

Evaluating Preschoolers' Social Skills: The Impact of a Physical Education Program from the Parents' Perspective

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Abstract

The purpose of this study was to investigate the parents' perceptions concerning the impact of a physical education program named ESPEC ('Early Steps' Physical Education Curriculum) on their children's social skills. This study's research design followed the 'concurrent triangulation strategy' of mixed method research. Based on this research design, parents participated in ESPEC evaluation providing both quantitative and qualitative data. The "Social Behavior Instrument" (SBI) was administered and 181 parents (87 from the control group and 94 from the experimental group) completed the SBI before and after the implementation of the ESPEC. For the qualitative data 16 randomly selected parents with children in the experimental group were interviewed. Results showed that no statistical differences were found between the control and experimental measures for all 18 items of SBI. The qualitative data provided a more insight view of the improvement of children's social skills. The overall picture, deriving from the results, showed that the implementation of a physical education program (ESPEC) had positive impact and improved various social behaviors and skills of preschoolers. This shows that physical education programs with their informal atmosphere and content constitute an ideal setting in which social skills can be developed. Also the participation of parents as valid and reliable external evaluators in intervention programs is further supported from the results of this study.

Keywords: children's social skills, early childhood education, physical education, evaluation, parents' perceptions

1. Introduction

Developing positive social skills can help young children make friends and succeed in school (Bikos & Gregoriadis, 2012; Elkinson & Elkinson, 2000; Gregoriadis, & Grammatikopoulos, 2013; Ladd 1990; Ladd, Kochenderfer, & Coleman, 1996; Masten, & Coatworth, 1998). Patten (1992), explains that 'no matter how gifted a child is physically or mentally, that child's happiness and success in life will also depend on his ability to get along with people' (p. 1). Likewise, many researchers suggest that children who lack social skills may need to be trained to enhance them (Gresham 1998; Gresham, & Elliott, 1990; Tsigilis, & Gregoriadis, 2008). Several training methods have been used to enhance and to teach children positive social skills (e.g., Elliott, & Ershler, 1990; Spence 2003; Lane, Wehby, Menzies, Doukas, Muntont, & Gregg, 2003; Lo, Loe, & Cartledge, 2002).

McClelland, Morrison, and Holmes, (2000) and McClelland and Morrison (2003), argued that there are specific social behaviours related to children's early school adjustment and academic achievement. They called them learning-related social skills, which are especially important for early school performance and transition to school and are developed between the ages of 3 to 5 years. The majority of early childhood curricula offer a variety of opportunities for enhancing social skills. Among the most suitable subjects for teaching social skills, could be physical education due to the frequent and varied interactions that take place among the students (Grammatikopoulos, Gregoriadis, Zachopoulou, 2012; Grineski, 1996; Tjeerdsma, 1999). Young children develop their social interaction ability and peer relationships through play and physical activities (Vidoni, 2007; Barbour, 1999; Bunker, 1991). Research indicated that physical activities provide face-to-face opportunities to develop children's positive social skills (e.g., Barbour, 1999; Dyson, 2001) through various interactions with others (sharing equipment, taking turns) (Quay, & Jacqui, 2008).

Research evidence suggests that quality physical education contribute positively to students' social and moral development (Hellison, & Martinek, 2006), fair play behaviour (Vidoni, & Ward, 2009), team building, cooperation, and development of social skills (Hunter, 2006; Kinchin, 2006). School physical education during childhood and adolescence has been associated with improvements in numerous physiological and psychological variables. While a growing body of literature has examined the relationship between physical education and social development for elementary and secondary students, there is limited research today that has explored this relationship within the context of early childhood education. However, the foundations of social behaviour are laid in the early years, and movement programs provide many of the first socialising experiences as children interact with others in their environment (Nichols, 1990). An alternative physical education curriculum, called "ESPEC" (Early Steps Physical Education Curriculum), was designed by the Early Steps Project team and implemented by twenty trained early educators, in order to develop children's positive social behavior and interpersonal interactions (Zachopoulou, Liukkonen, Pickup, & Tsangaridou, 2010; Zachopoulou, Tsangaridou, Pickup, Liukkonen, & Grammatikopoulos, 2007). The ESPEC was a part of the Early Steps Project, a European transnational project which was specifically designed to improve the quality of education for preschool aged children where? And was supported by a grant from the EU Socrates Program, Comenius 2.1 Action.

The emphasis of the ESPEC was to help children cooperate with others and respect individual differences. The provides children with opportunities for movement and play, in order to learn to interact positively with the members of a group, work in groups, share resources, space, ideas and roles and help others. For an in depth view of the lesson plans content refer to Zachopoulou, et al. (2007; 2010). The ESPEC incorporated a variety of teaching strategies, materials and equipment appropriate for all participating children, regardless of their individual differences. More specifically, the key-points of ESPEC were: learning through experimentation, monitoring each child's progress, consideration of children's interests and experiences, and encouragement of children's independence and responsibility. The program included weekly lesson plans where early educators had the opportunity to apply creative and interdisciplinary teaching. The children participated in 24 lessons, involving two 40-min lessons per week. The evaluation of the whole program incorporated pre- and post-measures from children, educators and parents through questionnaires, interviews, observation procedures from external assessors and every-day reflective journal which was kept by classroom educators (Grammatikopoulos, 2010).

The preschool years are characterized by phenomenal growth of children's capacities for communication, self-regulation, and internalization of behavior standards. A major part of children's behaviors relevant to their development in those areas is displayed in the context of the parent-child relationship (Hungerford, & Cox, 2006; Pantidos, Valakas, Vitoratos, Ravanis, 2010). This is one of the reasons why the evaluation provided by parents in the current study was an important part of the overall ESPEC evaluation. Parents played the role of external evaluators as they were not involved in the program. Thus, they were considered as a reliable source of information with no biases regarding the program effects. Additionally, parents can function as important agents who monitor social and movement skills and encourage children to engage in activities that promote their competence (Grammatikopoulos, Gregoriadis, Tsigilis, Zachopoulou, 2012; Williams et al., 2008). During early childhood, skills and interest in physical activity are founded within family and school contexts (Ferreira et al., 2006). Therefore, parents can contribute with observations of their children's behaviors throughout their daily routines. Another reason for including parents in this study is that an educational evaluation should try to include various sources of evaluation, such as students, educators, administration, parents, local community etc.

This study's design followed a mixed method research approach. Based on this research design, it was decided that parents should participate in ESPEC evaluation providing both quantitative and qualitative data. Data were collected and analyzed separately and 'mixing' of the results occurred in the interpretation phase. The purpose of this study was to investigate the parents' perceptions concerning the impact of the ESPEC on their children's social skills. Parents were asked to indicate any changes in specific social behaviors of their children through questionnaires. Moreover, parents were interviewed in order to contribute to a more detailed mapping of the improvement of their children's social skills.

2. Method

The curriculum of early childhood education in Greece includes a 40-45 min period of physical activities on a daily basis. The control and the experimental group derived from eight preschool classrooms from six randomly chosen urban preschool centers of Thessaloniki, Greece. Two preschool centers provided the four classrooms which operated as the control group and the other four preschool centers provided one classroom each for the experimental sample. Between the pre- and post-measures, children of the control group continued to follow their regular schedule. Research staff members supervised all the control group activities. Instead of their usual physical activities, children in the experimental group participated in the lessons of ESPEC. The lesson plans of ESPEC replaced the regular physical activities of the children twice a week. The 24 lesson plans designed in ESPEC were implemented during a three month period between March and May. ESPEC lesson plans were implemented by trained research staff members with the aid of classroom teachers.

2.1. Quantitative phase

Participants

The sample comprised 181 parents. Most were female (167 female, 14 male) with a mean age of 31.4 years old (age range= 24.3-40.8, \pm 4.9). There were 87 parents in the control group and 94 in the experimental group.

Instrument-Measures. For the purposes of the current research the "Social Behavior Instrument" (SBI) was designed and used by the Early Steps Project team (Zachopoulou, Liukkonen, Pickup, & Tsangaridou, 2010). This instrument is a newly designed tool based on the specific goals and objectives of the ESPEC program. It consists of 18 items regarding positive social behaviours that parents were asked to rate according to their occurrence in children's daily behaviour. SBI is a 6-point Likert scale ranging from 1 to 6, with an additional '0' score as an 'I do not know' option. The instrument's psychometric properties were tested initially by using exploratory factor analysis (Principal Axis Factoring) which resulted in two factors explaining 63.2% of the total variance. Cronbach's α for the 'social skills' and 'interpersonal skills' factors were .94 and .92 respectively (Grammatikopoulos, Trevlas, & Zachopoulou, 2007).

Data collection

The quantitative data were gathered from the parents of all participating children. Early childhood teachers administered the SBI questionnaire and all 181 parents completed the SBI before the implementation of the ESPEC. The same procedure was followed one week after the completion of the ESPEC. The questionnaires were completed in the preschool centers when parents came to pick up their children.

2.2. Qualitative phase

Participants

For a more detailed examination of the parents' perceptions regarding the impact of ESPEC on children's social behavior, qualitative data were collected. More specifically, 16 randomly selected parents with children in the experimental group were interviewed. Four parents from each participating preschool classroom were approached through the early educators and participated voluntarily. Most of them were female (11 female, 5 male) and their mean age was 30.9 years old.

Instrument – Measures

A semi-structured interview was designed to elicit the parents' perceptions of the implementation of ESPEC and the effect it had on their children's social skills.

The interview consisted of 8 open-ended questions regarding: (a) the parents' original impressions of the program, (b) their perceptions about the effect it had on their children, (c) their children's talk and narrations regarding their participation in the program, (d) their observations concerning changes in their children's behaviour or attitudes, (e) their recollection of other participating parents' comments regarding the program, (f) their children's feelings and predisposition regarding their participation to the program, (g) any additional observation about changes in their children's personality, characteristics, routines, etc., and (h) the parents' overall opinion regarding the positive or negative effects the program might have had on their children's social skills. These eight (8) open-ended questions were selected in an attempt to collect as much information and knowledge as possible parents could acquire through various sources (e.g. their own opinion, their children's narrations etc.).

Data collection-Data analyses

In order to examine the parents' perceptions, data were collected through semi-structured interviews. The interviews were conducted into a two-week period immediately after the end of the ESPEC implementation. The interviews were taken by one of the authors who was an experienced interviewer and also a member of the research group of the Early Steps project. The interviews mean duration was about 35 minutes and they were conducted, after scheduled meetings, in the administration office of each preschool centre. Each interview was recorded and then transcribed verbatim. The transcripts of the interviews were analyzed with qualitative thematic context analysis (Silverman, 2001). This method was chosen as the most suitable, since there were no predefined categories concerning the parents' perceptions. Two experienced researchers categorized and coded the data separately. They reached an overall agreement of 89% with regard to the analyzed data. Inter-rater reliability was assessed using Cohen's Kappa for all the coded categories. Cohen's Kappa between observer pairs ranged from $K = .82$ to $K = .86$, suggesting relatively high inter-rater reliability. Inter-coder disagreements were resolved by review from a third observer and discussion.

3. Results

Quantitative results

Initially, an independent sample t-test was conducted in order to examine if there were any statistically significant differences between the control and the experimental group. The data which were gathered before the implementation of the ESPEC were analyzed, but no statistical differences were found between the control and the experimental groups ($t_{179} = -.132$, $p > .05$). Cronbach's α coefficients were calculated for pre- and post-measures of the SBI. The results indicated satisfactory levels for the whole scale as well as for the two subscales (Table 1). The total score for the whole scale was .918 and .898 for the pre- and post-measures respectively. The Social factor subscale scored .868 (pre-measures) and .826 (post-measures), while the Emotional factor subscale scored .828 (pre-measures) and .837 (post-measures).

Table 1. Pre- and post-measures Cronbach's α coefficients (scale & subscales)

	Scale (18 items)	Social factor (10 items)	Emotional factor (8 items)
Pre measures	.918	.868	.828
Post measures	.898	.826	.837

Descriptive statistics showed that the variation of the pre-implementation scores of the control group ranged from 4.19 (item 15, *Understands the basic meaning of the expression "all for one"*) to 5.38 (item 7, *Is able to respond to a range of verbal, auditory and pictorial stimuli*). As for the post-implementation scores the variation ranged from 3.95 to 5.55 for the same items respectively. Paired samples t-test (pre- and post-measures) was conducted and the results of the control group did not reveal any significant changes in the parents' perceptions concerning their children's social behaviours (Table 2). Only item 3 (*Is able to work safely and effectively on her/his own*) showed statistically significant improvement. The rest of the items were either positively (7) or negatively (10) changed, but not in a statistically significant way. These findings do not allow any safe conclusion regarding the social behaviour of children in the control group. Table 2 displays the means for the control group before and after the implementation of ESPEC, t values (paired sample t-test) and significant levels of the items of the SBI.

Descriptive statistics showed that the variation of the pre-implementation scores of the experimental group ranged from 3.50 (item 15, *Understands the basic meaning of the expression “all for one”*) to 5.34 (item 7, *Is able to respond to a range of verbal, auditory and pictorial stimuli*). As for the post-implementation scores, the variation ranged from 3.96 to 5.43 for the same items respectively.

Table 2. Means, t-values and significant levels of the items of SBI of the control and the experimental group

SBI for Parents	Control (df=86)				Experimental (df=93)			
	Mean pre	Mean post	t	Sig.	Mean pre	Mean post	t	Sig.
Shares the space with other children	5.29	5.41	-.295	.772	5.32	5.23	1.111	.270
Shares the resources with other children	5.14	5.24	-.295	.772	4.81	5.11	-1.890	.062
Is able to work safely and effectively on her/his own	4.62	5.36	-3.00	.007	4.95	5.07	-.406	.686
Is able to identify and work in her/his own space	5.36	4.90	1.926	.069	5.07	5.12	-.261	.795
Is able to work with different partners	5.24	5.36	-1.00	.330	5.01	5.10	-.340	.735
Is able to work in small groups	5.41	5.24	1.00	.330	5.10	5.19	-.842	.402
Is able to respond to a range of verbal, auditory and pictorial stimuli	5.38	5.55	-.809	.428	5.34	5.43	.000	1.000
Understands her/his contribution to a common goal	4.95	5.00	-.566	.579	4.64	4.84	-2.188	.032
Recognizes the contribution of other members of the group towards a common aim	4.81	4.76	.567	.578	4.35	4.54	-1.045	.299
Has a sense of a cooperation in helping other children	5.05	4.95	.438	.667	4.72	4.75	.000	1.000
Enjoys working in groups	5.43	5.45	.000	1.000	5.32	5.36	-.127	.899
Enjoys sharing ideas	5.14	4.90	.000	1.000	5.02	5.02	-.394	.695
Enjoys sharing roles	5.00	5.50	-1.00	.331	5.24	5.11	.388	.699
Has developed a ‘team spirit’ and cooperative skills	5.05	4.81	1.455	.163	4.48	4.65	-.674	.503
Understands the basic meaning of the expression “all for one”	4.19	3.95	1.525	.145	3.50	3.96	-3.513	.001
Participates in activities without disturbing others	5.00	4.90	.567	.577	4.68	4.86	-1.031	.306
Appreciates (ie is able to describe and reflect on) her/his own work	4.95	4.77	1.314	.204	4.47	4.56	-.869	.387
Enjoys helping others	5.32	5.29	.295	.772	5.03	5.24	-1.580	.118

Paired sample t-test (pre- and post-measures) revealed that parents' perceptions of the experimental group did not indicate any statistically significant changes in their children's behaviour. Only item 8 (*Understands her/his contribution to a common goal*) and item 15 (*Understands the basic meaning of the expression "all for one"*) showed statistically significant improvement. However, an interesting finding was that all items, except from item 13 (*Enjoys sharing roles*), revealed a positive improvement of children's social behaviour. Table 2 displays the results from the experimental group before and after the implementation of ESPEC, t values (paired sample t-test) and significant levels of the items of the SBI.

Qualitative results

The analysis of the parents' interviews in their entirety originally revealed a number of 'children behaviors' subcategories that were attributed to their participation in the program. Data derived from parents' perceptions and observations or from parents' descriptions of their children's talk and narrations (from all eight open-ended questions), resulted in the identification of 17 subcategories. These subcategories were: (1) 'Readiness to share ideas and roles', (2) 'Readiness to share resources, space and toys', (3) 'Understand his/her contribution to a common goal', (4) 'Enjoys participating in group activities', (5) 'Recognize the effect of one's behavior on another person', (6) 'Ability to appreciate other individuals needs', (7) 'Listens to others', (8) 'Follows instructions and rules more effectively', (9) 'Take initiatives on interacting with others', (10) 'Show leadership in group play', (11) 'Readiness to support their classmates', (12) 'Ability to respect others and their work', (13) 'Take decisions based on fairness and others rights', (14) 'Effort to resolve differences and conflicts through conversation', (15) 'Ability to avoid conflict', (16) 'Participate in activities without disturbing others', and (17) 'Motivated to try again'. In the second order analysis, the two researchers who categorized the data, 'interpreted' and coded the initial 17 'children's behaviors subcategories into 5 new categories based on certain social skills. These five new '*prosocial skills*' categories focused on (a) cooperation and sharing, (b) empathy, (c) effective interactions, (d) support and respect and (e) self-control.

Finally, these five categories were used to compose a meta-category regarding the *prosocial behavior* of the participating children and the enhancing of both their *interpersonal* and *social* competency. Table 3 displays the overall category coding of this study, the meta-category, the five "prosocial skills categories" and the "children's behaviors" subcategories in hierarchical order. The identification of children's behaviors that were attributed to their participation in ESPEC and the attempt to categorize them in "prosocial skills" categories, could be explained by the benefits and the positive effects that parents seem to report regarding their children's behavior. For example, parents describe a wide range of behavioral and attitude improvements concerning all the aforementioned 'prosocial skills' categories. These categories are:

(a) Cooperation and sharing: In numerous occasions parents reported that since their children joined the ESPEC, they started noticing positive changes (Table 3) regarding their predisposition and motivation to cooperate and to "play with other children in groups" (10). In addition, parents mention that they observed improvements in their children's "readiness to share ideas" (11), "readiness to share space and resources" with other children (14). Also, based on their children's narrations they noticed an enhanced understanding on behalf of their children regarding their "participation and contribution to common goals" (7).

"She never used to share her toys with other children that came to our home. After the first two months of the program, she started sharing toys quite easily with the cousins and generally she is more eager to play with her peers".

"Sofia has changed a lot since she joined your program. It's like she is a more 'mature' child and she cooperates much better with us and her friends in everything".

(b) Empathy: The ability to acknowledge the other person's feelings, rights and needs is one of the basic goals that most preschool education programs and curriculums aim at enhancing in preschoolers. When children broaden their perspective-taking skills, they become proficient in comprehending how others perceive and react to them (Small 1990). Almost all of the participating parents related their children's participation in the program with positive impact regarding "their understanding of other children needs" (10) and "the realization that certain behaviors have certain effects on others" (12).

'Antonia was always I, I, I. These past few months she has shown better understanding of the feelings of others. When we go to the playground, she treats other children in a much better way. Once, she stepped aside to give her turn to the swing to another girl and when I asked her why she did it, she said *'she was sad and I wanted to make her happy'*."

(c) Effective interactions: The importance of positive interactions with teachers and peers for the social adjustment and success of a child in the school environment has been widely accepted and empirically supported by a lot of researchers and scholars (e.g. Malti, Gasser, & Gutzwiller-Helfenfinger, 2010; Telama, & Polvi, 2007). Participation in physical education programs through movement and play activities has been argued that contributes significantly to children's socialization (Hellison, & Martinek, 2006). Parents' narrations of their children's talk and of their own observations agree that their children "follow instructions and rules more effectively" (14) and also, "listen to others" (11).

"He talks better and I think he listens to me more carefully. Sometimes he even follows instructions the first time, which he never did".

"Eleni was very shy and introvert. She was always playing alone and now I see her at the playground, the moment she spots a child, she doesn't hesitate to approach it to play".

(d) Support and respect: According to parents' descriptions, their children seem to have improved "concerning the support they show other children" (9), especially younger and 'weaker' children. Furthermore, they report that in general their children seem to be more tolerant to other children's rights, "to their work and to their needs" (9).

"I am not sure if the changes I observed are owed to the program or to the fact that my child is growing up, but I admit that he is much more supportive with other children than he used to be".

"For example she started treating her little sister better and sometimes she acknowledges that she can play with her own toys".

(e) Self-control: The last behavior that parents identify as significantly improved in their children refers to the ability they developed to restrain themselves from conflicts and trouble and their "intrinsic motivation" (6) regarding playing and working with others harmonically. For example, parents mentioned that children attempted to "solve differences through conversation" (9) more frequently than they used to, to "cope with failure more effectively" (7) and to "cooperate with others without disturbing them" (14).

"In two occasions last week, she walked away from incidents that would have resulted in big fights before".

"Her teacher told me that even if she fails in some motor games, she tries again together with other children. I would have expected her to abandon the activity, but she seems more inspired and courageous nowadays".

In conclusion, the qualitative results of the current study demonstrated several positive outcomes in children's behaviors that were attributed by their parents to their participation in ESPEC. Parents' narrations reported changes and improvements in social behaviors that concerned altogether peer to peer, peer to group and peer-adult interactions. These improvements in children's social behaviors were concluded in a higher order meta-category, named 'pro-social behavior'. The 'pro-social behavior' meta-category in the current study refers to the enhancement of the social and interpersonal competency of children. Furthermore, this finding seems to be in accordance with one of the initial goals of ESPEC, which was to improve the social and emotional skills of children. Both quantitative and qualitative results indicated that parents' assessments, observations and narrations of their children's behavior and talk demonstrated that children developed several social skills through their participation in ESPEC. More specifically, children's social behaviors and skills that were reported as the most improved in this study included cooperation, sharing, empathy, assertion, support, respect, self-control and effective interactions.

4. Discussion

The purpose of the current study was to examine the parents' perceptions concerning the impact of the ESPEC to their children's social behavior and skills.

The overall picture, deriving from the results, showed that the implementation of a physical education program (ESPEC) had positive impact and improved various social behaviors and skills of preschoolers. These results are in agreement with recent research findings (Dyson, 2001; Quay, & Jacqui, 2008; Vidoni, 2007; Vidoni, & Ward, 2009) that also showed that physical activities constitute an ideal field for the development of children’s social skills. As far as the results from the quantitative data are concerned, changes in children’s social behaviors and skills were not revealed in a statistically significant way both in the control and the experimental group measures. Despite the lack of statistically significant differences, the experimental group’s measures were increased for the 17 of the 18 items of the SBI. One possible explanation for this finding could be the high initial scores that were recorded during the pre-implementation measures of the experimental group, which varied from 3.50 to 5.34. In a 6-point Likert scale these scores seem to somehow limit the possible statistical increase parents could report after the implementation of the program. However, it is not unusual that parents tend to overestimate their children’s abilities and skills.

Table 3: Parents' perceptions Categories and Coding (and Subcategory Frequency)

Metacategory	Social Skills Category	Children's Behaviors Subcategory	Frequency
Prosocial Behavior (Interpersonal Competency)	Cooperation/Sharing	(1) "Readiness to share ideas and roles"	(11)
		(2) "Readiness to share resources, space and toys"	(14)
		(3) "Understand his/her contribution to a common goal"	(7)
		(4) "Enjoys participating in group activities"	(10)
	Empathy	(5) "Recognize the effect on one's behavior on another person"	(12)
		(6) "Ability to appreciate other individuals needs"	(10)
Prosocial Behavior (Social Competency)	Effective interactions	(7) "Listens to others"	(11)
		(8) "Follows instructions and rules more effectively"	(14)
		(9) "Take initiatives on interacting with others"	(6)
		(10) "Show leadership in group play"	(5)
	Support/Respect	(11) "Readiness to support their classmates"	(9)
		(12) "Ability to respect others and their work"	(9)
		(13) "Take decisions based on fairness and others rights"	(8)
	Self control	(14) "Effort to resolve differences and conflicts through conversation"	(9)
		(15) "Ability to avoid conflict"	(7)
		(16) "Participate in activities without disturbing others"	(14)
(17) "Motivated to try again"		(6)	

Nevertheless, the improvement of children’s social skills is supported and further explained by the descriptions parents gave during their interviews. Parents’ interviews identified a wide range of 17 social behaviors in which their children displayed improvement. They described specific examples of their children’s improvements and changes that they attributed mainly to the effect of the ESPEC program in their children’s behaviors. However, some behaviors were reported as more frequent and as more improved (e.g. sharing ideas and roles, sharing spaces and toys, participating in activities without disturbing others) compared to others (e.g. understanding his/her contribution to a common goal, showing leadership in group play, take initiatives on interacting with others). This finding can be attributed to a number of reasons. At first, it could be argued that the “external” or more “outgoing” nature of some behaviors makes them easier for observation. For example, the behavior “follows instructions and rules more effectively” is much easier to be observed than “motivated to try again”. In addition, certain behaviors are more possible to occur during the daily life of children outside the preschool environment. For example, parents are given fewer chances to observe their children’s ability to “Show leadership in group play” than “Sharing toys with others”.

Another explanation regarding this finding focuses on the nature and the goals of the program. During the implementation of the ESPEC some behaviors were more strongly pursued and enhanced, because they constituted specific goals of the lesson plans of the program. For example, the “Ability to appreciate other individuals’ needs” is a behavior in accordance with one of the basic goals of ESPEC which is “To recognize and respect individual differences”. Furthermore, specific behaviors, apart from being the goal of some lesson plans, were also practiced throughout the program’s implementation. For example, the social behaviors such as “Readiness to share resources, space and toys” and “Participate in activities without disturbing others” are fundamental prerequisites for the effective execution of any physical education activities (Quay, & Jacqui, 2008).

Finally, an overall finding of parents’ perceptions referred to the enhancement of children’s prosocial behavior, and more specifically to interpersonal and social competency. Prosocial behaviors, such as helping, empathizing, being supportive and sharing were identified as indicators of children's social and interpersonal competency (Bierman, 1987). Recent research findings led researchers to believe that children's behaviors are predictive in the relationships they form (Agnor, 2009). Additionally, other researchers are trying to identify specific behaviors and skills that support children in creating and keeping friends (Agnor, 2009; Tsigilis, Tsioumis, Gregoriadis, 2007, 2006). The qualitative data in the current study provided a more insight view of the improvement of children’s social skills which were revealed in a non-significant way by the quantitative results. Thus, the ‘concurrent triangulation strategy’ of the mixed method research supported the assertion that such a design increases the validity of evaluation procedures (Grammatikopoulos, Zachopoulou, Tsangaridou, Liukkonen, Pickup, 2008).

Parents’ perceptions contributed effectively to our knowledge of the impact of the ESPEC. They offer information about settings outside the school environment where educational staff and researchers are difficult to have access to. Yet, the fact that parents may be biased as evaluators of their own children’s behavior should not be overlooked. The absence of retention results concerning this study is attributed to the schedule of the “Early Steps” project. “Early Steps” did not include any retention phase since it was expected that as soon as the intervention stopped, the observed behavior changes would have short life-time expectancy, since solely one-shot programs could not build retention results (Hassandra, Theodorakis, Kosmidou, Grammatikopoulos, Hatzigeorgiadis, 2009). In order for intervention programs as ESPEC to have more permanently results, they have to be integrated within the school curriculum.

In conclusion, researchers and scholars should study physical education in a more systematic way, due to the opportunities that it provides for cognitive and social development (Bailey, 2006; Kirk, 2005). Children's play and especially physical and motor play are increasingly identified as a form of 'social behavior', because through them children engage in several social situations such as cooperation, assistance, sharing and solving problems in appropriate ways. In these situations, children acquire social skills and learn about their social world, such as the adults' and their playmates' points of views, morals, social skills and conceptions of friendship (Saracho, 1986). Physical education programs with their informal atmosphere and content constitute an ideal setting in which social skills can be addressed (McHugh, 1995).

In this article, the behavioral strategies of modeling, coaching, role-play, feedback and reinforcement of skill usage were applied through the implementation of ESPEC. These strategies together with the activities children attended were described by parents as effective in producing short-term improvements in children's social skills. However, although interesting, the findings reflect only the experiences of children in a specific socio cultural framework. Therefore, such a conclusion, needs to be repeated in future studies with wider samples, in order to become the spark for further research regarding the so far 'neglected' by scholars, contribution of movement and physical play in children's learning and development.

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