for students with disabilities.

This study had a few limitations. First of all, this study conducted in one region in Saudi Arabia. Second, students with disabilities were placed in self-contained classrooms. Future research should include many regions in Saudi Arabia, and students with disabilities should participate with their peers without disabilities in regular PE classes in order to be good opportunities for interactions that may reflect negatively or positively in their attitudes.

Finally, the major findings of this study support inclusion of students with disabilities in regular PE classes. Thus, the inclusion will be successful if students gain more awareness about students with disabilities as well as providing appropriate support to PE teachers by making modifications to rules and equipment in physical education classes to ensure that students with and without disabilities can effectively participate in regular physical education.

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