

**SOCIAL DEVELOPMENTAL PARAMETERS IN PRIMARY SCHOOLS: INCLUSIVE SETTINGS' AND GENDER DIFFERENCES ON PUPILS' AGGRESSIVE AND SOCIAL INSECURE BEHAVIOUR AND THEIR ATTITUDES TOWARDS DISABILITY**

**Athina Arampatzi**

**Katerina Mouratidou**

**Christina Evaggelinou**

**Eirini Koidou**

**Vassilis Barkoukis**

*Aristotle University of Thessaloniki*

*The aim of the present study was to examine whether gender and inclusion settings are associated with elementary school pupils' aspects of social development such as aggression, social insecurity and attitudes toward disability. The sample consisted of 658 pupils ( $M_{age}=11\pm 1$  years) of 15 primary schools (306 boys and 352 girls). Three hundred and fifty three of the participants attended schools with inclusive settings while the rest 305 attended typical schools. The participants of the study completed the Checklist of Aggressive Behaviour (CAB), the Checklist of Social Insecure Behaviour (CSIB), and the Children's Attitudes Towards Integrated Physical Education - Revised (CAIPE-R). Results indicated that girls showed less aggressive behaviour compared to boys, and pupils in typical schools displayed higher attitudes toward disability compared to pupils in inclusion schools. These findings imply that gender is a significant factor just for students displaying aggression but not social insecurity and/or adopting positive attitudes towards disability. Furthermore, inclusive setting is not a sufficient condition for the promotion of typical pupils' social behaviour.*

**Introduction**

Students' social development constitutes - in many countries, including Greece - an essential educational goal both in elementary and high school. This also stands in both typical and inclusion schools (school where children with mild disabilities attend) (Ministry of Education and Religion Affairs, 2003; 2008). This can be largely attributed to the fact that social development constitutes one of the most significant predictors of students' future adjustment in society, as well as their affective and behavioral problems (Asher, 1983; Parker & Asher, 1987; Rubin, 1983; Sandstrom, Cillessen, & Eisenhower, 2003). In addition, a student's social developmental level affects directly the interpersonal situations, and consequently, the performance of the whole school class (Greenberg, Weissberg, O'Brien, Zins, Fredericks, Resnik, & Elias, 2003).

Special education and related issues constitute part of social and typical school reality. Students with disabilities and special educational needs (SEN) are those who demonstrate, for the whole or a specific period of their school life, significant education difficulties due to sensory, cognitive and developmental problems, and neuropsychological disturbances that affect the process of school adjustment and learning (Zoniou-Sideri, 1998). Recently, securing and constantly updating the obligate character of special education as an integral part of obligatory education in Greece and caring for provision of education in all individuals with disabilities of any age and for all levels of education, is a basic aim of both elementary and secondary education in Greece (Ministry of Education and Religion Affairs, 2008).

A series of studies conducted to examine issues relevant to inclusion of students with disabilities in school framework, revealed that inclusion plays an important role in education of children with disabilities and SEN (Diamond, 2001; Diamond, Hestenes, Carpenter, & Innes, 1997; Favazza, Phillipsen, & Kumar, 2000; Forlin & Cole, 1994; Frederickson, Simmonds, Evans, & Soulsby, 2007; Helmstetter, Peck, & Giangreco, 1994; Hepler, 1998; Lieber, Capell, Sandall, Wolfberg, Horn, & Bechman, 1998; Peck, Staub, Gallucci, & Schwartz, 2004; Stainback & Stainback, 1990). According to Block (2007) *inclusion* is defined as a philosophical apprehension of supporting the educational needs of students with disabilities in typical school. The aim of inclusion is the creation of a school for students with and without disabilities, who are allowed and must live different lifestyles, have different goals and want to reform together school and society (Zoniou-Sideri, 1998).

Furthermore, it is worth noticing that in the case of schools with inclusive settings, students' social development without disabilities has a determinant role for the successful or unsuccessful inclusion of children with SEN. Typical students who are characterized by a more mature social developmental level are expected to display more positive behaviour towards their classmates, even when the latter have different characteristics, such as different developmental features (Lieber et al., 1998).

#### *Social development*

The term *social development* refers to concepts, emotions and attitudes that children develop and to the way that they change throughout age (Schaffer, 1996). The study of social development, beyond the quality and quantity of social interactions, concentrates on the person itself considering both cognitive and emotion sides of development (Schaffer, 1996). As children grow older, they mature and enhance their social abilities, such as the competence of *recruiting* their thoughts, their emotions, their attitudes, and their behaviours in order to achieve interpersonal goals and social results in a given frame. Particularly, social competence in children can be defined as their effectiveness of interaction with other children and adults (Mouratidou, Barkoukis, Zahariadis, & Arampatzi, 2007). Consequently, the more a child adopts positive attitudes toward his/her classmates and effectively interacts with them the more competent he/she is. On the contrary, a child who confronts with problems during his/her social interaction, could probably demonstrate problematic behaviours, such as attention disruption and aggressiveness (external behaviour), isolation and social anxiety, and social insecure behaviour (internal behaviour) (Rose-Krasnor, 1997). On the basis of the above evidence, then, it could be argued that aggressive and social insecure behaviours constitute parameters of social competence and/or social development and refer to the quality of interpersonal contacts, namely to the way children interact with other people.

Petermann and Petermann (2003) supported that a child's behaviour could be characterised as *social insecure behaviour* in case of social isolation and demonstration of social anxiety, excessive shyness, withdrawal and social avoidance. Generally, social insecurity is synonymous with: a) separation anxiety (the child refuses to be separated from one specific adult, to get out of the house, and to correspond to any social invitation), b) social anxiety or phobia (it concerns anxiety towards less familiar persons, and anxiety for evaluation regarding child's behaviour in performance's circumstances), and c) generalized anxiety disorder (the child is characterized by generalized anxiety concerning his/her skills, success and competence on handling problems during every day life) (Mouratidou et al., 2007). Furthermore, findings of previous studies have shown that, insecure children display more hostile and antisocial behavior (Erickson, Sroufe, & Egeland, 1985) and more dependent behavior to their peers (Turner, 1991) than did secure children.

On the other hand, *aggressive behaviour* is defined as the behaviour that intends to induce painful stimulants to other people or to perform a catastrophic behaviour to objects (Citrome & Volanka, 2001). Aggressiveness can be verbal (wordy attack) or non verbal (shooting objectives) and has not always direction to external world (to other child or adult), as sometimes can be transformed to indifference or directed to the person itself (Papadopoulos, 1994). It should be mentioned that social insecure and aggressive behaviour are important for the inclusion of children with disabilities in typical school, as they define the latter's quality of interaction with students of regular class. A social insecure behaviour or an aggressive behaviour is not in favor of the development of a positive coexistence and communication among students with and without disabilities, but unfavorably is dysfunctional for the process of inclusion.

Another parameter of social development, important for the inclusion of children with SEN in school, is the attitude that their classmates develop towards these children. According to Allport (1935) an *attitude* is defined as a person's mental and psychological state which composes from his/her experiences. These experiences in tern exert a guided or a dynamic impact on his/her reactions for all objects and conditions that the person confronts. Fishbein and Ajzen (1975) defined *attitude* as a stable behaviour that comes up with a positive or a negative way concerning a particular fact or condition cognitive-emotional-behavioral. According to the theory of planned behaviour (Ajzen & Fishbein, 1980) the individual's attitudes toward a specific behaviour, the subjective norms, and the perceived behavioral control are the three parameters of his/her intention to perform that behaviour. Furthermore, attitudes are referred to a person's disposition to approach or avoid something (a person, an idea, a disability, a behaviour, etc.) and constitute the key for the behavioral change towards people with disabilities (Sherrill, 2004). It should be mentioned here that, as the study of Tsorbatzoudis and Emmanoulidou (2005) showed,

students' attitudes toward moral behaviour were significant predictors (54%) of their intention towards moral behaviour.

Therefore, attitudes, aggressive and social behavior are three socially developmental parameters, which are important indexes for children's interactions in the educational framework – especially in cases of schools with inclusive settings. Their assessment is important as through the latter teachers could draft conclusions about the nature and the frequency of children's interpersonal relations and the relative problems the latter affront during these interactions; then teachers could utilize these information in order to improve classmates' social interactions as well as their personal social development which in turn would lead to more positive behaviours and less problematical ones in the educational framework.

#### *Empirical findings*

Typical school students' attitudes toward disability influence their behavioural intentions to befriend and interact with classmates who display some type of disability and severely affect the social and emotional health and the longitudinal positive adjustment of the latter (Gilmore & Farina, 1989). However, understanding children's development of positive or negative attitudes is not a simple procedure (Scheepstra et al., 1999), as both perceptions and attitudes are acquired under the impact of many parameters, like parents' and educators' beliefs (Nikolarazi, Kumar, Favazza, Sideridis, Koulousiou, & Riall, 2005), curriculum and school environment (Nikolarazi & Reybekiel 2001), and direct and indirect experiences with incidents and people, such as contact with children with SEN (Diamond et al., 1997; Favazza & Odom, 1997).

Furthermore, it is crucial to this point to consider that perception for disability is affected by age. As in Hodkinson's study (2007) was showed, primary school students perceive disability as physical one. Hence, research on attitudes of primary education students could be done in the frame of physical education (PE), since on one hand this subject is characterized through intensive interactions among all pupils with and without disabilities and on the other hand a physical disability is more apparent throughout physical activities comparing with other educational subjects (for example math, history etc.). Therefore, the evaluation of students' attitudes toward disability in PE could be more representative.

In general, the majority of studies supports that typical class students' coexisting with classmates with some type of disability leads to adoption from the former positive attitudes towards the latter (Gash & Coffey, 1995; Kishi & Meijer, 1994; Laws & Kelly, 2005; Lipsky & Gartner, 1995; Margalit, Mioduser, Al-Yagon, & Neuberger, 1997; Nikolarazi & Reybekiel, 2001; Nikolarazi et al., 2005; Rapier, Adelson, Carey, & Croke, 1972; Roberts & Lindsell, 1997; Roberts & Smith, 1999; Shelvin & O'Moore, 2000; Siperstein, Bak, & O'Keefe, 1988). Furthermore, in a more recent study, Cambra and Silvestre, (2003) have confirmed the important role of coexistence, between children with typical development and their classmates with disability, regarding the conception that first configure for the seconds. Therefore, inclusion seems to have a positive influence on attitudes and perceptions of students of typical class towards their classmates with SEN. On the contrary, a series of other studies reports that inclusion has no or even negative influence on the adoption of positive attitudes of students towards their classmates with SEN (Gotlieb, Cohen, & Goldstein, 1974; Hodkinson, 2007; Nowicki & Sandieson, 2002; Scheepstra, Nakken, & Pijl, 1999; Siperstein, Parker, Bardon-Norins, Widaman, 2007). Moreover, most studies examining students' attitudes towards children with disabilities and SEN in the framework of PE showed that these attitudes were positive (Block, 1995; Butler & Hodge, 2001; Loovis & Loovis, 1997; Panagiotou, Evaggelinou, Doulkeridou, Mouratidou, & Koidou, 2008). Yet, Ellery and Rauschenbach (2000) supported that inclusion of students with disabilities in PE led to the adoption of negative attitudes. As it can be seen, the role of inclusion on students' attitudes toward disability has been examined thoroughly; however the findings resulted from these studies are bivalent, so that it is still unclear whether coexistence of children with and without disabilities change positively the attitudes toward disability.

Similar contradictory results have been found concerning the question whether the two genders differ in their attitudes towards disability. On one hand, a number of relevant studies reported that girls, compared to boys, adopt more positive attitudes towards their classmates with SEN (Hodkinson, 2007; Krajewski & Flaherty, 2000; Nowicki & Sandieson, 2002; Siperstein & Chatillon, 1982; Townsend, Wilton, & Vakilirad, 1993). On the other hand, other studies supported that there was no significant gender difference (Abrams, Jackson, & Claire, 1990; Cohen & Lopatto, 1995; Cohen, Nabors, & Pierce, 1994; Colwell, 1998; Diamond, 2001; Diamond et al., 1997; Nikolarazi et al., 2005). Therefore, the impact of

gender on students' attitudes toward disability needs further study, since there are contradictory findings.

Regarding the empirical findings for social development, relevant research revealed the positive impact of children's without disabilities coincidence in the classroom with peers with disabilities and SEN on different aspects of social competence/behaviour. More specifically, a series of studies reported that students who coexist with children with SEN develop empathy and acceptance of personal differences (Diamond, 2001; Diamond et al., 1997; Favazza et al., 2000; Helmstetter et al., 1994; Hepler, 1998; Lieber et al., 1998), enhance their consciousness and their responsibility towards other kids' needs (Frederickson et al., 2007; Peck et al., 2004) and acquire better knowledge regarding disability (Diamond, 2001; Diamond et al., 1997; Favazza et al., 2000). In addition, inclusion's positive implications on social development of typical class students are reported also in studies where respective intervention programs were implemented (Frederickson & Turner, 2003; Frederickson, Dunsmuir, Lang, & Monsen, 2004; Vaughn, Elbaum, Schumm, & Hughes, 1998). Therefore, it seems that inclusive settings in the educational framework promote the social behaviours of students with and without SEN and disabilities.

Furthermore, the examination of gender differences concerning aggressive behaviour (one parameter of social development) in educational frameworks, revealed contradictory result. Some studies showed that boys tend to be more aggressive than girls (Block, 1983; Crick & Grotpeter, 1995; Farmer, Farmer, Estell, & Hutchins, 2007; Kanfman, Jaser, Vaughan, Reynolds, Donato, Bernard, & Hernandez-Brereton, 2010; Tomada & Schneider, 1997; Zegarra, Barra, Marques, Berlanga, & Dallas, 2009). However, others supported that both girls and boys display equally levels of aggressive behaviour (Crick & Grotpeter, 1995; Kuppens, Grietens, Onghena, Michiels, & Subramanian, 2008). Moreover, several other studies claimed that both girls and boys are aggressive but tend to exhibit distinct forms of aggression. Specifically, boys appear more physically and verbally aggressive than girls (Coie & Dodge, 1998; Giles & Heyman, 2005; Prinstein, Boergers, & Vernberg, 2001), but girls are expected to exhibit more relational aggression (Crick, 1995; Crick & Werner, 1998; French, Jansen, & Pidada, 2002; Galen & Underwood, 1997; Giles & Heyman, 2005; Paquette & Underwood, 1999; Xie, Farmer, & Cairns, 2003). In addition, as Turner's study (1991) revealed, insecure boys tend to behave in a different manner during peer interactions compared to insecure girls: boys display more aggression, disruption, assertion, control, and attention-seeking, while girls are less assertive and controlling, and express a more positive behavior and compliance. Moreover, gender is not a significant factor for predicting insecurity about self in children and adolescents (Jacobsen & Hofmann, 1997).

#### *Aims and hypotheses*

From the literature reviewed so far it seems that although there is substantial evidence concerning the role of gender and inclusion on students' attitudes toward disability, the findings are bivalent. The same goes for the effect of gender on children's aggressive behaviour. In addition, although there were empirical research concerning the inclusion and several aspects of social behaviours, none of them examined aggression and/or social insecurity. Therefore, more research is needed in order these topics to be clarified. Hence, the purpose of the present study was to examine whether there are differences between gender and inclusion settings in students' aggressive and social insecure behaviour and their attitudes toward disability. Since the findings of previous relevant research were bivalent, no specific hypotheses were set on the role of gender and type of school (with or without inclusive settings) on the social parameters examined in our study.

#### **Method**

##### *Participants*

The overall sample comprised 658 students without SEN, of fifth and sixth grade ( $M_{age}=11\pm 1$  years) of 15 primary schools (ten urban and five rural). Three hundred and six of the participants were boys and the remaining 352 were girls. Seven schools of them implemented inclusive settings (which means that their students with or without SEN coexisted in all educational lessons, except math and Greek language), while the rest 8 schools were typical. Three hundred and five students (149 boys, 156 girls) attended the typical schools (i.e. without inclusive setting). The rest 353 of the students (156 boys, 197 girls) attended the schools with inclusive settings and coexisted during physical education – among other lessons- with classmates with SEN; the latter had different forms of disability, like learning difficulties, mental retardation and motor disabilities (one student on a wheelchair, one student with severe vision impairment, 11 students with mental retardation and 30 students with learning difficulties).

### *Measures*

Four scales were used to assess students': (a) demographic characteristics, (b) attitudes toward disability, (c) aggressive behaviour, and (d) social insecure behaviour. The first two questionnaires were completed by the participants, with an exception concerned the type of school (which is a demographic characteristic), which was answered by the administrator of the elementary educational office. Those questionnaires concerned students' aspects of social behaviour (i.e. aggression and social insecurity) were completed by the teachers separately for each student.

*Demographic characteristics.* The demographic questionnaire regarded age, gender, class (5<sup>th</sup>, 6<sup>th</sup>), and type of school (with or without inclusive settings). More specifically, concerning the type of school, the researchers - before visiting the schools participated in the study - were informed by a list conducted from the respective administrator, which school was with inclusive setting and which was not.

*Attitudes toward disability.* In order to assess children's attitudes towards students with disabilities during physical education the Children's Attitudes Towards Integrated Physical Education Revised (CAIPE-R) (Block, 1995) was used. CAIPE-R includes some personal attributes, for example, having a friend or family member with a disability or having someone with a disability in a regular education class. Furthermore, there is a drawing of a student, John, in a wheelchair and a text follow with the description of the child. The questionnaire is consisted of 13 items. The first 2 items are comprehension questions and the other 11 items are classified in two factors: a) general statements for having a student with disability in regular physical education (6 items, example item: 'If we would play a team sport like basket, it would be OK if I have John in my team') and b) specific statements for eliciting students' reactions to modifications that would accommodate John in a basketball game (5 items, example items: 'It would be OK to allow John shoot the ball in a lower racket?'). Answers were given in a four-point Likert scale: *no, rather no, rather yes, yes*, with four corresponding on most positive and one on most negative attitude. Therefore, the most negative total score (i.e. the most negative attitudes towards disability) would be 11 (1 x 11 items), while the most positive score would be 44 (4 x 11 items).

*Aggressive behaviour.* The Checklist of Aggressive Behaviour (CAB) by Peterman and Peterman (2001; Mouratidou et al., 2007 for Greek version) was used in order to assess students' aggressive behaviour. The CAB is consisted of 14 items comprising three subscales: a) *verbal behaviour* (example item: *Child screams, scolds, and insults adults and children*), b) *non verbal behaviour* (example item: *Child eats his nails, pulls his hair, hits his head*) and c) *positive behaviour* (example item: *Child is characterized by readiness of cooperation and compromise*). The items assessing positive behaviour in CAB are inverted. Answers were given in a five-point Likert scale, ranging from *never appears* (1) to *always appears* (5).

*Social insecure behaviour.* The Checklist of Social Insecure Behaviour (CSIB) by Peterman & Peterman (2003; Mouratidou et al., 2007 for Greek version) was used in the present study to assess students' social insecure behaviour. CSIB is consisted of 16 items, which are classified in five factors: a) *verbal reactions* (example item: *Child cannot complete a word or a sentence with coherence*), b) *body language* (example item: *Child's hands shake, eats his/her pencil and/or his/her nails, plays with his/her hands nervously*), c) *activities* (example item: *Child quits when he/she fails in a game or when he/she does not correspond to a social task*), d) *social contact* (example item: *He/she does not participate in any group of playing children, refuses to correspond to a social invitation*) and e) *self-defence* (example item: *He/she can put logical demands, he/she can express his/her view or use critic*). The self-defence items in CSIB are reverse-scored. Answers were given in a five-point Likert scale, ranging from 1 (*never appears*) to 5 (*always appears*).

For both aforementioned checklists a composite score results from teachers' evaluation regarding children's behaviour. A low total score reveals high positive behaviour, while a high score indicates high negative social behaviour (in table 1 the interpretation of the aggressive and/or social insecure behaviour, according to the total score respectively, is represented). Furthermore, both checklists were chosen since, according to Petermann and Petermann (2001; 2003), are appropriate for clinical and/or educational assessments in children in the age of elementary school.

**Table 1:**  
**Assessment of Checklist of Aggressive Behaviour (CAB), and Checklist of Social Insecure Behaviour (CSIB)**

CAB / CSIB	Assessment of behaviour
14-21	No problematical behaviour. Seldom apparent
22-35	Most times no problematical behaviour. Sometimes apparent
36-49	Behaviour that appears sometimes or/and regularly
50-63	Particularly apparent behaviour. It is observed in many circumstances
64-70	Excessively apparent behaviour

#### *Procedure*

The demographic questionnaire and the CAIPE-R were completed from all the participants, in their classes and under the researchers' supervision. The teachers of the students, as well as their classmates with SEN were not present, while two of the investigators remained during the completion to help with any questions or problems that arose. In the beginning, it was emphasized to all students that the questionnaires did not evaluate their educational progress and that there were no right or wrong answers. Moreover, it was emphasized the importance of working individually. Further, the students were assured that their responses were confidential and anonymous. For CAIPE-Rs and demographic questionnaire's completion students were engaged for about one teaching hour.

CAB and CSIB were completed by the teachers separately for each student, apart from teaching hours. They had been given instructions earlier for the completion for both checklists by the investigators. No difficulties emerged as far as answering the items of all questionnaires. Finally, in order all four questionnaires to be corresponded with each other, and students' anonymity to be ensured, a code was utilized instead of their names (the initial of the first and last name, the class grade and the initial of teacher's last name).

#### *Data analysis*

The effects of gender (male, female) and the type of school (with or without inclusive settings) on the scholars' social parameters, were examined with a 2(sex) x 2(type of school) ANOVA, where attitudes toward disability, aggressive and social insecure behaviour functioned as the dependent variable in each case. In order to investigate the significance of the differences between the group means t-tests for independent samples were used. In all analyses significance was set at  $p < .05$ .

### **Results**

#### *Descriptive statistics*

Descriptive statistics of the study's variables are shown in Table 2. Regarding the evaluation of students' social developmental aspects, results showed that levels of aggressive and social insecure behaviour were low. Particularly, the mean score in CAB was 22.35 (SD = 8.07). Similarly, the low mean score was found in CSIB (M = 25.91, SD = 9.49). Regarding the attitudes toward disability of students who attended primary schools, results showed that the score was high (M = 38.16, SD = 4.52).

**Table 2:**  
**Means and Standards Deviations of Aggressive and Social Insecure Behaviour and Attitudes**

	Subgroup without inclusive setting			Subgroup with inclusive setting			Total		
	M	SD	N	M	SD	N	M	SD	N
<b>Aggressive behaviour</b>	22.71	8.44	299	22.03	7.74	346	22.35	8.07	645
Boys	24.55	9.7	146	24.52	8.83	155	24.54	9.25	301
Girls	20.96	6.6	153	20.01	6.03	191	20.43	6.3	344
<b>Social insecure behaviour</b>	25.20	9.01	281	26.58	9.91	294	25.91	9.49	575
Boys	25.40	9.25	137	27.46	10.51	132	26.41	9.	269
Girls	25.01	8.79	144	25.87	9.36	162	25.46	9.09	306
<b>Attitudes</b>	38.75	4.74	304	37.65	4.26	349	38.16	4.52	653
Boys	39.05	4.17	149	37.44	4.71	155	38.23	4.52	304
Girls	38.46	5.23	155	37.81	3.87	194	38.10	4.53	349

*Inclusion, gender, and parameters of social development*

The results of the 2 X 2 ANOVA on aggressive behaviour revealed a significant main effect on gender [ $F(1,641) = 42.849, p < .001$ ]. No main effect for inclusion or an interaction between gender and inclusion was found for pupils' aggressive behaviour [ $F(1,641) = .614, p > .05$  and  $F(1,641) = .551, p > .05$  respectively]. Follow up, independent samples t-test on gender revealed [ $T(518.412) = 6.494, p < .001$ ] that girls were less aggressive ( $M = 20.43$ ) than boys ( $M = 24.54$ ).

With respect to insecure behaviour, the results of the 2 X 2 ANOVA showed no significant main effect for gender and inclusion or significant interaction between them [ $F(1,641) = 3.366, p > .05$  and  $F(1,641) = 1.569, p > .05$  and  $F(1,641) = .569, p > .05$  respectively].

Finally, the results of the 2 X 2 ANOVA on attitudes revealed a significant main effect on inclusion [ $F(1,649) = 10.194, p < .001$ ]. No significant main effect on gender or a significant interaction between gender and inclusion was found on pupils' attitudes [ $F(1,649) = .097, p > .05$  and  $F(1,649) = 1.836, p > .05$  respectively]. Follow-up independent samples t-test revealed [ $T(651) = -3.128, p < .01$ ] that pupils attending typical schools had more positive attitudes toward disability ( $M = 38.75$ ) compared to their mates who coexisted with classmates with SEN ( $M = 37.65$ ).

**Discussion**

The aim of the present study was the examination of whether there are gender and type of school (with or without inclusive settings) differences on pupils' aggressive and social insecure behaviour and their attitudes toward disability. Regarding social developmental parameters, results showed that students of primary school with or without inclusive settings are characterised of low aggressive and social insecure behaviour and high positive attitudes toward disability (independently whether the pupils participate in typical schools or in schools with inclusive settings). Specifically, from their scores in CAB and CSIB it is evident that any form of aggressiveness, that pupils perform, is characterised as no problematic and that behaviours as screams, shooting objects, slashing people and objects, rarely appear. Similar results were found for social insecure behaviour. Behaviours like silence, stutter, crying, reduced social contact and incapacity of self-defence, appear sometimes and in most of the cases are not problematic. These findings could probably be attributed to the power of school as a mean for children's socialization; in the educational framework the interaction between peers, the instructional teaching methods, and the organizational dimensions promote pupils' social competencies and can determine their attitudes toward other children and/or adults (Roeser, Eccles, & Sameroff, 2000; Shelvin & O'Moore, 2000; Siperstein et al., 1988; Wentzel, 1991).

Concerning the question whether there are inclusion and gender differences on pupils' aggression, social insecurity and attitudes towards disability, the results of the analysis revealed diverse findings: significant gender differences were found in only one parameter of social development that is aggressive behaviour. Nevertheless this fact does not apply for students' displaying social insecure behaviour and for their configuration of attitudes toward their classmates with disability and SEN. However, regarding inclusion, differences were found only for pupils' attitudes toward disability but not their aggressive and social insecure behaviours. Moreover, the interaction between gender and inclusion was not significant for all three aforementioned variables of the study.

More specifically, results showed that boys tend to be more aggressive than girls (independently whether the former attended a typical school or a school with inclusive settings). The findings concerning the effect of gender on scholars' aggression are in contrast with those reported by Kuppens's et al. (2008), which supported that there are no differences between the two genders regarding aggressiveness. Yet, they are in accordance with a series of previous studies (Block, 1983; Crick & Grotpeter, 1995; Farmer et al., 2007; Kanfman et al., 2010; Tomada & Schneider, 1997; Zegarra et al., 2009), which have shown that boys display higher verbal and non verbal aggressive levels than girls. This difference between the two genders could be attributed to the different social norms concerning the social behaviour of the gender (Campbell, Muncer, & Coyle, 1991; Shaffer, 2009), since generally it is expected that boys will be more aggressive than girls. Yet, further research is needed for substantiating such an explanation.

Moreover, results imply that the type of school doesn't change the existing difference in aggressive behaviour between male and female pupils. Yet, there is no clear explanation for such findings, which are in contrary with those reported by previous studies indicating that children who attend a school with inclusive setting are characterized by higher levels of social development (Diamond, 2001; Favazza et al., 2000; Frederickson et al., 2007; Helmstetter et al., 1994; Hepler, 1998; Lieber et al., 1998; Peck et

al., 2004). However our results could be due to the fact that inclusive settings in the schools participated in our study had been implemented for a short term period of seven months (earlier these schools were typical). It is commonly accepted that it needs time in order changes on children's aspects of social development to be accomplished; on the contrary, in short time frames, as in our case, it is expected that a person would display negative behaviours as defensive mechanisms towards the 'different' (Crick & Dodge, 1994). Probably, more methodical plans, wider informing about disabilities and more available time are required in order for children to get familiar with disability and interact more efficiently with their classmates who appear a type of disability. In addition, it must be reported that the aforementioned studies examined other parameters of social development, such as acceptance of difference, empathy, higher level of responsibility and acceptance of disabilities, and not aggression and/or social insecurity.

In addition, results have shown that the main effects of inclusion and gender, as well as the interaction between them weren't significant for students' social insecure behaviour. So far there is no research evidence examining the role of sex and type of school on the above parameter of social behaviour. Thus, it is difficult to explain such findings. A probably interpretation could be found in conjunction with the aforementioned findings of the present study, which concern the role of the school as a medium of socialization and the short term implementation of the inclusive settings in the particular schools. Clearly, more research is needed concerning the effect of inclusion and/or gender on scholars' social insecurity.

Furthermore, results indicated that there are no gender differences with respect to pupils' attitudes towards their classmates with disability. Therefore, both male and female pupils are characterized from similar attitudes towards disability. Previous research has shown that girls have more positive attitudes toward disability compared to their male classmates (Hodkinson, 2007; Nowicki & Sandieson, 2002). However other relevant studies indicated that gender is not a significant factor for children's attitudes towards their classmates with SEN (Diamond, 2001; Diamond et al., 1997; Nikolarazi et al., 2005). It seems that further research on this topic is necessary in order to be clarified whether girls adopt more positive attitudes toward disability in comparison with their classmates who are boys.

In addition, our results concerning the role of inclusion on pupils' attitudes toward disability indicated that children who attend schools with inclusive settings differ significantly regarding their attitudes compared to those students who attend typical schools, but the attitudes of the former are more negative than those of the latter. This means that inclusion doesn't improve typical pupils' perceptions of their classmates with disabilities and SEN. This finding is in contrast with other studies which supported that the coexistence of children with and without disabilities enforces positive perception of persons with disability (Butler & Hodge, 2001; Laws & Kelly, 2005; Margalit et al., 1997; Nikolarazi et al., 2005; Roberts & Smith, 1999; Shelvin & O'Moore, 2000). However, our findings are consistent with several other studies (Ellery & Rauschenbach, 2000; Hodkinson, 2007; Nowicki & Sandieson, 2002; Scheepstra et al., 1999; Siperstein et al., 2007). These studies claimed that inclusion does not lead to the adoption of more positive attitudes towards disability and moreover, in some cases, it has even a negative influence on students' attitudes towards their classmates with SEN (Gotlieb et al., 1974; Hodkinson, 2007; Nowicki & Sandieson, 2002; Scheepstra et al., 1999; Siperstein et al., 2007). Probably, as in case of aggressive behaviour, the short term implementation of inclusive settings in the participated schools, is the reason for these findings of our study. Hence, further research deems necessary in order to be clarified whether inclusion is really effective for the educational process for all students (with or without disabilities).

### **Conclusions**

The results of the present study cannot be generalized for all pupils without disabilities, who attend educational frameworks with inclusive settings. This inability is due to the fact that there was not unevenness regarding the sample of the study and the latter was conducted only in schools of a suburban district, where the institution of inclusion was short-term.

Finally, from the results, it can be concluded that inclusion per se, as well as gender, do not work positively regarding students' aggression, social insecurity and attitudes toward disability. This means that in order students' with disabilities and SEN inclusion to be successful and useful for all students, it is crucial that practices of inclusion, teaching and implementation to be considered and well controlled for the avoidance of whichever negative effects (both for students with and without disabilities). Hence, future research could examine, through intervening programs, issues concerning pupils' social behaviour and attitudes toward disability in educational frameworks, where inclusive settings function with a more

structured manner and the interaction of pupils with and without disabilities take place systematically and continuingly.

### References

- Abrams, D., Jackson, D., & Claire, L. S. (1990). Social identity and the handicapping functions of stereotypes: Children's understanding of mental and physical handicap. *Human Relations*, 43, 1085–1098.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Allport, G. W. (1935). Attitudes. In C. Murchinson (Ed.), *A handbook of social psychology* (pp. 798–844). Worcester, MA: Clark University Press.
- Asher, S. R. (1983). Social competence and peer status: Recent advances and future directions. *Child Development*, 54, 1427–1434.
- Block, J. H. (1983). Differential premises arising from differential socialization of the sexes: Some conjectures. *Child Development*, 54, 1335–1354.
- Block, E. M. (1995). Development and Validation of the Children's Attitudes Toward Integrated Physical Education – Revised (CAIPE-R) Inventory. *Adapted Physical Activity Quarterly*, 12 (1), 60–77.
- Block, E.M. (2007). *A teacher's guide to including students with disabilities in general physical education* (3<sup>rd</sup> ed.). Baltimore: Paul H. Brookes.
- Butler, S. R., & Hodge, R. S. (2001). Inclusive physical education: attitudes and behaviors of students. *Research Quarterly for Exercise and Sport, Supplement, Abstracts of Completed Research*, 72 (1), A-99.
- Cambra, C., & Silvestre, N. (2003). Students with special educational needs in the inclusive classroom: social integration and self-concept. *European Journal of Special Needs Education*, 18 (2), 197–208.
- Campbell, A., Muncer, S., & Coyle, E. (1991). Social representation of aggression as an explanation of gender differences: A preliminary study. *Aggressive Behavior*, 18, 95–108.
- Citrome, L. & Volanka, J. (2001). Aggression and violence in patients with schizophrenia. In M. Hawng, & P. Bermanzohn (Ed.), *Schizophrenia and comorbid conditions. Diagnosis and treatment* (pp. 149–185). Washington, DC: American Psychiatric Press Inc.
- Cohen, T. & Lopatto, D. (1995). Preschool children's comprehension of the word 'handicapped'. *Perceptual and Motor Skills*, 81, 747–750.
- Cohen, R., Nabors, L. & Pierce, K. (1994). Preschooler's evaluations of physical disabilities: A consideration of attitudes and behavior. *Journal of Pediatric Psychology*, 19, 103–111.
- Colwell, C. (1998). Effects of information on elementary band students' attitudes toward individuals with special needs. *Journal of Music Therapy*, 35, 19–33.
- Coie, J. D., & Dodge, K. A. (1998). Aggression and antisocial behavior. In W. Damon & N. Eisenberg (Ed.), *Handbook of child psychology 3: Social, emotional and personality development* (pp. 779–862). New York: Wiley & Sons, Inc.
- Crick, N. R. (1995). Relational aggression: The role of intent attributions, feelings of distress, and provocation type. *Development and Psychopathology*, 7, 313–322.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin*, 115 (1), 74–101.
- Crick, N. R., & Grotpeter, J. K. (1995). Relational Aggression, Gender, and Social-Psychological Adjustment. *Child Development*, 66, 710–722.
- Crick, N. R., & Werner, N. E. (1998). Response decision processes in relational and overt aggression. *Child Development*, 69, 1630–1639.
- Diamond, K. (2001). Relationships among young children's ideas, emotional understanding, and social contact with classmates with disabilities. *Topics in Early Childhood Special Education*, 21, 104–113.
- Diamond, K., Hestenes, L., Carpenter, E., & Innes, F. (1997). Relationships between enrollment in an inclusive class and preschool children's ideas about people with disabilities. *Topics in Early Childhood Special Education*, 17, 520–537.
- Ellery, J. P., & Rauschenbach, J. (2000). Impact of disability awareness activities on nondisabled student attitudes toward integrated physical education with students who use wheelchairs. *Research Quarterly for Exercise and Sport, Supplement, Abstracts of Completed Research*, 71 (1), A-106.
- Erickson M. F., Sroufe L. A., & Egeland B. (1985). The relationship between quality of attachment and behavior problems in preschool in a high-risk sample. *Monographs of the Society for Research in Child Development*, 50 (1/2), 147–166
- Farmer, T. W., Farmer, E. M., Estell, D. B., & Hutchins, B. C. (2007). The developmental dynamics of aggression and the prevention of school violence. *Journal of Emotional and Behavioral Disorders*, 15 (4), 197–208.
- Favazza, P., & Odom, S. (1997). Promoting positive attitudes of kindergarten-age children towards

- people with disabilities. *Exceptional Children*, 63, 405-418.
- Favazza, P. C., Phillipsen, L., & Kumar, P. (2000). Measuring and promoting acceptance of young children with disabilities. *Exceptional Children*, 66, 491-508.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Readings MA: Addison-Wesley.
- Forlin, C., & Cole, P. (1994). Attributions of the social acceptance and integration of children with mild intellectual disability. *Australia and New Zeland Journal of Developmental Disabilities*, 20, 11-23.
- Frederickson, N., Dunsmuir, S., Lang, J., & Monsen J. J. (2004). Mainstream-special school inclusion partnerships: pupil, parent and teacher perspectives. *International Journal of Inclusive Education*, 8 (1), 37-57.
- Frederickson, N., Simmonds, E., Evans, L., & Soulsby, C. (2007). Assessing the social and affective outcomes of inclusion. *British Journal of Special Education*, 34 (2), 105-115.
- Frederickson, N., & Turner, J. (2003). Utilizing the classroom peer group to address children's social needs: an evaluation of the circle of friends intervention approach. *The Journal of Special Education*, 36, 234-245.
- French, D. C., Jansen, E. A., & Pidada, S. (2002). United States and Indonesian children's and adolescents' reports of relational aggression by disliked peers. *Child Development*, 73, 1143-1150.
- Galen, B. R., & Underwood, M. K. (1997). A developmental investigation of social aggression among children. *Developmental Psychology*, 33, 598-600.
- Gash, H., & Coffee, D. (1995). Influence on attitudes towards children with mental handicap. *European Journal of Special Needs*, 10, 1-16.
- Giles, J. W., & Heyman, G. D. (2005). Young children's beliefs about the relationship between gender and aggressive behavior. *Child Development*, 76, 107-121.
- Gilmore, J. L., & Farina, A. (1989). The social reception of mainstreamed children in the regular classroom. *Journal of Mental Deficiency Research*, 33, 301-311.
- Gottlieb, J., Cohen, L., & Goldstein, L. (1974). Social contact and personal adjustment as variables relating to attitudes toward EMR children. *Training School Bulletin*, 71 (1), 9-16.
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, 58 (6/7), 466-474.
- Helmstetter, E., Peck, C. A., & Giangreco, M. F. (1994). Outcomes of interactions with peers with moderate or severe abilities. *Journal of the Association for persons with Severe Handicaps*, 10, 263-276.
- Hepler, J. B. (1998). Social integration of children with emotional disabilities and nonhandicapped peers in a school setting. *Early Child Development and Care*, 147, 99-115.
- Hodkinson, A. (2007). Inclusive education and the cultural representation of disability and Disabled people: recipe for disaster or catalyst of change? An examination of non-disabled primary school children's attitudes to children with disabilities. *Research in Education*, 77, 56-76.
- Jacobsen, T., & Hofmann, V. (1997). Children's attachment representations: Longitudinal relations to school behavior and academic competency in middle childhood and adolescence. *Developmental Psychology*, 33 (4), 703-710.
- Kanfman, J. S., Jaser, S. S., Vaughan, E. L., Reynolds, J. S., Donato, J., Bernard, S. N., & Hernandez-Brereton, M. H. (2010). Patterns in office referred data by grade, race/ethnicity and gender. *Journal of Positive Behavior Interventions*, 12 (1), 44-54.
- Kishi, G. S., & Meijer, L. H. (1994). What children report and remember: a six-year follow-up of the effects of social contact between peers with and without severe disabilities. *Journal of the Association of Persons with Severe Handicaps*, 19, 277-287.
- Kostelnik, M., Whiren, A. P., Soderman, A. K., & GreGory, K. (2005). *Guiding children's social development: Theory to practice*. New York: Thomson Delmar Learning.
- Krajewski, J. J., & Flaherty, T. (2000). Attitudes of high school students toward individuals with mental retardation. *Mental Retardation*, 38, 154-162.
- Kuppens, S., Grietens, H., Onghena, P., Michiels, D., & Subramanian, S. V. (2008). Individual and classroom variables associated with relational aggression in elementary-school aged children: A multilevel analysis. *Journal of School Psychology*, 46, 639-660.
- Laws, G., & Kelly, E. (2005). The attitudes and friendship intentions of children in United Kingdom mainstream schools towards peers with physical or intellectual disabilities. *International Journal of Disability, Development and Education*, 52 (2), 79-99.
- Lieber, J., Capell, K., Sandall, S., Wolfberg, P., Horn, E., & Bechman, P. (1998). Inclusive preschool programs: Teacher beliefs and practices. *Early Childhood Research Quarterly*, 13, 87-106.
- Lipsky, D. K., & Gartner, A. (1995). The evaluation of inclusive education programs. *Bulletin of National Center of Educational Restructuring and Inclusion*, 2, 1-9.

- Loovis, E. M., & Loovis, C. L. (1997). A disability of awareness unit in physical education and attitudes of elementary school student. *Perception and Motor Skills*, 84 (3), 768-770.
- Margalit, M., Mioduser, D., Al-Yagon, M., & Neuberger, S. (1997). Teachers' and peers' perceptions of children with learning disorders: consistency and change. *European Journal of Special Needs Education*, 12, 305-316.
- Mouratidou, K., Barkoukis, V., Zahariadis, P., & Arampatzi, A. (2007). Evaluation of students' social ability: Greek version of checklists for aggressive behaviour and social insecurity in elementary education. *Social Psychology of Education*, 10, 495-508.
- Ministry of Education and Religion Affairs. (2003). *Analytical educational programs*. Athens: Greece.
- Ministry of Education and Religion Affairs. (2008). *Special education of persons with disability or special educational needs*. Athens: Greece.
- Nikolarazi, M., & Reybekiel, N. (2001). A comparative study of children's attitudes towards deaf children, children in wheelchairs and blind children in Greece and in the U.K. *European Journal of Special Needs Education*, 16, 167-182.
- Nikolarazi, M., Kumar, P., Favazza, P., Sideridis, G., Koulousiou, D., & Riall, A. (2005). A cross-cultural examination of typically developing children's attitudes toward individuals with special needs. *International Journal of Disability, Development and Education*, 52 (2), 101-119.
- Nowicki, E. A., & Sandieson, R. (2002). A meta-analysis of school-age children's attitudes towards persons with physical or intellectual disabilities. *International Journal of Disability, Development and Education*, 49 (3), 243-265.
- Panagiotou, A. K., Evaggelinou, C., Doukeridou, A., Mouratidou, K. & Koidou, E. (2008). Attitudes of 5<sup>th</sup> and 6<sup>th</sup> grade Greek students toward the inclusion of children with disabilities in physical education classes after a paralympic education program. *European Journal of Adapted Physical Activity*, 1(2), 31-43.
- Papadopoulos, N. (1994). *Λεξικό της ψυχολογίας* (Dictionary of Psychology). Athens.
- Paquette, J. A., & Underwood, M. K. (1999). Gender differences in young adolescents' experiences of peer victimization: Social and physical aggression. *Merrill-Palmer Quarterly Journal of Developmental Psychology*, 45, 242-266.
- Parker, J. G., & Asher, S.R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin*, 102, 357-389.
- Peck, C. A., Staub, D., Gallucci, C., & Schwartz, I. (2004). Parent perception of the impacts of inclusion on their nondisabled child. *Research & Practice for Persons with Severe Disabilities*, 29 (2), 135-143.
- Petermann, F., & Petermann, U. (2001). *Training mit aggressiven Kindern* (10<sup>te</sup> Aufl.) (Training with aggressive children). Weinheim: Beltz.
- Petermann, F., & Petermann, U. (2003). *Training mit sozial unsicheren Kindern* (8<sup>te</sup> Aufl.) (Training with social insecure children). Weinheim: Beltz.
- Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Clinical Child Psychology*, 30, 479-491.
- Rapier, J., Adelson, R., Carey, R., & Croke, K. (1972). Change in children's attitudes toward the physically handicapped. *Exceptional Children*, 39, 219-223.
- Roberts, C. M., & Lindsell, J. S. (1997). Children's attitudes and behavioural intentions toward peers with disabilities. *International Journal of Disability, Development and Education*, 44, 133-145.
- Roberts, C. & Naylor, F. (1994). Loneliness and causal attributions about peer rejection in integrated students with mild intellectual disabilities. In *Children's peer relations: Conference proceedings* (pp. 305-316). Adelaide: The University of South Australia, The Institute of Social Research.
- Roberts, C. M., & Smith P. R. (1999). Attitudes and behaviour of children towards peers with disabilities. *International Journal of Disability, Development and Education*, 46, 35-50.
- Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (2000). School as a context of early adolescents' academic and socio-emotional development: a summary of research findings. *The Elementary School Journal*, 100 (5), 443-471.
- Rose-Krasnor, L. (1997). The nature of social competence: A theoretical review. *Social Development*, 6 (1), 111-135.
- Rubin, K. H. (1983). Recent perspectives on social competence and peer status: Some introductory remarks. *Child Development*, 56, 253-264.
- Sandstrom, M. J., Cillessen, A. H., & Eisenhower, A. (2003). Children's appraisal of peer rejection experiences: Impact on social and emotional adjustment. *Social Development*, 12 (4), 530-550.
- Schaffer, H. P. (1996). *Social development*. Oxford: Blackwell Publishers.
- Scheepstra, A. J.M., Nakken, H., & Pijl, S.G. (1999). Contacts with classmates: the social position of pupils with Down's syndrome in Dutch mainstream education. *European Journal of Special Needs*

*Education*, 14 (3), 212-22.

Shaffer, D. R. (2009). Sex differences in aggression. In *Social and personality development* (pp. 303-316). USA: Wadsworth Cengage Learning.

Sherrill, C. (2004). *Adapted Physical Activity, Recreation, and Sport: Crossdisciplinary and Lifespan*. New York: McGraw-Hill Companies.

Shevlin, M., & O' Moore, M.A. (2000). Fostering positive attitudes: reactions of mainstream pupils to contact with their counterparts who have severe/profound intellectual disabilities. *European Journal of Special Needs Education*, 15, 206-217.

Siperstein, G. N., Bak, J. J., & O'Keefe, P. (1988). Relationship between children's attitudes toward and their social acceptance of mentally retarded peers. *American Journal of Mental Retardation*, 93, 24-27.

Siperstein, G. N., & Chatillon, A. C. (1982). Importance of perceived similarity in improving children's attitudes toward mentally retarded peers. *American Journal of Mental Deficiency*, 86, 453-458.

Siperstein, G. N., Parker, R. C., Bardon-Norins, J., & Widaman, K. F. (2007). A National Study of Youth Attitudes toward the Inclusion of Students with Intellectual Disabilities. *Exceptional Children*, 73(4), 435-455.

Stainback, S. B., & Stainback, W. C. (1990). *Support networks for inclusive schooling: Independent integrated education*. Baltimore: Paul H. Brookes.

Turner P. J. (1991). Relations between attachment, gender, and behavior with peers in preschool. *Child Development*, 62, 1475-1488.

Tomada, G. & Schneider, B. H. (1997). Relational Aggression, Gender, and Peer Acceptance: Invariance Across Culture, Stability Over Time, and Concordance Among Informants. *Developmental Psychology*, 33 (4)601-609.

Townsend, M. A., Wilton, K. M., & Vakilirad, T. (1993). Children's attitudes toward peers with intellectual disability. *Journal of Intellectual Disability Research*, 37, 405-411.

Tsorbatzoudis, H., & Emmanouilidou, M. (2005). Predicting moral behavior in physical education classes: An application of the theory of planned behavior. *Perceptual and Motor Skills*, 100, 1055-1065.

Vaughn, S., Elbaum, B. E., Schumm, J. S., & Hughes, M. T. (1998). Social outcomes for students with and without learning disabilities in inclusive classrooms. *Journal of Learning Disabilities*, 31 (5), 428-436.

Wentzel, R. W. (1991). Social competence at school: Relation between social responsibility and academic achievement. *Review of Educational Research*, 61 (1), 1-24.

Xie, H., Farmer, T. W., & Cairns, B. D. (2003). Different forms of aggression among inner-city African-*Psychology*, 41, 355-375.

Zegarra, S. R., Barra, R. G., Marques, C. M., Berlanga, J. F., & Dallas, C. M. (2009). Behavioural gender differences in school relationships. *Psicothema*, 21, (3), 453-458.

Zoniou-Sideri, A. (1998). *Οι ανάπηροι και η εκπαίδευσή τους* (Persons with disabilities and their education). Athens: Ελληνικά Γράμματα.