Teachers’ Perceptions: Role-play Strategies for Teaching Social Skills to Children with Autism in Physical Education

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Abstract
Children with Autism Spectrum Disorders often have difficulties communicating, such as social interactions, social cognition, pragmatics, and language processing. A number of effective instructional strategies and methods have been used for teaching these children who need extra attention. This paper focuses on physical education teachers’ perceptions of using role-playing approach as a teaching strategy to help children who are diagnosed with autism spectrum disorders to increase social interaction skills with their peers. The qualitative approach focused on the analysis of fifty-eight teachers’ (M=45.7 years) perceptions with a major in adapted physical education of northern and western Greece who are selected by purposive sampling and participated in semi-structured interviews. The interview protocol included 10 open-closed questions. Each interview lasted approximately 30 to 45 minutes. Responses were collected through a recording device. A depth-analysis of teacher’s responses was used to analyze their patterns and relationships. Physical education teachers’ agree that role-playing strategies with appropriate curricular decisions and knowledge can hold an essential place in their class and developing social interaction skills to children with autism spectrum disorders.

Keywords: Autism, Role-Playing, Social skills, Physical Education, Teachers
Introduction

Social interaction is the most elementary unit of sociological analysis. The study of behavior per se is the proper subject matter of psychology, whereas sociology studies the organization of individuals, which can only begin with social interaction. By interacting with one another, according to Kenrick and Neuberg (2014) people design rules, within which they seek to live. Symbols are used to communicate the expectations of a given society to those new to it (either children or adults). On this basis, social interaction plays a pivotal role especially in child’s ability to communicate with others, to know how to act in a certain social situation, and maintain meaningful social relationships in his or her lifespan (Klopfer et al. 2019; Ellis & Almeida, 2015).

Vygotsky’s sociocultural theory includes cooperative learning as an educational method which actively views children to participate in a social process and become active through the Zone of Proximal Development and creates a causal relationship between social interaction and experience with peers (Lantolf & Poehner, 2014). However, children with Autism Spectrum Disorders (ASD) are unable to establish the power of communication, which directly or indirectly can influence behaviors and interactions in a social environment such as school or extracurricular activities (e.g. triad impairments, such as, difficulties with communication, social skills, emotional and behavioral difficulties). Recent findings show that most of the children with autism spectrum disorders (ASD) find the school or other extracurricular activities as challenging at some time or other ((El Achkar & Spence, 2015; Locke et al., 2017; Smagorinsky, 2016).

Cooperative learning can be described as a mean of providing opportunities for children with ASD to work as a team in accomplishing a set of given objectives. According to Slavin (1990) relies on the following principles, (1) children are assigned to small groups (usually no more than 4 members in a group), (2) groups are comprised of children of different ability levels and (3) the activities that are assigned can vary in nature depending on the grade level. The basic goal is to promote positive relationships, to foster accountability and to provide a venue for problem-solving as a group.

In recent years, role play is an effective strategy in cooperative learning because it reduces anxiety, promotes healthy relationships, and is versatile. Literature review which refers to the effect of role play in cooperative learning for children with ASD, shows that it is highly effective in achieving long-term learning objectives such as social skills development (Bella & Evaggelinou, 2018; Hart & Whalon, 2011; Hirsch, 2016). Specifically, Bella et al. (2019) explored the effect of six elementary school children with High Functioning Autism (HFA) in theatrical play programme through physical education (PE) and the social interactions with their peers. Results showed that both role-playing activities and cooperative learning condition positively influenced their social skills development and also the acceptance of the children with HFA by their regular peers. Lory et al. (2017) through a systematic review, summarize the quality of theatrical play activities such as role play that involved both children with ASD and their typically developing peers. Their findings indicated that children with ASD had better social skills after the theatrical play programmes, exhibit increased engagement and assimilation, and received higher levels of social support.
This study gives PE teachers a wider outlook on role play as a teaching strategy which helps children with ASD to develop social skills. In short, it aims to: (1) indicate and analyze specific challenges and reports by adapted physical education teachers for role play activities and their knowledge to teach social skills on children with ASD, (2) emphasize the importance of cooperation in learning environment and social interactions among children with ASD and their peers and (3) examine the effect of cooperative learning on children with ASD needs in relation to traditional teaching strategies.

**Research Questions**

This study specifically aims to answer the following research questions:

1. Is role-playing activities a capable teaching strategy to develop social skills on children with ASD in PE class?

2. Are the strategies of cooperative learning appropriate in relation to other strategies to address the needs of children with ASD?

3. Have PE teachers’ strong knowledge of applying to role-playing activities and teach children with ASD?

**METHODOLOGY**

**Participants**

The researchers sent out emails to 80 PE teachers who works with ASD children in extracurricular activities, in private psychomotor center or sport clubs in Northern and Western Greece. All children with ASD are attending general classes and 3 times a week extracurricular activities. Researchers were responsible for coordinating and ensuring interviews (dates and times). At first, 18 of 40 PE teachers, from seven private psychomotor centers agreed to be interviewed. Twelve teachers cited commitments to spring school obligations as reasons to not participate, ten others flatly did not respond at all and two said that they would but failed to respond back to the researchers with a day and time that would work for them. The researcher contacted 40 other teachers from six other private parties and was able to obtain 58 teachers who agreed to participate. Fifty-eight PE teachers both male and female (32 female and 26 male) aged between 35.5 and 60.2 years who are teaching in private psychomotor center (N=28) and sport clubs (N=30) participated in this study. Interviews were conducted in 2019; names of teachers, places, and all parties were alias. Each teacher was given a research consent form to participate in the study. Teachers were selected by purposive sampling method, which was useful because the researchers wanted to study specifically the effect of role-playing and cooperative learning in the population of children with ASD by PE teacher with a major in adapted sport or activities. In addition, teachers who are selected had experience with ASD children over 12 years. Face-to-face dialogues were used as a democratize research tool which makes individual voices public.
**Semi-structured Interview**

A set of four opened-questions regarded the capability of role-playing to develop social interaction skills on children with ASD in extracurricular activities. A set of three opened-questions regarded the teaching of cooperative learning in relation to other strategies to address the needs of children with ASD. In the end, a set of three closed-questions regarded PE teachers’ cooperative learning knowledge to teach children with ASD (5-point Likert scale). They studied carefully the interview guide, included exhaustive details for the formulation of each question and studied a detailed guide on what constitutes an adequate and inadequate response. Researchers when assured the participants of the confidentiality of their personal data, which would include only their small name, they answered in questions which were similar for all of them. Interviewers reports were recorded through a recording device and researcher retained written notes with some comments. The interview protocol is identical in Table 1.

**Table 1: Interview Protocol**

| Categories | Questions and Probes |
|------------|----------------------|
| Are you using role-playing activities to develop social interaction skills for children with ASD | - Do children with ASD participate in role-playing activities? If yes, how have you characterized their social behavior within the group?  
- Do children with ASD, during cooperative role-playing activities, communicate and cooperate with other children? Can you give an example?  
- Have children with ASD opportunities for developing social interaction skills?  
- Do children with ASD accept encouragement from other children? |
| Cooperative learning in relation with other learning strategies | - Do you think that there are many differences between cooperative learning and other learning strategies?  
- In which case cooperative learning is better teaching strategy than the others? Can you give an example?  
- Traditional or cooperative learning and why? |
| Knowledge of physical education teachers | - Do you think that you have strong knowledge of apply role-playing to children with ASD?  
   Yes □ □ No □ □  
- Do you have the ability to create role-playing activities for children with ASD?  
   Yes □ □ No □ □  
- Do you have the ability to evaluate social skills for children with ASD through role-playing in your class?  
   Yes □ □ No □ □ |
PROCEDURE

Upon sending emails to all PE teachers who participated in this study the researchers coordinated the dates, times (either after work or during the teacher’s planning period) and places (all were interviewed in workplace). The researchers traveled to the respective places to meet the 58 PE teachers who are agreed to participate in the study, and they subsequently carried out the interviews. They recorded each interview using the voice memo app of an iPod. The extended study also provided insightful information because the PE teachers took the time to condense their perspectives into shorter responses. A few days before the interview, participants received ordinary instructions and they informed about the scope of the interview and their possible responses (pilot study). The first step included reading out each question two or three times allowing a short pause so that the participants could understand and received the primary stress. The second step included reading out each question two or three times and having the participants to use short and meaningful responses. The last step included going through the question list with the opened-questions and giving examples as an explanation of their responses. After this pilot study, all PE teachers were ready to respond honestly. In collection data, there was no limiting factor (e.g., incomplete answers) for results alteration.

ANALYSIS

Researchers proceeded to identify PE teachers’ perceptions of using cooperative learning to develop social skills for children with ASD. The analysis and coding process utilized triangulation. The researchers coded the data, by the PE teachers’ response to seeing if any similarities or patterns arose in their answers. The first step after coding the data was researchers analyzed the data further to see if any of the codes could be combined. The second step was to reevaluate the codes to establish themes and determine whether any codes or themes needed to be added, changed or combined, or completely deleted. Responses were processed using an in-depth interview method. The third step was evaluated through a five-point scale (Likert) (knowledge of PE teachers). The findings are examined in results.

RESULTS

Twelve of 28 PE teachers who are teaching in private psychomotor centers in this study have a second degree or a master in special education. More specifically, eight PE teachers have a postgraduate degree in special education and sociology, two in the field of developmental disorders and two on students integration. As far as PE teachers who work in Sports Clubs five of 18 have also a postgraduate degree in educational psychology, six have attended 400 hours seminars on special education, while seven have dealt with the subject because have a specialization in neurodevelopmental disabilities. Most of the PE teachers who are working in private psychomotor centers work in the same places for more than 12 years and 9 hours a week while PE teachers in Sports Clubs for more than 18 years and 6 hours a week.

Role-playing in Private Psychomotor centers and Sport Clubs

Ten of the twelve teachers in this study who are teaching in private psychomotor centers agree that each child with ASD has unique behavioral characteristics and their needs
reflected differently but the social interacting experience and communication have the same worth both children with ASD and their peers. Role-playing as a creative strategy gives the PE teachers the ability to develop social skills to children with ASD. All of the interviewees claim that the psychomotor physical class is a social environment where all children have the chance to interact and communicate. Lesson plans include several activities to reinforce the concept of social skills development in small groups (2-3 children). Activities include movement, with art and music, and they can stand alone or be adapted to tie in with teachers current curricular themes. As a result, children with ASD through cooperative learning are able to act in different social situations and communicate, make friends, learn from others, develop hobbies and interests and help with family relationships and give them a sense of belonging.

On the other hand, fifteen of eighteen PE teachers who work in Sports Clubs claim that role-playing is a dependent upon if teachers being able to call upon a range of teaching styles and to encourage children with ASD to learn through a variety of social situations. According to their perceptions, teaching, paired work, individual instruction and group work have become standard practices in many learning places and each requires careful planning and management if they are to be effective. For children with ASD functioning as part of a group can be at the beginning particularly daunting. Obstacles to participating with other children in group work arise from the ‘triad of impairments’ in particular conditions such as social communication and interaction. Furthermore, unusual sensory experiences and poor organizational and sequencing skills can hinder their progress. Twelve of eighteen PE teachers agree that role-playing is a powerful teaching strategy for these children. In addition, they have emphasized in this strategy because activities in small groups are an important part of learning because they develop contacts and emotions. An important role plays also PE teachers attitudes. A great teacher is sensitive to children with ASD needs. According to twenty of twenty-eight PE teachers, they should not follow the high road, of stereotypical teaching methods, so need to try to personalize as much as possible the activities of their lesson, so they do not penalize anyone. All teachers agree that they select teaching strategies that will support children with ASD to achieve their goals. An important percentage of them search for new strategies that may be more effective. They all have basic beliefs, assumptions, and different behavior but they try to provide children with ASD different perspectives and to share their ideas, knowledge, and experiences altogether with the main goal to develop social skills.

Cooperative learning vs traditional strategies

All PE teachers in this study recognize that there different types of learning in a classroom setting. Cooperative learning groups provide children with ASD the motivation to achieve as a group by putting forth a combined effort. However, less than 5 teachers both private psychomotor centers and sports clubs do not properly structure groups so that instead of having cooperative group learning, but they have traditional group learning. However, according to the PE teachers perceptions cooperative learning activities take longer to create and assess but they are much more effective in helping children with ASD learn to work as part of a team. On the other hand, in a traditional class group setting, children are not interdependent upon one another. According to twenty of twenty-eight PE teachers who are working in sports clubs, in traditional learning methods, there is no feeling of a positive
interaction where the children with ASD need to work as a group to produce a quality piece of work. On the other hand, true cooperative learning provides these children with incentives to work as a team to succeed together. In addition, seven of twelve PE teachers who are working in sports clubs claim that a traditional group, social skills are typically assumed and ignored. On the other hand, cooperative learning is all about teamwork which is emphasized, and in the end, assessed through the project rubric. All PE teachers agree that cooperative learning is positive interdependence. Positive interdependence is the heart of cooperative learning. Each child is responsible for their own learning as well as that of their group members. The group is accountable for achieving its goals and each child is responsible for contributing his or her share of work.

All teachers who participated in this interview seems to agree on the fact that cooperative learning develops social skills to children with ASD. PE teachers believe that this strategy building good relationships between children with and without ASD. Communication skills are the key for children with ASD to develop friendships and to build social consciousness. PE teachers also encourage them to take care of their own needs and develop respectful behaviors of the needs of others. It seems that the contact between children with and without ASD through cooperative learning contribute to their behaviors change.

**Physical education teachers’ knowledge of apply role-playing**

The third section of the interview included three closed-questions about the PE teachers’ knowledge of applies role-playing in their classes who are working with children with ASD. All responses were given on a five-point scale (Likert). Each of the three questions had different verbal calibration and was analyzed separately. It is worth noting that there was no missed answer. In figure 1 presented the responses by the PE teachers in the first closed question.

![Figure 1. First closed-questions](image)
As regards the second closed question, and according to Figure 2, ten of twelve PE teachers who work in private psychomotor centers gave positive responses (82.1%) and a percentage of PE teachers who works in sports clubs (77.6%) also gave positive responses.

Figure 2. Second closed-questions

In the third closed question, eight of twelve PE teachers who work in sports clubs responded to the option ‘yes’ (66.3%). As regards PE teachers who are working in psychomotor centers are fully satisfied with their knowledge to evaluate children with ASD through a role-playing strategy (95.1%).

Figure 3. Third closed-questions

DISCUSSION

In this study were presented the views of 58 PE teachers either private psychomotor centers or sports clubs who are teaching children with ASD through the strategy of role-playing. All PE teachers seem to have positive views of this strategy and they choose to use it
in their class. Moreover, they claim that this teaching strategy is a suitable mean of learning both supportive centers and sports clubs. Several of PE teachers in this study agree that this strategy has a great impact on strengthened children with ASD in private psychomotor centers. In addition, they believe that role-playing is useful to develop social skills to children with ASD because they work in groups and amuse together. In general, children with ASD seem to share things with their peers. This strengthens give them the opportunity to concentrate and at the same time, to communicate in extracurricular environments.

Children with ASD when participated in a group, usually they try to be obedient, but more often teachers observe that they are uncomfortable because the characteristics of ASD, in any case, improve their social interaction (Barak & Feng, 2016). Reading et al. (2016) in their research studied the role of cooperative and role-playing activities in social interaction of children with ASD within school groups and the relationship between these activities and interpersonal relations in communication. The result of this study seems to enhance social interaction because each child with ASD has the ability to differentiate and modify his behavior. The class is characterized as a social environment in which children with ASD have the opportunity to interact and communicate effectively with their peers but sometimes increase anxiety and depression. On this basis, there are several teaching approaches, which PE teachers use to help children with ASD to develop social skills with success. Children with ASD appreciate routine and can get active when participates in groups with two or three peers. So teachers need to use small groups for success in their programmes.

Role-playing activities can support day-to-day activities and the ability to teach children with ASD as well as teachers may open a new era for private extracurricular activities. In the current study, the research hypotheses were confirmed, since they compared with relevant research which was done in the past. This study covered this research gap and presented the views of 12 PE teachers who work in private psychomotor centers and 28 in sports clubs. Role-playing activities learning can support day-to-day activities and the ability to teach children with ASD. Participants seemed to have a positive response in terms of role-playing activities to children with ASD. Notable features of this study that expand the literature include (a) participation of elementary and secondary school-age ASD children who have limited social skills, (b) use of groups including the target child with ASD and their peers.

In prior studies, target ASD children have often been preschoolers or those with low functioning levels (Feng et al., 2017; Gal, Lamash et al., 2016). For example, the overall occurrence of appropriate social skills increases when the intervention use role-playing. These outcomes suggest that for children with ASD, PE teachers need to adopt this strategy as well as build more specific cooperative activities for social skills training. Thus, they might need to use a reinforcement cooperative system for social interactions in play sessions as well as for developing social skills. Other positive effects of role-playing settings are that it has become an aid for children with ASD to initiate effective interactions with peers. Cooperative learning might also provide opportunities for children with ASD to observe similar-age typical children play with each other in learning environments focusing exclusively on group teaching (Nguyen & Larson, 2015).
RECOMMENDATIONS

This study explored the perceptions of PE teachers with regard to the effectiveness of role-playing strategies developing social interaction skills for children with ASD. However, further studies that focus on quantitative data from children with ASD performance could add value to this study. Future studies added to this one could seek to explore the quantitative data of children with ASD scores on assessments with and without using role-playing activities or techniques in elementary or secondary school. Data reflecting assessment scores from groups of these children before and after using role-playing strategies could give further insight into the effectiveness of these strategies. This research would extend the data on this study and support teacher perspectives with quantitative children's data. Furthermore, a study that focused on teacher perceptions from various other content areas would serve to indicate if role-playing strategies can benefit children with ASD to develop social interaction skills and in specific school courses.

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Conflict of Interest

The authors declare no conflict of interest.

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