

## **Learning with Play: How Play Activities Program Improve Pro-Social Behaviour of Six Year Old Children?**

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**Abstract:** This study was designed to investigate stability of and changes in pro-social behaviour. The participants were 42 children from reception class of a state primary school in Ankara, Turkey. A pre-test-improvement-post-test design was used. The children were assessed by their parents and teachers. The experimental groups undertook a 10 week play activities program. Results suggest that this program significantly improved pro-social behaviour. The discussion in this paper focuses on effectiveness of different programmes to increase pro-social behaviour of primary age children. Finally, the implications for future research on children's pro-social development and education are discussed.

**Key words:** Children • Pro-social behaviours • Altruism • Preschool program • Socio-emotional development

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### **INTRODUCTION**

Pro-social behaviour has importance in relation to the quality of interactions between individuals and between groups. The main behaviour characteristics of humanity that separate it from other living creatures are; helping, cooperating and empathy with others [1]. Sharing something with another person, showing willingness to cooperate, helping and comforting someone in distress are pro-social behaviours that refer to voluntary behaviour intended to benefit another person [2,3,4]. The term pro-social behaviour is also referred to as altruism that is acting for the welfare of others without obvious self-gain or voluntary positive social behaviours [5]. Children who have pro-social behaviours are well-adjusted and have better relationships with their peers [6,7].

There is considerable evidence that pro-social behaviour begins quite early; some researchers indicate that this can be as early as 6 years old [8]. Human beings feel for and help people who are in distress and do so robustly and flexibly from very early in development [9]. From the second year of life, pro-social behaviour appear as a distinct part of children's behavioural repertoires and become important determinants of their growing social competence and the kind of experiences they have in interactions with their peers [10]. For example when a four year old child sees another child while crying he may give him his toys or try to comfort him saying "don't worry your mum will come; look my mum is not here either". The child who comforts the other does not expect to gain praise [11]. He acts without an adult instruction or encouragement and seems to be quite independent of external circumstances; this is a genuine contribution to social interaction [8].

Both individual and environmental factors affect children's pro-social behaviour. Factors such as gender, temperament and age are considered to be the individual characteristics of a child; the culture, parent styles, siblings, peers, school program and teacher are included in the environmental factors. According to many studies [12,9] young children have more pro-social behaviour than older children. On the other hand there is no agreement among researchers whether girls are more pro-social than boys [5,13,14]. However, most researchers agree that warm, supportive interactions with parents and

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teachers have been associated with preschool children's modelling of their pro-social actions and sympathetic-pro-social reactions to distress [15]. Moreover, pro-social behaviours of children change according to the culture in which they grow up. Kakavoulis [8] found that comforting and cooperating are observed more often than sharing and helping in Greek children. Guzman *et al.* [16] showed that Philippine children were generally more pro-social towards relatives, while American children showed more pro-social behaviours towards non-relatives. Yagmurlu and Sanson [17] found that Turkish and Australian children were similar in their levels of pro-social development.

Although individuals and environmental factors obviously affect children's pro-social behaviours, it is possible to increase pro-social behaviour using improvement programmes. Recently researchers have tried to improve children pro-social behaviours and socio-emotional development, some focusing on parents, others focusing on teachers or children. Tolan and McKay [18] developed a family intervention programme, specifically designed to prevent antisocial behaviour in urban areas. Sprinkle [19] analysed a school-based violence prevention/intervention and character education programme that used rescued shelter dogs to teach antiviolence and pro-social messages to elementary and middle school student. Doescher and Sugawara [20] developed adult modelling and encouragement programme in pro-social home and school-based interventions on preschool children's cooperative behaviour. Lösel and Belman [21] and Bertone *et al.*, [22] improved pro-social behaviour through social skills instruction. On the contrary the other researchers such as Street *et al.*, [23] used a cooperative physical games programme.

In the existing research, children and their relatives have been chosen to improve pro-social behaviour. The researchers decided on the improvement methods according to children's age, developmental levels, parental needs and teacher needs. At first direct education methods were used to improve the children's behaviour, however, in the last century, it has been found that children, particularly those of a younger age tend to improve their behaviour with programmes that use games, drama and art activities [24].

In the short-term investigation reported in this paper the goal was to examine young children's pro-social behaviour with their peers. Frequent use of cooperative games in the pre-school could play an important preventive role. Furthermore, there is a practical advantage to modifying behaviour with antecedent conditions such as play and activities. Improving children's behaviour in the use of particular activities is a simple strategy, particularly when compared to training a teacher to carry out a specific treatment plan using contingent reinforcement for certain responses [25]. Therefore, more specifically, it was expected that the improvement programme would be increase children pro-social behaviour. The present study should provide valuable information for teaching or social work professionals developing programmes to assist parents in their role of socializing young children.

**Method:** The study took place in reception classes of a primary school in a medium-sized mainly working and middle-class, community located in the centre of Ankara. Data were collected regarding the children's pro-social behaviours, as predicted by a variety of classroom variables, using a parent and teachers rating scales. Children aged 6 were selected to participate in the study, in Turkey this is the age at which children first attend primary school. Children at this age and grade spend a great deal of time together and they are observed by teachers to assess their developmental preparedness for the primary education. Two reception classes were selected in the same primary school. The methods included daily observations of children's life in the classroom, a pro-social improvement programme with children and a pro-social behaviour rating of children at the beginning and end of the programme period.

**Participants:** 42 children aged 6-years and their mothers participated in the study. 20 of subjects (47.6%) were placed in experimental group; 22 (52.4%) in the control group. The researcher met with the mothers of the children to explain the study. Agreement was sought for the children to participate in the study and the cooperation of the mothers. The families of children were predominantly middle-class, with 60% of the mothers having graduated from university and having an annual household pre tax income ranging from under \_500,000 to over \_1000,000. The pro-social behaviours of children were also observed by one qualified teacher and one trainee teacher in each of the experimental and control groups. The pro-

social improvement programme was carried out by the researchers. Parents and teachers rated pro-social behaviour of children before and after the play programme.

### **Measures**

**Pro-social Behaviour Questionnaire:** The Weir, *et al.* [26] Pro-social Behaviour Scale was used to collect data. The original questionnaire that included 20 items scale was initially given a pilot group of teachers and the results showed that 10 items of the questionnaire were considered to be suitable for reception class children. The questionnaire has two subparts which have positive items, one of its verbal another is behavioural, thus, higher scores refer to higher level pro-social behaviours.

**Procedure:** Data were collected using a pretest-posttest follow-up quasi-experimental design. The socialization data for this study was collected during an interview in the with each child's mother. The improvement programme for pro-social behaviours was developed to increase the pro-social behaviour of control group and make their positive interaction with each other stronger. For the control group, there was no programme or activity. The programme for the experimental group was followed for 10 weeks, twice a week; it included 42 play activities involving sharing, empathy and cooperation skills. Each activity took a maximum of 40 minutes and was in three stages. The first stage was preparation including warm up exercises to make an easy transition to the main play activity. The second stage was the main play activity that involved a game in a small group such as, finding something solving a problem, carrying something or creating. The last stage contained activities to relax the children and an evaluation of the activity, thus the children were physically passive but cognitively active in this stage. At the beginning and end of the programme, the pro-social development scale and social behaviour checklist were used to assess the children's behaviour. The parents and teachers observed child during the duration of the programme. At the end of the programme they rated pro-social behaviour of the children again.

## **RESULTS**

Preliminary analyses were conducted to determine whether there were any significant differences in the children's pro-social behaviours. To determine if the improvement programme had influenced children's pro-social test scores, were submitted to a T test comparing performance of the children in the two group. The pre-test and post-test scores revealed directionally predicted correlations between instruments employed in the study.

The results revealed no significant differences in the pro-social behaviour scores between the groups at the pre-tests ( $p > .05$ ). The pre-test scores of experimental group on the Pro-social Behaviour Scale were 16.45 for the verbal test, 17.50 for the behavioural test and 33.95 for the total pro-social test. The pro-social behaviour pre-test scores of control group were 17.00 for the verbal test, 17.45 for the behavioural test and 33.45 for total pro-social test. The experimental group scores were close to the experimental group score in the pre-test (17.00 for the verbal test, 17.45 for the behavioural test and 34.45 for the total pro-social test).

However, there were significant differences between the scores of the experimental and control groups after the post-test. The post-test of the experimental group were higher than the control group (19.10 for the verbal test, 20.25 for the behavioural test and 39.35 for the total pro-social test). The teacher's observations supported the parent's ratings. These results obviously showed that the improvement programme was positively affected the pro-social behaviour of the children in the experimental group.

A paired sample t test was used to determine the affect of programme on the experimental group. When the children's pre and post test scores were paired the differences between tests can be clearly seen in Table 2. Following the pro-social behavioural improvement programme the children displayed an increase in their pro-social behaviour, reflected by higher score.

Table 1: Pre-test and post-test comparisons of the experimental and control groups of children

Tests	Groups	Pre-test			Post-test		
		Mean	Std. Deviation	p	Mean	Std. Deviation	p
Pro-social-Verbal Sub Test results from parents	Experimental	16,4500	3,42552	0.572	19,1000	1,86096	0.42*
	Control	17,0000	2,82843		17,5000	2,90730	
Pro-social-Behavioural Subtest results from parents	Experimental	17,5000	2,98240	0.960	20,2500	2,26820	0.22*
	Control	17,4545	2,87398		18,0909	3,40740	
Total							
Pro-social Behaviour Score results from parents	Experimental	33,9500	5,84425	0.768	39,3500	3,73145	0.17*
	Control	34,4545	5,14298		35,5909	5,69594	
Pro-social-Verbal Sub Test results from Teachers	Experimental	16,7000	3,43511	0.938	19,7000	1,62546	.005
	Control	16,7727	2,56221		17,5455	2,84065	
Pro-social- Behavioural Subtest for Teachers							
Subtest for Teachers	Experimental	17,9500	2,78104	0.912	20,7000	1,86660	.004
	Control	17,8636	2,25294		18,2727	3,02658	
Total Pro-social Behaviour Score results from Teachers	Experimental	34,6500	5,63144	0.993	40,4000	3,13553	.002
	Control	34,6364	3,98265		35,8182	5,36866	

p<.05

Table 2: Pre and post-testing comparison of the children in the control group

Tests	Pre-test		Post-test		T value
	Mean	Std. Deviation	Mean	Std. Deviation	
Pro-social-Verbal Sub Test results from parents	16,4500	3,42552	19,1000	1,86096	-3,277*
Pro-social-Behavioural					
Subtest results from parents	17,5000	2,98240	20,2500	2,26820	-3,871*
Total Pro-social Behaviour Score results from parents	33,9500	5,84425	39,3500	3,73145	-3,976*
Pro-social-Verbal Sub Test results from Teachers	16,7000	3,43511	19,7000	1,62546	-3,758
Pro-social- Behavioural					
Subtest results from Teachers	17,9500	2,78104	20,7000	1,86660	-2,647
Total Pro-social Behaviour Score results from Teachers	34,6500	5,63144	40,4000	3,13553	-3,631

p<.05

## DISCUSSION

The present study compared two groups of reception class children's ratings for pro-social behaviour following the implementation of an improvement programme with one of the groups. Overall, the results support the hypothesis that children would assign different pro-social behaviour after an improvement programme. In this study, the experimental group of children were exposed to pro-social messages regarding humans, animals, plants given opportunities to apply these messages through activities and group projects and their positive behaviours were reinforced by the researcher and their peers.

Pro-social behaviours are highly relevant to any assessment of child psychology as children who show excessively high or low rates of pro-social behaviour may be at risk of developing behavioural problems and affective disorders. Low levels of pro-social behaviour have been linked to the externalising disorders of childhood and conduct disordered children

are often low in empathy [4]. In order to reduce this negative aspect of children's behaviour it is necessary to focus on specific strategies that foster positive social interaction. Therefore, a play activities programme was used in this research. This study showed the affectivity of play activities such as sharing games and group work. Since in early childhood the concentration span is short, these methods make it easy to support children in their development. Sprinkle's [19] work using animal shelter dogs to teach antiviolenace and deliver pro-social messages to children had significant results in terms of children's character development. Sansosti and Powel-Smith [27] improved the social behaviour of children using social stories. Gentile *et al.*, [28] studied the effects of pro-social video games on pro-social behaviours. All these researchers pointed out that activity based approaches effectively support pro-social behaviour of children.

Children's learning of pro-social behaviour appears to be a gradual process that involves guidance and encouragement from adults over a period of time. Intensive, short-term interventions may not be as effective as those that involve a continual exposure of children to pro-social activities. In this way, the school experience can reinforce pro-social goals parents emphasize at home [20].

In this current study the age range and ethnic diversity of the sample was limited and future research should address children's understanding of pro-social behaviour across a wider age range and ethnic distribution. Although there are clearly limitations to this study and the design of the present study permits only tentative conclusions we believe the data and questions raised warrant further study. Longitudinal studies with larger samples of children need to be adopted in future research that might also explore the random assignment of teachers or parents to a mixed- or same-age context.

The findings of the present study offer suggestions to family practitioners and researchers on ways in which effective educational programmes can be designed and implemented to assist parents in their task of socializing young children. Concrete strategies can help parents to encourage pro-social behaviour at early age. The most well-known of these strategies are; creating a loving and warm atmosphere in the family and school, explaining and giving rules to the children, encouraging children to be helpful, attributing pro-social behaviour to children's own internal qualities, offer positive models of thoughtful and generous behaviour [8].

In conclusion, the results of the current study indicate that a play activities program can be successful in facilitating the development of pro-social behaviour among preschool children. For this reason it is hoped that schools, parents and teachers will continue to support children pro-social development to ensure that future generations well-adjusted and have better relationships with peers.

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