



Original

## Social Adjustment and Cooperative Work in Primary Education: Teacher and Parent Perceptions<sup>☆</sup>



Cira Carrasco\*, Rafael Alarcón, and M. Victoria Trianes

Universidad de Málaga, Spain

### ARTICLE INFO

*Article history:*

Received 7 October 2016

Accepted 20 February 2017

Available online 17 June 2017

*Keywords:*

Cooperative work  
Prosocial behaviour  
Adaptive behaviour  
Teachers  
Family

*Palabras clave:*

Trabajo cooperativo  
Conducta prosocial  
Conducta adaptativa  
Profesorado  
Familia

### ABSTRACT

Cooperative work is useful in education, as it has a positive impact on the social, emotional and academic environment of the student. This study aims to assess whether working in cooperative groups (CG) in the classroom promotes pro-social and adaptive behaviour, and decreases maladaptation in primary education (PE) children. A total of 78 3rd and 4th year of PE schoolchildren were included in the study. The effectiveness of the intervention – from the perception of teachers and family – was assessed by using a pre-test/post-test design with a non-intervened group (NIG). Results were analysed using analysis of covariance (ANCOVA). Results were more significant from a teachers' perception than from a family's perception in the variables: pro-social, adaptive, and maladaptive behaviour. The intervention was shown to be effective in improving pro-social and adaptive behaviour in primary school children. However, differences are observed between the perception of teachers and family when assessing the behaviour of the children.

© 2017 Universidad de País Vasco. Published by Elsevier España, S.L.U. All rights reserved.

## Adaptación y trabajo cooperativo en el alumnado de educación primaria desde la percepción del profesorado y la familia

### RESUMEN

El trabajo cooperativo es útil en educación ya que obtiene resultados positivos en el ámbito social, afectivo y académico. El objetivo del presente trabajo es evaluar si trabajar en grupo cooperativo (GC) en el aula fomenta las conductas prosociales y adaptativas, y disminuye las inadaptativas del alumnado en Educación Primaria (EP). Han participado en el estudio 78 estudiantes de tercero y cuarto de EP. Para determinar la eficacia de la intervención –desde la perspectiva del profesorado y la familia–, se ha llevado a cabo un diseño pretest-postest con grupo no intervenido (GNI) analizándose los datos mediante análisis de la covarianza (ANCOVA). La intervención arroja más resultados significativos desde la percepción del profesorado que desde la familia en las variables de conducta prosocial, adaptativa e inadaptativa. La intervención llevada a cabo muestra su eficacia en la mejora de la conducta prosocial y adaptativa del alumnado aunque se observan discrepancias entre la percepción del profesorado y de la familia en la valoración de la conducta infantil.

© 2017 Universidad de País Vasco. Publicado por Elsevier España, S.L.U. Todos los derechos reservados.

<sup>☆</sup> Please cite this article as: Carrasco C, Alarcón R, Trianes MV. Adaptación y trabajo cooperativo en el alumnado de educación primaria desde la percepción del profesorado y la familia. Rev Psicodidact. 2018;23:56–62. <http://dx.doi.org/10.1016/j.psicod.2017.02.001>

\* Corresponding author.

E-mail address: [ciracarrasco@uma.es](mailto:ciracarrasco@uma.es) (C. Carrasco).

### Introduction

School is where most children get to know their peers, make their first friends and participate in group activities. School relationships have positive and negative effects on adjustment, academic performance and the sense of belonging (Hamre & Pianta, 2001; Klem & Connell, 2004). The quality of friendship in childhood influences school adjustment in adolescence (Wentzel, McNamara-Barry, & Caldwell, 2004). The degree of integration in the peer

group has important implications for personal wellbeing and psychosocial development (Carrasco, Alarcón, & Trianes, 2015). On the contrary, peer rejection predicts an increase in internalised and externalised problems (Kraatz-Keily, Bates, Dodge, & Pettit, 2000). Suffering rejection by peers predicts anxiety, depression, avoidance of social relationships (Gazelle & Rudolph, 2004) and, over time, the risk of antisocial behaviour in adolescence, even if the exteriorisation of problems has been controlled during childhood (Ladd & Burgess, 2001). Moreover, children who have no friends in childhood are likely to suffer from limited prosocial behaviour and emotional problems (Wentzel et al., 2004). In sum, the association between suffering problems with peers in childhood and showing psychosocial adjustment problems in adolescence has been proven.

Using Cooperative Work (hereinafter CW) as a methodology in classrooms has proved useful in education. CW involves an interactive approach to organising classwork in which students are responsible for their own learning as well as their peers' learning (Rodríguez & Herrera, 2010). After listening to the teacher's instructions, each Cooperative Group (hereinafter CG) has to organise, plan and carry out the task by consensus (Rodríguez & Herrera, 2010). Therefore, CW is an instrument to encourage learning in students, regardless of their personal characteristics and educational needs, and so as to promote dialogue, coexistence, solidarity and cooperation skills (Pujolàs & Lago, 2011). CW has proven effective to: (a) develop social skills in students (Lavasani, Afzali, & Afzali, 2011); (b) facilitate the inclusion of students with learning difficulties and promote interpersonal relationships with students with different learning needs and different cultural and ethnic backgrounds (Gillies, 2014); and (c) decrease racist attitudes (Díaz-Aguado, 2003). Also, CW has a positive effect on emotional development, as it: (a) promotes self-esteem (Bertucci, Conte, Johnson, & Johnson, 2010); (b) increases intrinsic motivation (Hanze & Berger, 2007); (c) increases the group's perception of cohesion and social responsibility towards the learning of others (Gillies, 2004); and (d) increases team power, that is, the trust in the team, hence the effectiveness of the group in future CW situations (León, Mendo-Lázaro, Felipe-Castaño, Polo, & Fajardo-Bullón, 2017). To achieve good results in the CG, teachers must define the goal of the task (Prien, Taylor, Renn, & Janz, 2000). In fact, one of the reasons why CW is sometimes not effective is the lack of teacher training (Sharan, 2010).

Since CW is an increasingly common methodology (Suárez, 2010), it is necessary to assess the effectiveness of programmes promoting it. A review of psycho-educational interventions in recent years in Spain shows that most of them have been assessed by students (Cerrillo-Martín, 2006; Coelho, Sousa, & Figueira, 2014), teachers (González-Valenzuela, Martín-Ruiz, & Delgado-Ríos, 2012), mediators (Cerrillo-Martín, 2006) and external researchers (Justicia-Arráez, Pichardo, & Justicia, 2015). Regarding the assessment of the Programme presented in this study, it shows relatively innovative aspects, as it has taken into account the perception of parents (family). A multi-source approach was used, in order to involve the participation of teachers/tutors and family (student's parent). Both sources are considered reliable and valid for assessing children's behaviour (Trianes, Blanca, García, Muñoz, & Fernández-Baena, 2007). Additionally, these two sources provide different information, depending on the context, the informant's prospects or bias and the possible errors of measurement (Kraemer et al., 2003). The use of a multi-source approach is not intended to identify which source has the exclusive truth about the child in question, but rather to draft a more comprehensive view of the child's behaviour in the different contexts (Rubin, Bukowski, & Jeffrey, 2006).

This study aims to assess the effectiveness of a programme to develop competent social relationships in primary education (Trianes, 2012) in the third module *learning to help and cooperate*, aimed to promote prosocial behaviour and school adjustment as well

as to decrease maladaptation, based on data collected from teachers and family. In particular, the aim is to analyse the differences between students involved in the intervention (IG) and students that are not (NIG), in relation to the following variables: *prosocial behaviour*, *adaptive behaviour* and *maladaptive behaviour*. Expected results would involve a significant increase in *prosocial behaviour* (Hypothesis 1) and *adaptive behaviour* (Hypothesis 2), along with a significant decrease in *maladaptive behaviour* (Hypothesis 3), in the IG in relation to the NIG. Also, teachers are expected to shed more significant results than family, due to their greater proximity to students in the school context where the assessment is taking place.

## Method

### Participants

Participants were 86 schoolchildren (50 boys and 36 girls) aged between 7 and 10 years old ( $M=8.62$ ,  $SD=.76$ ), attending a public PE school in a town of the province of Malaga (Spain). Students were divided into two groups depending on whether they participated in the intervention programme or not. The intervened group (IG) was composed of 42 students (23 boys and 19 girls) from 3rd and 4th years (two classes), while the non-intervened group (NIG) was composed of 44 students (27 boys and 17 girls) from the same years (two classes). Participants were also 86 families of the students and four teachers/tutors from the two classes (two men and two women).

Neither the choice of school nor the assignment of students to groups was made randomly. The school where the research was conducted was the school assigned to one of the authors of this study (who is also a teacher) by the Ministry of Education of the Regional Government of Andalusia, which did not participate as an informant in this research.

### Instruments

#### BASC-2 (Behaviour Assessment System for Children and Adolescents)

This test assesses four adaptive aspects and ten maladaptive aspects of children's behaviour (Reynolds & Kamphaus, 1992). Its Spanish adaptation (González, Fernández, Pérez, & Santamaría, 2004) was used in this study. In addition, this research used the P-2 questionnaire to be completed by families (134 items) and the T-2 questionnaire by teachers (149 items). While both questionnaires assess the same aspects, T-2 provides an extra analysis on study skills and learning problems. Both questionnaires have a Likert response format and five answer options.

The study assesses four aspects of *adaptive behaviour*: *adaptability*, *leadership*, *social skills* and *study skills*; and ten aspects of *maladaptive behaviour*: *aggressiveness*, *hyperactivity*, *behavioural problems*, *anxiety*, *depression*, *somatisation*, *atypicality*, *withdrawal*, *learning problems* and *attention problems*.

In the Spanish version, the T-2 and P-2 scales show a reliability of around .80 measured by the Cronbach's alpha coefficient, thus showing adequate internal consistency in the different normative groups. Test-retest correlations showed satisfactory values after three months (.82 and .88, respectively).

In the study sample, the T-2 scale scored Cronbach alpha values ( $\alpha$ ) of .90, McDonald Omega ( $\Omega$ ) of .91 and a percentage of explained variance of 68.66. As for the P-2 level, results are similar ( $\alpha = .89$ ,  $\Omega = .90$  and 67.54% of explained variance). Results are satisfactory.

#### PBQ (Prosocial Behaviour Questionnaire)

The Prosocial Behaviour Questionnaire (PBQ) assesses positive aspects in the social behaviour – *i.e.* helping, cooperating, sharing

and comforting – of children aged 5–11 years old (Weir & Duveen, 1981), and is widely used in plenty of research studies in Spanish-speaking contexts (Garaigordobil, 2005). Teachers complete the PBQ after observing children's social behaviour for a period of time. It contains 20 items in a Likert response format and 5 answer options. It displays a unifactorial structure and offers a final total score.

The psychometric studies conducted on the Spanish version (Garaigordobil, 2005) successfully confirm the reliability and validity of the instrument. In order to explore its test–retest reliability, a retest is conducted with a three weeks time interval, obtaining a correlation coefficient of .93. A high level of internal consistency (Cronbach's alpha coefficient = .94) was also observed. Validity studies showed that prosocial behaviour negatively correlates with behaviours of sorrow, anguish, hesitation ( $r = -.41$ ), demanding behaviour ( $r = -.40$ ) and deviant behaviour ( $r = -.46$ ). In the study sample, results show an  $\alpha$  coefficient of .93, a  $\Omega$  coefficient of .94 and 68.12% of explained variance. Results are satisfactory.

### Programme

The programme to develop competent social relationships in primary education (Trianes, 2012) has three modules: (1) *Improving the class climate*; (2) *Solving problems with schoolmates without fighting*; and (3) *Learning to help and cooperate*. This study has used the third module *learning to help and cooperate*, which aims to promote CW while providing Primary Education (hereinafter PE) students with the required skills to work cooperatively. Likewise, the module is divided into three parts. The first part is called *getting started in cooperative groups* and includes four activities: (1) Introducing CGs; (2) Designing CGs; (3) Implementing CGs; and (4) Assessing CGs. The second part is called *learning skills to work in CGs* and includes five activities: (1) Difficulties to cooperate; (2) Learning to help in CGs; (3) Getting organised in CGs; (4) Learning discussion and debate skills in CGs; and (5) Working cohesion and strength in CGs. Finally, the third part is called *we can help and cooperate anywhere* and includes five activities: (1) Learning to help; (2) Learning to ask for help; (3) Help and ask for help in everyday life; (4) Conformity and lack of solidarity (obstacles to give and seek help); and (5) We can always help and cooperate anywhere. This programme does not have closed activities. Instead, the teacher decides which contents and specific objectives to work in class and each activity tends to achieve a specific skill.

### Procedure

The first step was to obtain the ethical permission to conduct the research from the school. Researchers responsible for this study met with the head teachers of the participating schools in order to explain the research objectives, present the programme (Trianes, 2012), introduce the assessment instruments and request the corresponding permissions. Then, schoolteachers were informed and their collaboration requested. A teacher agreed to use the programme in 3rd and 4th year of PE (one class group for each level) and four teachers/tutors from 3rd and 4th year of PE (two class groups for each level) agreed to complete the questionnaires before and after the intervention. Participating teachers were given pre-test questionnaires to be completed and returned in a fortnight. A meeting with participants' families was held in October to explain the research and request collaboration. Pre-test questionnaires were taken home by children and returned to the school three days after.

From October to May, the Natural Sciences teacher of the IG used cooperative work as a methodology to teach her class group, following the activities suggested by *learning to help and cooperate* (Trianes, 2012). The programme does not include closed sessions.

Instead, the programme methodology is used to teach Natural Sciences lessons throughout the entire year. Each session lasts for 45–60 minutes every day. The post-test assessment was conducted in June, after completion of the intervention. It involved the same sources and procedures as in the pre-test. Sources, teachers and family members were blinded as to which group students belonged: IG or NIG.

### Data analysis

A pre-test/post-test design with the NIG has been carried out in this study with the purpose of assessing the effectiveness of the third module *learning to help and cooperate* of the programme (Trianes, 2012). The set of variables under study are grouped into three categories according to the type of conduct: *prosocial behaviour*, *adaptive behaviour* (adaptability, social skills, leadership and study skills) or *maladaptive behaviour* (anxiety, atypicality, depression, hyperactivity, conduct problems, withdrawal, somatisation, learning problems, aggression and attention problems). All variables refer to the perception teachers and families have on these variables.

A number of analyses of covariance (ANCOVA) were performed, where the factor was the group variable with two levels: control (NIG) and experimental (IG). The dependent variables (DV) were the scores of the variables in the post-test, and the covariates were scores of the same variables in the pre-test. In addition to the parametric assumptions (quantitative DV, normal data distribution and variance homoscedasticity), this test requires compliance with two other assumptions: (1) To verify the existence of a non-zero linear relationship between the DV and the covariate in all groups together. If there is no such relationship, conducting an ANCOVA does not make sense, so a unifactorial ANOVA should be conducted alternatively; (2) To check the homogeneity of regression slopes; that is, to ensure that the linear relationship of the DV and the covariate is the same in all groups. If this assumption is not met, a factorial ANOVA should be conducted, by forming blocks of subjects based on the covariate (covariate lock) and introducing the covariate as a new factor in the analysis.

### Results

The results obtained in this study are shown in the following order: (1) results regarding the perception of teachers in the set of variables, and (2) results regarding the perception of family in the set of variables. In both cases, the results shown first are those extracted from the variables analysed by ANCOVAs, followed by results from the variables analysed by unifactorial ANOVAs or factorial ANOVAs.

#### Perception of teachers

Table 1 shows the following descriptive statistics: mean, standard deviation and adjusted mean, in all variables analysed.

Next, the results from the variables analysed by ANCOVAs are shown. All variables are statistically significant except for *leadership*. The variables *prosocial behaviour* and *adaptability* have scored higher adjusted means in the IG than in the NIG, according to teachers' view. In turn, the variables *atypicality*, *depression*, *hyperactivity*, *behavioural problems*, *aggressiveness* and *attention problems* have scored lower adjusted means in the IG than in the NIG, according to teachers' view. Results from the ANCOVA analysis are shown in Table 2. Table 3 shows the pairwise comparisons in the group factor by using the Bonferroni adjustment on all variables analysed.

Next, the results obtained from the variables analysed by factorial ANOVAs will be displayed. *T*-tests were conducted on pre-test scores in all variables analysed with factorial ANOVA, to check for

**Table 1**  
Mean descriptive statistics (M), standard deviation (SD) and adjusted mean (adjustedM)

	M	SD	adjustedM
<i>Prosocial behaviour</i>			
NIG	50.24	7.20	47.53
IG	55.90	6.15	58.75
<i>Adaptability</i>			
NIG	21.27	3.61	20.17
IG	22.81	4.31	23.97
<i>Atypicality</i>			
NIG	18.66	4.78	18.24
IG	16.36	3.20	16.80
<i>Depression</i>			
NIG	13.04	3.02	12.95
IG	11.10	3.11	11.20
<i>Hyperactivity</i>			
NIG	20.98	7.02	22.22
IG	20.21	9.40	18.91
<i>Behavioural problems</i>			
NIG	11.60	2.20	11.99
IG	11.07	3.10	10.66
<i>Aggressiveness</i>			
NIG	19.84	5.39	20.81
IG	19.59	7.85	18.57
<i>Attention problems</i>			
NIG	18.73	6.50	19.05
IG	16.81	7.45	16.48
<i>Leadership</i>			
NIG	23.59	3.72	22.63
IG	23.61	7.49	24.64

**Table 2**  
ANCOVA test results, showing values of F statistic, statistical significance and effect size ( $\eta^2_{\text{partial}}$ )

	F	p	$\eta^2_{\text{partial}}$
Prosocial behaviour	42.66	<.001	.33
Adaptability	20.85	<.001	.20
Atypicality	7.89	<.01	.09
Depression	11.37	<.01	.12
Hyperactivity	8.88	<.01	.10
Behavioural problems	15.95	<.001	.16
Aggressiveness	6.71	<.05	.08
Attention problems	8.81	<.01	.10
Leadership	1.76	.19	.01

**Table 3**  
Pairwise comparisons with the Bonferroni adjustment

	Mean difference	Standard error	p
Prosocial behaviour	11.22	1.72	<.001
Adaptability	3.80	.83	<.001
Atypicality	1.44	.52	<.01
Depression	1.75	.52	<.01
Hyperactivity	3.31	1.11	<.001
Behavioural problems	1.33	.33	<.01
Aggressiveness	2.24	.87	<.01
Attention problems	2.57	.86	<.01
Leadership	2.01	1.51	.19

differences between IG and NIG scores. Results show no statistically significant differences in any of the variables, which suggests that groups are homogeneous. As for post-test scores, all variables show statistically significant differences in the main effect of the group factor, except for the variable *study skills*, which is not statistically significant. The variable *social skills* shows a higher adjusted mean in the IG than the NIG after the intervention, according to the perception of teachers. Likewise, the variables *anxiety*,

**Table 4**  
ANCOVA test results, showing values of F statistic, statistical significance and effect size ( $\eta^2_{\text{partial}}$ )

	F	p	$\eta^2_{\text{partial}}$
Social skills	25.69	<.001	.24
Anxiety	12.95	<.01	.13
Withdrawal	24.32	<.001	.23
Somatisation	8.68	<.01	.10
Learning problems	7.37	<.01	.09

**Table 5**  
Pairwise comparisons with the Bonferroni adjustment

	Mean difference	Standard error	p
Social skills	7.98	1.58	<.001
Anxiety	2.64	.73	<.01
Withdrawal	4.49	.91	<.001
Somatisation	1.31	.45	<.01
Learning problems	3.18	1.17	<.01

*withdrawal*, *somatisation* and *learning problems* show a lower adjusted mean in the IG than the NIG, according to the perception of teachers. Results of the factorial ANOVA analysis are shown in [Table 4](#). [Table 5](#) shows the pairwise comparisons in the group factor by using the Bonferroni adjustment on all variables analysed.

*Perception of students' families*

[Table 6](#) shows the following descriptive statistics: mean, standard deviation and adjusted mean, in all variables analysed.

All variables analysed met the assumptions required for conducting ANCOVAs. Only *anxiety* was statistically significant [ $F(1,78) = 7.30, p < .01, \eta^2_{\text{partial}} = .10$ ], which indicates that students in the IG show lower adjusted means in anxiety than students in the NIG after the intervention. *Adaptability*, *aggressiveness*, *atypicality*, *depression*, *social skills*, *hyperactivity*, *leadership*, *attention problems*, *behavioural problems*, *withdrawal* and *somatisation* were not statistically significant, indicating that the adjusted means in both groups did not differ after the intervention. [Table 4](#) shows the following descriptive statistics: mean, standard deviation and adjusted mean, in all variables analysed.

**Discussion**

Results from the present study on the effect of the third module *learning to help and cooperate of the programme to develop competent relationships in primary education* (Trianes, 2012) have shown differences between teachers' and parents' view in virtually all variables except for *anxiety* and *leadership*. Results are consistent with other research studies that used a multi-source approach and could only reach a partial agreement among the variables (Karver, 2006). Inconsistencies may be due to the fact that teachers build children's social-emotional adjustment based on social contents related to the school context, whereas parents do so based on social contents related to the family context (Fernández-Vilar, 2012). Thus, children can behave differently depending on whether they are at school or in the family context (Frank, van Egeren, Fortier, & Chase, 2000), as a consequence of the different expectations of teachers and parents regarding their behaviour.

Regarding *prosocial behaviour* from teachers' view, students who have worked cooperatively in class during the activities in the programme, have significantly increased their *prosocial behaviour*, thus Hypothesis 1 has been met. Such result directly refers to the objective of the Programme, i.e. to increase cooperative and helping behaviour. Getting children involved in helping activities encourages their prosocial behaviour (Staub, 2003). The above results

**Table 6**  
Mean descriptive statistics (*M*), standard deviation (*SD*) and adjusted mean (adjusted *M*)

	<i>M</i>	<i>SD</i>	adjusted <i>M</i>
<i>Anxiety</i>			
NIG	15.03	3.13	15.07
IG	13.40	3.79	13.34
<i>Adaptability</i>			
NIG	26.80	3.15	27.03
IG	26.60	3.52	26.34
<i>Aggressiveness</i>			
NIG	18.80	3.50	19.22
IG	19.46	5.40	19.10
<i>Atypicality</i>			
NIG	16.50	2.99	16.89
IG	17.05	4.63	16.62
<i>Depression</i>			
NIG	17.52	3.45	17.30
IG	16.93	5.46	17.16
<i>Social skills</i>			
NIG	44.60	5.92	44.40
IG	43.56	7.42	43.76
<i>Hyperactivity</i>			
NIG	16.00	3.70	16.64
IG	16.37	4.32	15.74
<i>Leadership</i>			
NIG	27.35	5.09	27.31
IG	27.60	5.74	27.63
<i>Attention problems</i>			
NIG	13.65	3.83	14.10
IG	14.30	3.92	13.85
<i>Behavioural problems</i>			
NIG	12.88	2.52	13.46
IG	14.54	4.44	13.96
<i>Withdrawal</i>			
NIG	15.10	2.90	15.08
IG	14.63	3.15	14.66
<i>Somatisation</i>			
NIG	19.28	4.21	19.46
IG	19.40	5.85	19.21

are consistent with further programme interventions that promote peer-support and cooperation (Moraru, Stoica, Tomuletiu, & Filpisan, 2011), as children who are taught to cooperate show more support and attention to their peers (Golub & Buchs, 2014).

Regarding *adaptive behaviour* from teachers' view, students involved in the intervention increased their *social skills* and *adaptability*, but not their *study skills* and *leadership*. The programme promotes the use of skilful language to give and seek help and encourages debating skills such as respecting turn-taking, establishing eye-contact with the speaker, giving credit and respecting others' opinions. Developing such contents encourages the acquisition of *social skills*. These results are in line with those reported by teachers in similar school interventions (Justicia-Arráez et al., 2015).

The increased *adaptability* in students may be interpreted as a general benefit of the programme. Working in CGs increases adaptation and group cohesion, and reduces individualistic, authoritarian and argumentative attitudes and behaviours (Yhan & Liu, 2004). Furthermore, cooperative work increases the quality and quantity of peer-relationships (Carrasco, 2015), thus facilitating students' integration.

As for *study skills*, they have not significantly increased from teachers' view. This may be due to teachers' lack of experience assessing skills and strategies involved in CW and/or in project work, and because they may still have a traditional view of

teaching and learning, one that is less active and participatory and more likely to involve rote learning.

Neither of the two sources has yielded significant differences in *leadership*. Leadership is worked out in the contents of the programme, as each CG has a leader who is democratically elected by the group members. This result may be due to the fact that children and adults may have a different concept of a "leader": while children think of a leader as someone different every day, depending on the activity and the context of the day, adults think of leadership as a rather permanent quality.

Regarding family, no significant differences were found in *adaptive behaviour: adaptability, leadership* and *social skills*. This result may be explained because parents value adaptive behaviour based on their family context (Frank et al., 2000), and children at these early ages are usually well-adapted at home. In short, after the intervention with *learning to help and cooperate* (Trianes, 2012), *adaptive behaviour* has increased from teachers' view but not from parents' view, so Hypothesis 2 was only partially met.

Finally, with regards to *maladaptive behaviour*, both teachers and family show significant differences in relation to *anxiety*. This result may be due to the fact that children have worked in cooperative groups and children who help others are usually accepted by their peers (Monjas, Sureda, & García-Bacete, 2008), which reduces anxiety. It is worth stressing the latter result. When working in CGs, students learn to overcome frustration and solve problems with each other (Kershner, Warwick, Mercer, & Staarman, 2014), which has a positive impact on decreasing anxiety and is shown in both school and family contexts.

Regarding teachers' point of view, students involved in the programme have decreased their *attention problems, learning problems* and *behavioural problems*. Furthermore, the motivation to study, achieved through CW, has generally improved students' behaviour in class. Other research studies report a positive relationship between social behaviour and academic motivation (Inglés, Martínez-González, Valle, García-Fernández, & Ruiz-Esteban, 2011). Del Rey and Ortega (2005) found an inverse relationship, i.e. between (1) lack of motivation to study and lack of expectations of academic success; and (2) disruptive behaviour.

Teachers also reported a significant decrease in *aggressiveness*. As observed in this intervention, by increasing cooperative and helping behaviour, the social climate is usually improved and aggressiveness is decreased (Chen & Wei, 2011; Ward, 2013).

Finally, *atypicality, depression* and *withdrawal* show a significant decrease from the perception of teachers. Students were able to overcome these psycho-pathological variables by working with the programme, which encourages help and cooperation in class. By doing so, students have reached a great psychological adjustment, as prosocial behaviour is an indicator of psychological adjustment (Guevara, Cabrera, & Barrera, 2007).

From the perception of family, no significant results were found in *maladaptive behaviour*. This may be due to the fact that families are less effective when they provide information about their children's behaviour in the school context. Furthermore, research assigns less rigour to this source than to teachers (Guijo, 2002).

In short, after the intervention with *Learning to Help and Cooperate* (Trianes, 2012), *maladaptive behaviour* has decreased from the teachers' view but not from the parents' view, so Hypothesis 3 was only partially met.

The programme to develop competent social relationships in PE (Trianes, 2012) has proven to be effective in its three modules. It has published results, from the perception of teachers regarding the first module *improving the class climate* and the second module *solving problems with schoolmates without fighting* (Sánchez, Rivas, & Trianes, 2006; Sánchez, Trianes, & Rivas, 2009); as well as from the perception of students regarding the third module *learning to help and cooperate* (Carrasco et al., 2015). With the assessment of

learning to help and cooperate from the perception of teachers and family, the assessment of this instrument has been completed. It has proven to be effective in developing interpersonal and intrapersonal competence in students.

However, the present study has some limitations. Firstly, the sample is limited and all students belong to the same school. Future studies should be conducted with larger samples and students from different schools. Secondly, the intervention of the programme was carried out by the same teacher in both intervened classes. Future interventions with the programme should be carried out by different teachers, in order to avoid the bias caused by the one teacher. Finally, and because a standardised sample was used, this research has not requested permission from the Ethics Committee of the University of Malaga. However, future research will have to request such permission.

With regards to practical implications of the research, it is worth highlighting the fact of providing teachers with a validated programme to teach students to help and cooperate, due to both the flexibility of the activities suggested and the methodology, which helps implementing the school curriculum. Therefore, teachers are offered a new instrument to promote school adjustment and behaviours of help and cooperation among their students during class, so there is no need to add a specific class to work these skills, which would either reduce the class time or increase school hours. The implementation of the programme should be continued, only this time pursuing educational values rather than validation values, for example: equality between boys and girls.

## References

- Bertucci, A., Conte, S., Johnson, D. W., & Johnson, R. T. (2010). The impact of size of cooperative group on achievement, social support, and self-esteem. *The Journal of General Psychology, 137*(3), 256–272. <http://dx.doi.org/10.1080/00221309.2010.484448>
- Carrasco, C. (2015). *Aprender a ayudar y cooperar. Resultados de una intervención psicoeducativa*. Málaga: Universidad de Málaga.
- Carrasco, C., Alarcón, R., & Trianes, M. V. (2015). Eficacia de una intervención psicoeducativa basada en clima social, violencia percibida y sociométricos en alumnado de educación primaria. *Revista de Psicodidáctica, 20*(2), 247–262. <http://dx.doi.org/10.1387/RevPsicodidact.13206>
- Cerrillo-Martín, M. (2006). Mejorar el autoconcepto en alumnos de un entorno desfavorecido. *Revista de Psicodidáctica, 14*(2), 71–86. <http://dx.doi.org/10.1387/RevPsicodidact.145>
- Chen, J., & Wei, H. (2011). The impact of school violence on self-esteem and depression among Taiwanese junior high school students. *Social Indicators Research, 100*(3), 479–498. <http://dx.doi.org/10.1007/s11205-010-9625-4>
- Coelho, V., Sousa, V., & Figueira, A. P. (2014). The impact of a school-based social and emotional learning program on the self-concept of middle school students. *Revista de Psicodidáctica, 19*(2), 347–365. <http://dx.doi.org/10.1387/RevPsicodidact.10714>
- Del Rey, R., & Ortega, R. (2005). Violencia interpersonal y gestión de la disciplina: Un estudio preliminar. *Red Revista Mexicana de Investigación Educativa, 10*(26), 805–832.
- Díaz-Aguado, M. J. (2003). *Educación intercultural y aprendizaje cooperativo*. Madrid: Pirámide.
- Fernández-Vilar, M. A. (2012). Efecto del ajuste socioemocional en el rendimiento y las competencias académicas en el contexto escolar: Estudio comparativo. *Anales de Psicología, 28*(3), 892–903. <http://dx.doi.org/10.6018/analesps.28.3.131211>
- Frank, S. J., van Egeren, L. A., Fortier, J. L., & Chase, P. (2000). Structural, relative, and absolute agreement between parents' and adolescent impatients' reports of adolescent functional impairment. *Journal of Abnormal Child Psychology, 28*(4), 395–402. <http://dx.doi.org/10.1023/A:1005125211187>
- Garaigordobil, M. (2005). *Diseño y evaluación de un programa de intervención socioemocional para promover la conducta prosocial y prevenir la violencia*. Madrid: Ministerio de Educación y Ciencia.
- Gazelle, H., & Rudolph, K. D. (2004). Moving toward and moving away from the world: Social approach and avoidance trajectories in anxious youth. *Child Development, 75*(3), 829–849. <http://dx.doi.org/10.1111/j.1467-8624.2004.00709.x>
- Gillies, R. (2004). The effects of cooperative learning on junior high school students during small group learning. *Learning and Instruction, 14*(2), 197–213. [http://dx.doi.org/10.1016/S0959-4752\(03\)00068-9](http://dx.doi.org/10.1016/S0959-4752(03)00068-9)
- Gillies, R. (2014). Aprendizaje cooperativo: Desarrollos en la investigación. *International Journal of Educational Psychology, 3*(2), 125–140. <http://dx.doi.org/10.4471/ijep.2014.08>
- Golub, M., & Buchs, C. (2014). Preparing pupils to cooperate during cooperative controversy in grade 6: A way to increase positive interactions and learning? *European Journal of Psychology of Education, 29*(3), 453–466. <http://dx.doi.org/10.1007/s10212-013-0207-0>
- González, J., Fernández, S., Pérez, E., & Santamaría, P. (2004). *BASC-2 Sistema de evaluación de la conducta de niños y adolescentes, Manual*. Madrid: TEA.
- González-Valenzuela, M. J., Martín-Ruiz, I., & Delgado-Ríos, M. (2012). Enseñanza de la lectoescritura y disminución del riesgo de dificultades de aprendizaje. *Revista de Psicodidáctica, 17*(2), 253–268. <http://dx.doi.org/10.1387/RevPsicodidact.4502>
- Guevara, I. P., Cabrera, V. E., & Barrera, F. (2007). Contextual factors and moral emotions as predictors of psychological adjustment in the adolescence. *Universitas Psychologica, 6*(2), 269–283.
- Guijo, V. (2002). *Estudio multifactorial de la conducta prosocial en los niños de cinco y seis años*. Burgos: Servicio de publicaciones de la Universidad de Burgos.
- Hänze, M., & Berger, R. (2007). Cooperative learning, motivational effects, and student characteristics: An experimental study comparing cooperative learning and direct instruction in 12th grade physics classes. *Learning and Instruction, 17*(1), 29–41. <http://dx.doi.org/10.1016/j.learninstruc.2006.11.004>
- Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*(2), 625–638. <http://dx.doi.org/10.1111/1467-8624.00301>
- Inglés, C. J., Martínez-González, A. E., Valle, A., García-Fernández, J. M., & Ruiz-Esteban, C. (2011). Conducta prosocial y motivación académica en estudiantes españoles de educación secundaria obligatoria. *Universitas Psychologica, 10*(2), 451–465.
- Justicia-Arráez, A., Pichardo, M., & Justicia, F. (2015). Estudio longitudinal de los efectos del programa Aprender a Convivir en la competencia social infantil. *Revista de Psicodidáctica, 20*(2), 263–283. <http://dx.doi.org/10.1387/RevPsicodidact.13313>
- Karver, M. S. (2006). Determinants of multiple informant agreement on child and adolescent behaviour. *Journal of Abnormal Child Psychology, 34*(2), 251–262. <http://dx.doi.org/10.1007/s10802-005-9015-6>
- Kershner, R., Warwick, P., Mercer, N., & Staarman, J. K. (2014). Primary children's management of themselves and others in collaborative group work: 'Sometimes it takes patience...'. *Education 3-13, 42*(2), 201–216. <http://dx.doi.org/10.1080/03004279.2012.670255>
- Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *School Health, 74*(7), 262–273. <http://dx.doi.org/10.1111/j.1746-1561.2004.tb08283.x>
- Kraatz-Keily, M., Bates, J. E., Dodge, K. A., & Pettit, G. S. (2000). A cross-domain analysis: Externalizing and internalizing behaviors during 8 years of childhood. *Journal of Abnormal Child Psychology, 28*(2), 161–179. <http://dx.doi.org/10.1023/A:1005122814723>
- Kraemer, H. C., Measelle, J. R., Ablow, J. C., Essex, M. J., Boyce, W. T., & Kupfer, D. J. (2003). A new approach to integrating data from multiple informants in psychiatric assessment and research: Mixing and matching contexts and perspectives. *American Journal of Psychiatry, 160*(9), 1566–1577. <http://dx.doi.org/10.1176/appi.ajp.160.9.1566>
- Ladd, G. W., & Burgess, K. B. (2001). Do relational risks and protective factors moderate the linkages between childhood aggression and early psychological and school adjustment? *Child Development, 72*(5), 1579–1601. <http://dx.doi.org/10.1111/1467-8624.00366>
- Lavasani, M. G., Afzali, L., & Afzali, F. (2011). Cooperative learning and social skills. *Cypriot Journal of Educational Sciences, 6*(4), 186–193.
- León, B., Mendo-Lázaro, S., Felipe-Castaño, E., Polo, M. I., & Fajardo-Bullón, F. (2017). Potencia de equipo y aprendizaje cooperativo en el ámbito universitario. *Revista de Psicodidáctica, 22*(1), 9–15. <http://dx.doi.org/10.1387/RevPsicodidact.14213>
- Monjas, M. I., Sureda, I., & García-Bacete, F. J. (2008). ¿Por qué los niños y las niñas se aceptan y se rechazan? *Cultura y Educación, 20*(4), 479–492. <http://dx.doi.org/10.1174/113564008786542181>
- Moraru, A., Stoica, M., Tomuletiu, E. A., & Filpisan, M. F. (2011). Evaluation of a program for developing socio-emotional competencies in preschool children. *Procedia-Social and Behavioral Sciences, 30*(4), 2161–2164. <http://dx.doi.org/10.1016/j.sbspro.2011.10.419>
- Prien, K. O., Taylor, R. R., Renn, R. W., & Janz, B. (2000). The effect of cooperative learning, cohesion, and commitment on team performance. In *Proceedings of the Forty-Second Annual Meeting*.
- Pujolàs, P., & Lago, J. R. (2011). El asesoramiento para el aprendizaje cooperativo en la escuela. In E. Martín, & J. Onrubia (Eds.), *Orientación educativa. Procesos de innovación y mejora de la enseñanza* (pp. 121–142). Barcelona: Graó.
- Rodríguez, M. J., & Herrera, M. E. (2010). El espacio europeo de educación superior. In N. Nieto, & M. J. Rodríguez (Eds.), *Investigación y evaluación educativa en la sociedad del conocimiento* (pp. 213–238). Salamanca: Ediciones Universidad Salamanca.
- Reynolds, C. R., & Kamphaus, R. W. (1992). *Behavior assessment system for children*. Circle Pines, MN: AGS.
- Rubin, K. H., Bukowski, W. M., & Jeffrey, J. G. (2006). Peer interactions, relationships, and groups. In W. Damon, & N. Eisenberg (Eds.), *Handbook of child psychology: Social, emotional and personality development* (pp. 571–788). Nueva York: John Wiley & Sons.
- Sánchez, A. M., Rivas, M. T., & Trianes, M. V. (2006). Eficacia de un programa de intervención para la mejora del clima escolar: Algunos resultados. *Revista Electrónica de Investigación Psicoeducativa, 9*, 4(2), 353–370.
- Sánchez, A. M., Trianes, M. V., & Rivas, M. T. (2009). Resultados de una intervención con el programa de educación de la competencia social en alumnado de primaria (PECSA). *Revista de Psicología General y Aplicada, 62*(4), 303–324.

- Sharan, Y. (2010). Cooperative learning for academic and social gains: Valued pedagogy, problematic practice. *European Journal of Education*, 45(2), 300–313. <http://dx.doi.org/10.1111/j.1465-3435.2010.01430.x>
- Staub, E. (2003). *The psychology of good and evil: Why children, adults and groups help and harm others*. New York: Cambridge University Press.
- Suárez, C. (2010). *Cooperación como condición social de aprendizaje*. Barcelona: UOC.
- Trianes, M. V. (2012). *Programa para el desarrollo de relaciones sociales competentes en educación primaria*. Málaga: Algibe.
- Trianes, M. V., Blanca, M. J., García, B., Muñoz, A., & Fernández-Baena, J. (2007). Análisis del comportamiento asertivo con adultos: Un modelo de relaciones entre componentes y fuentes. *Infancia y Aprendizaje*, 30(2), 163–182. <http://dx.doi.org/10.1174/021037007780705201>
- Ward, A. M. (2013). *The association between violence exposure and aggression and anxiety: The role of peer relationships in adaptation for middle school students*. Order No. AAI3524399, Dissertation Abstracts International: Section B: The Sciences and Engineering. Retrieved from <http://search.proquest.com/docview/1429636279?accountid=14568> (1429636279; 2013-99140-383).
- Weir, K., & Duveen, G. (1981). Further development and validation of the prosocial behaviour questionnaire for use by teachers. *Journal of Child Psychology and Psychiatry*, 22(4), 357–374. <http://dx.doi.org/10.1111/j.1469-7610.1981.tb00561.x>
- Wentzel, K. R., McNamara-Barry, C., & Caldwell, K. A. (2004). Friendships in middle school: Influences on motivation and school adjustment. *Journal of Educational Psychology*, 96(2), 195–203. <http://dx.doi.org/10.1037/0022-0663.96.2.195>
- Yhan, S. H., & Liu, S. F. (2004). An investigation of the relationship between forms of positive interdependence, social support, and selected aspects of classroom climate. *Computers in Human Behavior*, 21(1), 45–72. <http://dx.doi.org/10.1016/j.chb.2004.02.002>