Peer Aggression and Victimisation: Social Behaviour Strategies in Early Childhood in Spain

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Abstract

The present study aims to examine the issue of peer aggression and victimisation in early childhood, with a focus on the associated social behaviour strategies (aggressiveness, prosociality, dominance and social insecurity). A sample of 227 children (58.1% girls, $n = 132$) between the ages of 4 and 7 years ($M = 5.61$; $SD = 1. 03$) participated in the study. Teacher reports and peer nominations of physical and verbal aggression and victimisation were analysed. Results showed an association between aggressiveness and insecurity and being nominated as a physical and verbal aggressor by peers. Being nominated as a physical victim was associated with aggressiveness and dominance; and for verbal victim with aggressiveness and prosociality. Differences were found between boys and girls in verbal aggression and victimisation. The current study contributes to a better understanding of the emergence of peer aggression and victimisation in relation to social processes in early childhood and has implications for the prevention of the later appearance of bullying.

Keywords Preschool education · Peer aggression and victimisation · Physical and verbal aggression-victimisation · Social behaviour strategies

Introduction

In many countries, children attend preschool/kindergarten or school between the ages of three and six years and this is true in Spain where 1.2 million children are registered in preschool (MECD, 2018). Research has indicated that interpersonal aggression is observable among this age-group, although these behaviours are still developing at this point. Interpersonal aggression in early childhood has become the focus of scientific interest in recent years, not only because

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of the associated negative consequences, but also because it may be a precursor of bullying at later ages (Barker et al., 2008; Rose, 2011).

A considerable number of studies have indicated that some children of this age behave aggressively towards others and that this behaviour differs both from rough play (so-called rough and tumble play, Smith & Boulton, 1990), and from bullying (Ortega & Monks, 2005). It has been argued that aggression during the early years does not meet the definition of bullying but is better considered as peer aggression and victimisation (Monks & O'Toole, 2021; Ortega & Monks, 2005; Vlachou et al., 2011). Bullying is defined as a form of intentional aggression in which one person, or several people intend to hurt, harass, humiliate, or exclude socially someone weaker, systematically and over time (Olweus, 1993). The definitional features of the power imbalance between bullies and victims and repetition over time, are key in distinguishing this phenomenon from general aggressive behaviour (Ybarra et al., 2014). Unlike bullying, which is observed during the primary school years, peer aggression and victimisation in the early years include aggressive behaviors where intentionality is not entirely evident. Peer aggression during the early years is characterized by temporal instability. Furthermore, these behaviours do

not involve a clear power imbalance between the perpetrator and target of the aggression (Monks et al., 2003). This may be because at this stage of development, the power hierarchies within the peer-group are diffuse and the social roles are unstable (Schäfer et al., 2005). In this line, in later years it has been shown that aggressors tend to choose vulnerable victims (Veenstra et al., 2010). However, in the early school years peer-directed aggression has been found to be less selective, so it is likely that children who behave aggressively towards others change their targets frequently, meaning that experiences of victimisation tend to be shorter-lived for many children at this age (Monks et al., 2003; Murray-Close & Ostrov, 2009). Likewise, preschoolers who are victimised appear to also respond aggressively (Hanish et al., 2012). Furthermore, the intentionality of causing physical or psychological harm is not clear at this age, although some studies indicate that children aged 3 to 6 already understand what it means to harm others (Camodeca & Taraschi, 2015).

Types of Peer Aggression and Victimization and Gender Differences

Studies of peer aggression and victimisation in preschool have identified two types of behaviours: direct and indirect (Ortega et al., 2013). Direct behaviours occur in a direct confrontation between the perpetrator and target and may take physical, verbal or relational forms. This would include behaviours such as hitting, insulting or telling the other that they cannot be part of a game. Aggression can also be indirect and involves behaviours that may be mediated via a third party such as rumour spreading or speaking ill of others who are not present (indirect relational) (Cerda et al., 2012; Ortega et al., 2013). It has been shown that direct forms of aggression are more common that indirect forms during early childhood (Monks et al., 2011), likely because indirect forms require greater social understanding (Huitsing & Monks, 2018). Specifically, it has been found that physical aggression is the most frequent form, followed by verbal forms (Domenèch-Llaberia et al., 2008). The forms of aggression may vary by gender, with more involvement of boys in direct forms (Romera et al., 2021a). Gender differences in peer aggression and victimisation have been debated (Lee et al., 2021; Monks et al., 2021). However, research in preschool and early years of primary school have not found clear gender differences (Lee et al., 2016; Monks et al., 2011). Previous studies underscore that during early childhood, boys are more likely to behave physically aggressively towards their peers (Crick et al., 2006; Huitsing & Monks, 2018), while girls are more likely to exhibit relational and verbal aggression (Card et al., 2008; Douvlos, 2019). More recent research has indicated that girls experience less physical and verbal aggression than boys (Stubbs-Richardson et al., 2018), although some studies have observed that children were most likely to be victimized by children of the same sex (Monks et al., 2021). The literature does not seem to reflect gender differences in victimisation during this age (Lee et al., 2016; Vlachou et al., 2011).

Social Strategies in Peer Aggression and Victimisation

Research has indicated that young children use different behaviour strategies in peer interaction to meet different social and material resource related goals (Rudolph et al., 2011). According to Resource Control Theory (Hawley, 1999), individuals use different behavioural strategies to obtain and maintain resources including coercive and prosocial strategies (Persson, 2005; Roberts et al., 2020). Resource control in children may have immediate beneficial consequences, and these, in turn, may aid optimal development (Willer & Cupach, 2010). Coercive strategies, such as aggression have been widely recognized as a means to obtain control of social and material resources (Reijntjes et al., 2018). However, research increasingly recognizes that prosocial behaviour is also an adaptative means of obtaining resource control. While aggressive behaviour has been found to be the predominant resource control strategy used during the early years, research has indicated that children also employ prosocial strategies at around four to five years of age (Persson, 2005; Roberts et al., 2020).

Some children demonstrate socially insecure behaviour, an important peer interaction strategy, associated with the exhibition of hostile and antisocial actions, present from the early years (Mouratidou et al., 2019). Although aggressiveness, dominance, prosociality and social insecurity are typically identified during the school-age years (Crick & Dodge, 1994), to identify what behaviour strategies are linked with higher levels of peer aggression and victimisation, as well as which of them protect against its development is of practical and theoretical importance.

Aggressiveness is defined as an aggressive behaviour with two different mechanisms and refers to motive systems associated with a provocation or planned behaviour to reach a goal, that predict it: reactive and proactive aggressiveness (Dodge & Coie, 1987; Vitaro et al., 2006). In general, the studies suggest that aggressiveness predicts peer aggression and victimization (Giesbrecht et al., 2011; Ostrov, 2008), specifically with direct forms as physical aggression (Evans et al., 2019). In preschool, aggressiveness is mostly reactive to perceived threat (Vlachou et al., 2011).

Social dominance refers to the cognitive estimation of skills, abilities, and control behaviours over others (Charlesworth & Dzur, 1987). High levels of social dominance have been linked to aggression in early childhood, regardless of gender (Hawley & Geldhof, 2012; Huitsing & Monks, 2018; Perren & Alsaker, 2006). Regarding victimisation, research

shows that victims are not lacking in dominance (Huitsing & Monks, 2018; Monks et al., 2011), although other research suggests that they lack assertiveness, which may place them at risk for repeated victimisation (Perren & Alsaker, 2006).

Prosocial behaviour, understood as a voluntary strategy behaviour, is recognized as a positive social skill that benefits others (Eisenberg et al., 2006; Marín, 2010), and is key to promoting positive social interactions (Padilla-Walker et al., 2015), although the underlying motivation can be selfish rather than altruistic (Hawley, 2014). In the preschool period, studies have shown that prosocial behaviours may be associated with both perpetration and victimisation, regardless of child gender (Ortega, et al., 2013), a relationship that may be mediated by attitudes and the perception of the morality of the behaviours of minors (Dereli, 2019).

Social insecurity refers to the demonstration of withdrawal, shyness, anxiety, and social avoidance. It has been recognized that insecurity in children is associated with maladaptive behaviours and relationships, including rejection and social isolation (Colonnesi et al., 2011; Crocker & Park, 2004; Ladd & Burgess, 1999). Perpetration of aggression in preschool has been characterized by lower social insecurity, while victimisation was not related to insecurity in this age-group (Huitsing & Monks, 2018; Mouratidou et al., 2019).

In summary, although the high level of aggressiveness, social dominance, and insecurity can place individuals at risk of peer aggression, prosociality may be a protective factor. Despite the advances in the relationship between social behaviour strategies and the involvement in peer aggression or victimisation, it is necessary to explore how they interact. For this, to identify different strategies that develop simultaneously may support a decline in peer aggression and victimisation. This study is particularly relevant because identifying precursors of aggression and victimisation patterns in early childhood, a key stage in the emotional and social development, may have implications for understanding development of aggression over the years and enable work to prevent aggressive behaviour escalating. For this, it is necessary to take a different approach adapted to their level of literacy. This led to the use of individual interviews supported by illustrations to elicit child reports of aggression by peers and self (Monks et al., 2003; Ortega & Monks, 2005).

The objective of this study was to: (a) analyze the social behaviour strategies associated with peer aggression and victimisation in preschoolers; (b) explore the interaction of gender and social behaviour strategies on involvement in physical and verbal peer aggression and victimisation.

The current study has the following hypotheses:

H1 Physical and verbal aggression are expected to be positively associated with aggressiveness and dominance and negatively with insecurity and prosociality.

H2 Physical and verbal victimisation are expected to be positively associated with aggressiveness and prosociality, and negatively associated with dominance.-+

H3 Involvement in physical and verbal aggression and victimisation is expected to be greater in boys than in girls.

## Material and Methods

Participants

A total of 227 Spanish preschoolers and students from the early years at school (58.1% girls, $n = 132$) were involved, aged between 4 and 7 years ($M = 5. 61$; $SD = 1.03$; 4 years old $= 16.7\%$, 5 years old $= 30\%$, 6 years old $= 29.1\%$, and 7 years old $= 24.2\%$) from three different school year groups: 2nd year of infant class (35.7%; 66.3% girls—33,8% boys), 3rd year of infant class (27.3%; 47.6% girls—52.4% boys), 1st year of primary school (37%; 58.3% girls—41.7% boys). The classrooms contained between 7 and 26 pupils ($M = 20. 61$; $SD = 4.77$). Classes of between 7 and 15 students were 10.9% of the sample, classes with between 16 and 21 pupils made up 40.1% and those with between 22 and 26 pupils were 49% of the sample. An incidental non-probabilistic sampling approach was taken, in which a convenience sample was recruited. The participants belonged to five state-funded schools which were situated in a rural environment, with an average socio-economic level.

Instruments

Child reports on involvement in peer-aggression and victimisation were obtained using the interview technique described by Monks et al. (2003). There is evidence for the reliability and consistency of peer reports of aggression by young children (Monks & Smith, 2010). Children were shown stick-figure cartoons exemplifying different types of aggression: physical (hitting, kicking or pushing another) and verbal (shouting or saying unpleasant things to another) (see Fig. 1).

To identify the different types of aggression, children were asked to report whether any of their classmates behaved in these ways and whether any of their peers experienced these forms of aggression (victimisation) and were then asked to nominate peers for these behaviours. Children were able to nominate as many peers as they wished for each of the behaviours. Children were also asked to self-report the behaviours as well—either as taking that behaviour or not. Peer-reports received for each child for aggression or victimisation were summed and standardised by class size. Students were assigned to a role if they obtained a scored above the classroom mean on the scale for that role ($z > 0$).

Fig. 1 Stick-figure cartoons exemplifying physical and verbal aggression
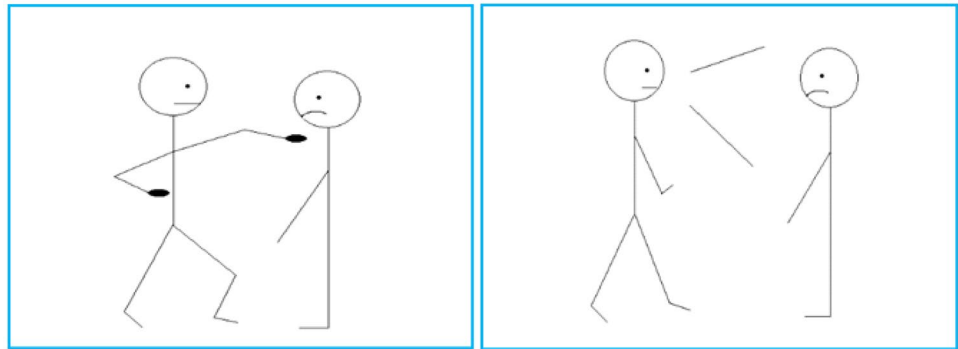
Social behaviour strategies. The teacher version of Dodge and Coie's *Reactive Proactive Aggression Questionnaire for Teaching Staff* (1987) was employed (see Appendix). Four dimensions of this scale were selected for the current study—*overall aggression* (e.g., this child starts fights with peers) $\alpha = .91$; $\omega = .88$; *dominance* (e.g., this child thinks they are better than others) $\alpha = .89$; $\omega = .82$; *insecurity* (e.g., this child is too shy to make friends easily) $\alpha = .74$; $\omega = .77$; *prosociality* (e.g., this child is very good understanding the feelings of others) $\alpha = .67$; $\omega = .75$. The teacher was asked to complete a questionnaire for each pupil in their class using a 7-point frequency Likert scale. The results of the confirming factorial analysis were optimal for a single scale with a solution of 4 factors, being the indices for the full scale $\chi^2 (28) = 166.387$, $p < .001$, CFI = .95; NNFI = .95; RMSEA = .064 (90% confidence interval [IC] [.052, .074]). To analyze the variables, Freeman's degree centrality was used for each dimension (Freeman, 1978), using standardized scores ranging from 0 to 100.

Procedure

The data collection was carried out just before the pandemic. Schools were approached for their participation. The child interviews were conducted individually during school hours in a quiet area outside of the classroom, without the presence of teachers or peers, in a single session of up to 30 minutes. Not all students in all classrooms participated, only those for whom parental/carer consent was obtained. As in Huitsing and Monks (2008), each child was shown stick-figure images of the different forms of aggression and were asked to identify who behaves in this way and to whom they did this. In this way, nominations were obtained for aggression and victimisation.

Teachers were asked to complete the questionnaires in their own time. All teachers in all classrooms participated.

Written consent was obtained from the participants' parents or legal guardians and oral consent was obtained from the children and teachers themselves. This study complies with the Helsinki Declaration on Confidentiality, Privacy and Informed Consent and has been approved by the Ethics Committee of Bioethics and Biosecurity of The University of Córdoba.

Data Analysis

Following the recommendations of Afifi et al. (2004), to determine whether an independent variable has a general effect on dependent variables, multivariate analyses were performed in three steps (DVs—physical aggression, verbal aggression, physical victimisation and verbal victimisation; IVs- gender, dominance, insecurity, aggressiveness and prosociality). First, the gender variable was added to the model. Second, the variables dominance, insecurity, aggressiveness and prosociality were added. Third, interactions between the psychosocial variables and gender were added. For parsimony, the final multivariate model only reflected significant interactions. To determine whether the addition of separate step variables contributed significantly to the overall multivariate linear model, we compared the models on the standard function ANOVA in R, to test for significant decreases in multivariate test statistics (e.g., Wilks's lambda). As a final step, linear regression was used through the stepwise method with the resulting variables from the multivariate model. The correlated errors were examined by the Durbin-Watson statistic. The recommended range (1.5–2.5) indicates that errors are independent, so the absence of positive autocorrelation (values close to 0) and negative autocorrelation (values close to 4) (Durbin & Watson, 1971).

To illustrate the significant interactions resulting from the previous analyses, the simple slope test (Preacher et al., 2006) was performed. Encoding and analyzing data were performed with the SPSS version 22 statistical package. $p < 0.05$ significance levels were adopted.

Results

Prevalence and Sociodemographic Variables of Victimisation and Aggression in Preschoolers

Boys showed greater involvement in both peer-reported physical and verbal aggression, physical victimisation and teacher reports of general aggression. A positive relationship was observed between the peer-reported variables of physical aggression, verbal aggression, physical victimisation, and teacher-reports of dominance and aggressiveness with scores ranging from 0.14 to 0.51. Verbal aggression also correlated positively with verbal victimisation and aggressiveness with values of 0.60 and 0.14, respectively. Physical victimisation showed a positive relationship with dominance (0.28) and aggressiveness (0.44), and dominance with general aggression (0.73). Insecurity correlated negatively with prosociality (− 0.23) and aggressiveness (− 0.24) (see Table 1).

Multivariate Regression of Physical and Verbal Peer Aggression and Victimisation

Analysis of the general multivariate linear model showed a significant association of gender with the dependent variables for Model 1 (see Table 2). When the social behaviour strategies were added in Model 2, the results indicated that gender, dominance, aggressiveness, and prosociality were significantly associated with the dependent variables. For Model 3, the results indicated that the interaction between gender and aggression was significantly related to the dependent variables.

Linear Regression

The results of the linear regression analyses for physical and verbal aggression are presented in Table 3. All models are included for comparison.

For physical aggression, the linear regression analysis showed statistically significant results ($F = 22,299$; $df = 1$, $p < .001$). Due to the significance of the change in R^2, Model 2 was selected, with a value of R^2 of 0.35. The Durbin-Watson statistic yielded a value of 1.97, confirming the absence of positive autocorrelation (values close to 0) and negative (values close to 4). Gender was found to be significantly related in all models, with boys being most associated with physical aggression. Social insecurity was negatively, and aggressiveness was positively associated with physical aggression (see Table 3).

For verbal aggression, the linear regression showed statistically significant results ($F = 12,418$; $df = 1$, $p < .001$).

Table 1 Correlations, and descriptive, and gender differences for aggression and victimisation according to the typologies of physical and verbal behaviours

	1	2	3	4	5	6	7	8	Total M (DT)	T	Boys M (SD)	Girls M (SD)
Physical Aggression (PN)									1.00 (1.87)	6.189***	1.85 (2.50)	.38 (.80)
Verbal Aggression (PN)	.144*								4.43 (2.71)	4.889***	1.22 (1.43)	.42 (.98)
Physical Victimisation (PN)	.718***	.116							.75 (1.25)	2.864*	5.04 (2.73)	3.99 (2.62)
Verbal Victimisation (PN)	.048	.607***	.015						2.86 (2.05)	.838	3.00 (1.82)	2.76 (2.19)
Dominance (TR)	.292***	−.088	.287***	.047					2.09 (1.11)	.457	2.13(1.13)	2.06 (1.10)
Prosociality (TR)	−.089	−.034	0.084	.135	.136				3.95 (1.02)	.029	3.95(1.12)	3.94 (.94)
Aggressiveness (TR)	.515***	.140*	.444***	.110	.739***	−.070			1.92 (1.01)	3.54***	2.20 (1.22)	1.71 (.76)
Insecurity (TR)	−1.31	.040	−.136	.053	−.235***	−.248***	−.069		2.38 (.93)	.339	2.41 (1.02)	2.36 (.85)

PN- peer nominations, *TR-* teacher reports, *M-* average, *SD-* standard deviation, *t-* t-Student

*$p < .05$

***$p < .001$

Table 2 *Multivariate* general linear model for predictive variables of physical and verbal peer aggression and victimisation

	Model 1		Model 2		Model 3	
	Wilks Λ	F	Wilks Λ	F	Wilks Λ	F
Gender	.82	11.278***	.90	5.1272***	.92	3.632***
Dominance			.89	5.502***	.98	.931
Aggressiveness			.78	12.691***	.87	6.544***
Insecurity			.95	2.315*	.92	3.722**
Prosociality			.95	2.095	.94	2.613*
Gender X Aggressiveness					.88	6.3053***

*p < .05
**p < .01
***p < .001

Table 3 Linear regression model coefficients for physical and verbal aggression behaviours

	Physical aggression			Verbal aggression		
	R^2	ΔR^2	B	R^2	ΔR^2	B
Model 1	.14**	.15		.09**	.09	
Gender			−.38**			−.31**
Model 2	.35**	.21		.24**	.16	
Gender			−.26**			−.21**
Dominance			−.16			−.06
Prosociality			−.05			−.07
Aggressiveness			.56**			.42**
Insecurity			−.14*			−.14*
Model 3	.35	.005		.25*	.01	
Gender			−.27**			−.19*
Dominance			−.13			−.12
Prosociality			−.04**			−.07
Aggressiveness			.59*			.36**
Insecurity			−.14			−.15*
Gender X Aggressiveness			−.09			.17*

ΔR^2—Change in R^2
*p ≤ .05
**p ≤ .001

Model 3 was selected with a value of R^2 of 0.257. The Durbin-Watson statistic yielded a value of 2.187. Gender was significant in all models, with boys being most related to this type of aggression. Insecurity was negatively associated, and aggressiveness positively associated (see Table 3).

The interaction of gender and aggressiveness was significant for verbal aggression. Simple slope analysis showed a positive association between verbal aggression and the aggressiveness in both boys (simple slope: B = 0.40; p = .019), and girls (simple slope: B = 0.50; p = .003). Follow-up analysis showed that the effect of general aggression on verbal aggression was not significantly different for boys and girls with high (simple slope: B = 0.02; p = .921) or low (simple slope: B = − 0.27; p = .092) levels of aggressiveness. These results indicate that in verbal aggression the positive relationship was stronger for girls compared to boys even

though the gender effect was not significantly different at high or low levels of aggressiveness (see Fig. 2).

For physical victimisation, linear regression analyses showed statistically significant results ($F = 5078$; $df = 4$, $p < .001$). Based on the significance of the change in R^2, Model 2 was selected, with a value of R^2 of 0.093 (see Table 4). The value of Durbin-Watson was 0.683, which confirmed the validity of the model. Dominance was negatively associated and aggressiveness positively to physical victimisation (see Table 4).

For verbal victimisation, linear regression showed statistically significant results (F = 3034; df = 1, p = .007). The value of R^2 for Model 3 was 0.058. The value of Durbin-Watson was 1.649, so the validity of the model was confirmed. Gender was significant in all models, with boys being the most related to this type of victimisation. Prosociality and

Fig. 2 Graphical representation of the interaction between gender and aggressiveness in relation to verbal aggression in preschoolers
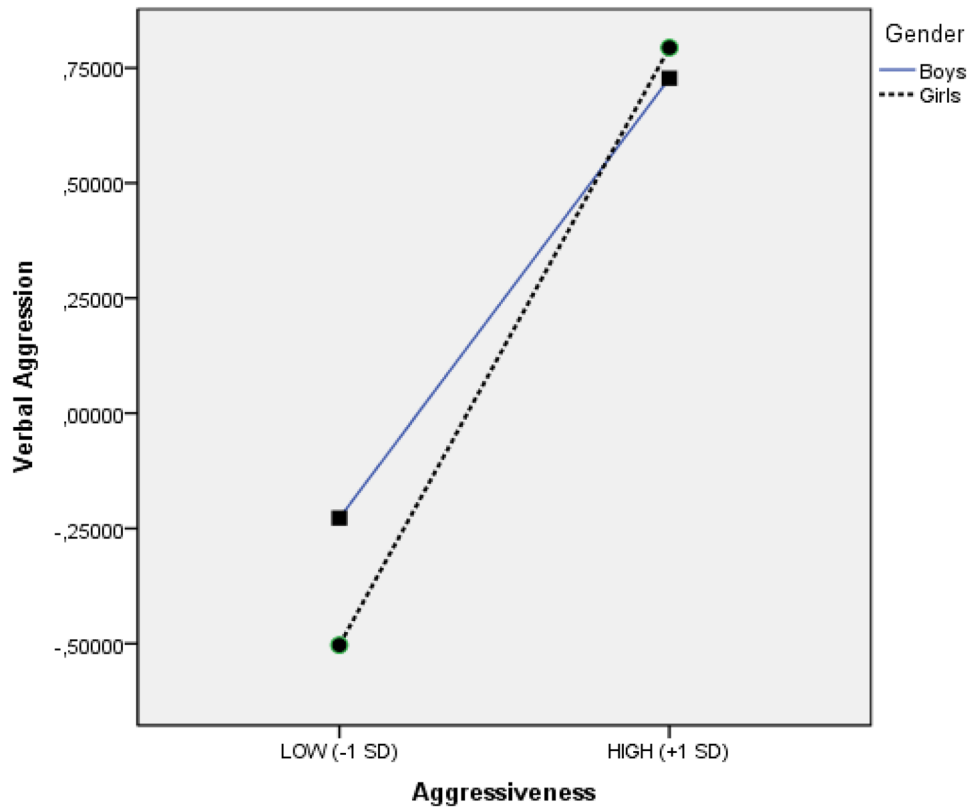
Table 4 Linear regression model coefficients for physical and verbal victimisation behaviours

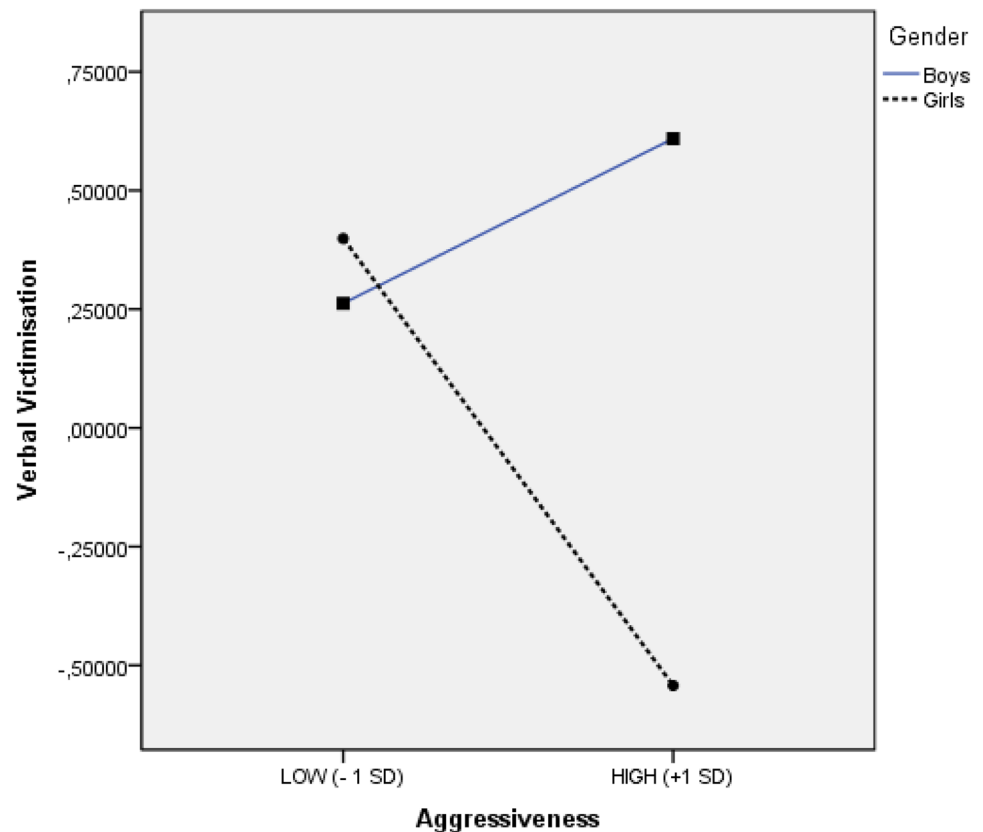|	Physical victimisation			Verbal victimisation		
	R^2	ΔR^2	B	R^2	ΔR^2	B
Model 1	− 0.02*	0.03		0.00	0.00	
Gender			− 0.17*			− 0.05
Model 2	0.09*	0.08		0.02*	0.04	
Gender			− 0.08			− 0.00
Dominance			− 0.45**			− 0.13
Prosociality			0.06			0.19*
Aggressiveness			0.46**			0.23*
Insecurity			− 0.01			0.08
Model 3	0.09	0.00		0.05*	0.03	
Gender			− 0.09			− 0.03
Dominance			− 0.42**			− 0.04
Prosociality			0.06			0.20*
Aggressiveness			0.48**			0.31*
Insecurity			− 0.01			0.11
Gender X Aggressiveness			− 0.07			− 0.24*

ΔR^2—Change in R^2; * $p \leq .05$, ** $p \leq .001$.

aggressiveness were both positively associated with verbal victimisation (see Table 4).

The gender by aggressiveness interaction was significant for verbal victimisation behaviours. Simple slope analysis showed a negative association between verbal victimisation and the pattern of aggression in boys (simple slope: $B = 0.33$; $p = .002$), but not in girls (simple slope: $B = -0.11$; $p = .236$). Follow-up analysis showed that the effect of aggression on verbal victimisation was significantly different for boys and girls with high levels of aggressiveness (simple slope:

Fig. 3 Graphical representation of the interaction between gender and aggressiveness in relation to verbal victimisation behaviours in preschoolers

$B = -0.57$; $p = .002$), but not with low levels (simple slope: $B = 0.05$; $p = .752$). These results indicate that boys were more likely than girls to be involved in verbal victimisation at high levels of aggressiveness (see Fig. 3).

Discussion

This study contributes to the knowledge of peer aggression and victimisation during early childhood. The aim was to examine the behavioural strategies associated with the development of direct forms of perpetration/aggression and victimisation among young children.

Social Behaviour Strategies and Physical and Verbal Aggression

Teacher reported aggressiveness and social insecurity were important social behaviour strategies to explain the involvement in aggression (physical and verbal) in the early years of schooling. These results confirm findings from previous studies among older children (Vlachou et al., 2016), which point to aggressive behaviours, characterized by impulsivity and spontaneity, even in the presence of teachers.

Social insecurity was inversely associated with aggression, both physical and verbal. These results coincide with

previous research that indicates that low levels of social insecurity characterize aggressors (Huitsing & Monks, 2018; Perren & Alsaker, 2006). This is consistent with studies that showed that the search for novelty, impulsiveness, and daring is associated with aggression among preschoolers rather than anxiety, insecurity, or withdrawal (O'Toole et al., 2017; Schmidt et al., 2002).

In the case of social dominance and, contrary to previous studies (Huitsing & Monks, 2018; Perren & Alsaker, 2006), it was found that this was not related to perpetration. This result suggests that there are not yet well-established individual differences in dominance within early childhood, which characterizes bullying at later ages (Romera et al., 2021b). It could be considered that in early childhood there is some instability in the involvement in aggression, there is not a clear intention to dominate peers, but rather to achieve instrumental objectives, as suggested by Crick and Dodge (1994).

Prosociality also did not show a link to involvement in aggression, either in its physical or verbal form. This can perhaps be explained because prosocial behaviour, which evolves with age, depends on various factors such as emotional support in the classroom (Johnson et al., 2013), perception and moral sensitivity (Dereli, 2019) or parenting styles (Gómez-Ortiz et al., 2019; Köster et al., 2016).

In short, it seems that perpetration is linked to general traits of aggressiveness and low levels of social shyness. Regarding prosociality and dominance, perhaps they are social behaviour strategies that require cognitive maturity to discern in which social situations to behave prosocially and when to exercise dominance in a strategic way, abilities that preschoolers have not yet acquired. Although, in line with Hawley (2014), some preschoolers do behave in a strategic way using prosocial behaviour and aggression interchangeably.

Social Behaviour Strategies and Physical and Verbal Victimisation

The second hypothesis was partially validated. Regarding social dominance, and in line with some previous studies (Perren & Alsaker, 2006), the results have shown that it is only negatively associated with physical victimisation, and not verbal victimisation. It is likely that it is force, physical strength, and other traits, which intimidate victims. On the other hand, verbal victimisation is likely associated with other aspects of the social context, as well the instability of the interpersonal relationships themselves (Lee et al., 2022). Social insecurity or shyness, as hypothesized, showed no connection to victimisation, whether physical or verbal. This result shows that victimisation in the early years has important differential characteristics compared to what happens in later years (Romera et al., 2020). Perhaps during early childhood, children do not choose to victimize their weakest companions or those who are socially isolated but display some randomness in the choice of their victims, hence there is no association between social shyness and victimisation (Huitsing & Monks, 2018). Previous research has found that prosociality is associated with both physical and verbal victimisation (Suárez-García et al., 2020). In the current study, there was a relationship between prosociality and verbal forms of victimisation. This result could be explained based on the nature of prosociality, which involves engaging in the problems of others to help them and provide more socially active responses, which perhaps exposes them to the aggression of others to a greater extent.

The third hypothesis was also partially confirmed. The results showed that while gender was associated with aggression and victimisation behaviours, only the interaction with verbal aggression was significant for both boys and girls. These data contradict previous studies that seem to indicate that both forms of aggression are more common among males as perpetrators (Douvlos, 2019; Huitsing & Monks, 2018; Romera et al., 2022). Regarding victimisation, the data reflected that the boys were more likely than girls to experience verbal victimisation, if they had obtained high scores on aggressiveness, according to teacher reports. In this regard, the previous literature does not appear to have established a clear relationship between gender and victimisation (Lee et al., 2016). Perhaps gender is only relevant depending on the level of aggression a child displays, which at these ages is very unstable (Hanish et al., 2012; Huitsing & Monks, 2018). These results suggest that preschool is a key point, for both girls and boys, in terms of promoting positive social and emotional development.

Conclusions

The conclusions of this study reinforce the importance of behavioural strategies (prosociality, aggressiveness, dominance, insecurity) along with the social perceptions of peers and teachers. It is clear, that the perception of both observers is moderately different from each other, but a certain salience of some traits, particularly aggression and social dominance, but also prosociality and to a lesser extent shyness or insecurity, may be reinforcing the roles of aggressor and victim, which at these ages are not fixed (Camodeca et al., 2015; Monks et al., 2003). Recognizing the differences between what is happening in early childhood compared to what is known about bullying in older children is important and opens a debate about what can and cannot be prevented in these years, in order to tackle bullying and cyberbullying later on.

Implications and Future Research

The results provide some guidance for interventions. According to aggression in early childhood an important implication for the field education is that in this behaviour the social security and aggressiveness are relevant factors. So, providing strategies to support children's emotional and behavioral self-regulation may help children to establish positive peer relationships (Savina, 2021).

Other implication of this research is related to victimisation and the association with factors as dominance, aggressiveness and prosociality. It implies the design of education programs aimed to promote the development of effective strategies to minimize victimization (Mora-Merchán et al., 2021). Therefore, preschool educators should be encouraged to promote activities, based for example on communication or affective play, in which there are opportunities for interactions between children and their teachers to support positive emotional and social adjustment (Zych & Llorent, 2020).

A third implication of this study is related to results that connect the gender with aggression and victimisation behaviours. In this line, educators should be encouraged to pay attention to the types of activities that both boys and girls engage in order to address social interaction problems among peers that may lead to aggression.

In general, practitioners should consider social behaviour strategies, focused on aggression and victimisation behaviors, and establish intervention practices aimed at optimizing social competence and moral sensitivity from the early years of children's education. So, for example, the practice of activities related with emotional intelligence and aspects such as self-control, motivation and emotional awareness may be useful (Kutnick et al., 2007). Based on the findings, the specific recommendations for today's ECE classroom include the design and implementation of programs to guide social strategies and prevent the interpersonal violence at these ages. Creating social and emotional programs requires engagement from families, teachers, and preschoolers. Having clearly programs based on social strategies and training scholar community reflects what is important in early years. For example, creating programs focused on families around emotional and social management at home and providing education to preschoolers, teachers and supervisors. So, social and emotional programs as the center of early childhood curricula should imply the development of ethical children.

In terms of limitations, the cross-sectional design of the study should be considered. A longitudinal design would provide further evidence on the social behaviour strategies model of peer-aggression in that it would make it possible to better understand the effects of this variables on this preschoolers' behaviours. Furthermore, a longitudinal design would enable an examination of the effects of prolonged exposure to peer-aggression as well as the long-term effects on other phenomena such as bullying. A further limitation is that evaluations made by teachers may not conform to children's experiences in the classroom, although within the current study teacher-reports were combined with child reports of behaviour.

Future research should evaluate the effectiveness to reduce peer violence through training and promoting social and emotional evidence-based policies and programs. Also, further studies focused on preschoolers and other personal and contextual characteristics that could aid in our understanding of the developmental origins of aggression and victimisation behaviours should be considered as future lines of research. Finally, there are key developments that occur between the ages of four and seven years of age which were not addressed in the current study but would also be important lines of research to examine in the future.

Appendix

See Table 5.

Table 5 Factors, and items adapted and validated from questionnaire for teaching staff (Dodge & Coie, 1987)

Factors	Items
Dominance	This child acts stuck up and thinks he or she is better than the other children
	This child tries to tell other children how things should be done
	This child usually wants to be in charge and set the rules and gives orders
	This child tries to dominate classmates and pushes self into existing play or work groups
	This child gets impatient when other children do not do things the way he or she thinks they should be done
Prosociality	This child is very good at understanding other people's feelings
	This child is good at games and sports, a good athlete
	This child is a leader and can tell others what should be done but is not too bossy
	This child is very aware of the effects of his/her behavior on others
	This child is good to have in a group, shares things, and is helpful
Overall Aggression	This child starts fights with peers
	This child gets angry easily and strikes back when he or she is threatened or teased
	This child says mean things to peers, such as teasing or name calling
	This child always claims that other children are to blame in fight and feels that they started the trouble
	This child uses physical force, or threatens to use physical force, in order to dominate other kids
	When a peer accidentally hurts this child (such as by bumping into him/her), this child assumes that the peer meant to do it, and then overreacts with anger and fighting
	This child threatens or bullies others in order to get his or her own way
	This child gets other kids to gang up on a peer hat he or she does not like
Insecurity	This child is too shy to make friends easily
	This child is self-conscious and easily embarrassed
	This child usually plays or works alone
	This child gets his or her feelings hurt easily
	This child is timid about joining other children and usually stays just outside the group without joining it
	This child is anxious and insecure in social situations

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Code availability Not applicable.

Declarations

Conflict of interest The authors certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock Cristina Ma García Fernández, Eva M. Romera Félix, Claire P. Monks & Rosario Ortega Ruiz ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Ethical Approval All the authors have approved the article, have considered the ethical authorities included in the norms of the journal, and they agree to send it for evaluation. We declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere.

Conflicts for Publication All authors declare the requirements of the authority in accordance with the provisions of the journal's regulations. We know of no conflicts of interest associated with this publication, and there has been no significant financial support for this work that could have influenced its outcome. As Corresponding Author, I confirm that the manuscript has been read and approved for submission by all the named authors.

References

Afifi, A., Clark, V. A., & May, S. (2004). *Computer-Aided Multivariate Analysis* (4th ed.). Chapman & Hall.

Barker, E. D., Boivin, M., Brendgen, M., Fontaine, N., Arseneault, L., Vitaro, F., Bissonnette, C., & Tremblay, R. E. (2008). Predictive validity and early predictors of peer-victimization trajectories in preschool. *Archives of General Psychiatry, 65*, 1185–1192. https://doi.org/10.1001/archpsyc.65.10.1185

Camodeca, M., Caravita, S. C. S., & Coppola, G. (2015). Bullying in preschool: The associations between participant roles, social competence, and social preference. *Aggressive Behavior, 41*, 310–321. https://doi.org/10.1002/ab.21541

Camodeca, M., & Taraschi, E. (2015). Like father, like son?: the link between parents' moral disengagement and children's externalizing behaviors. *Merrill-Palmer Quarterly, 61*(1), 173–191.

Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development, 79*, 1185–1229. https://doi.org/10.1111/j.1467-8624.2008.01184.x

Cerda, G., Ortega, R., & Monks, C. (2012). The unwarranted aggression as a precedent of peer harassment: an investigation into children's schools of Chile. *School Research Journal, 78*, 55–68.

Charlesworth, W. R., & Dzur, C. (1987). Gender comparisons of preschoolers' behavior and resource utilization in group problem solving. *Child Development, 58*, 191–200. https://doi.org/10.2307/1130301

Colonnesi, C., Draijer, E. M., Stams, G. J. J. M., Van der Bruggen, C. O., Bögels, S. M., & Noom, M. J. (2011). The relation between insecure attachment and child anxiety: A meta-analytic review. *Journal of Clinical Child and Adolescent Psychology, 40*, 630–645. https://doi.org/10.1080/15374416.2011.581623

Crick, N. R., Ostrov, J. M., Burr, J. E., Cullerton-Sen, C., Jansen-Yeh, E., & Ralston, P. (2006). A longitudinal study of relational and physical aggression in preschool. *Journal of Applied Developmental Psychology, 27*, 254–268. https://doi.org/10.1016/j.appdev.2006.02.006

Crick, N., & Dodge, K. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74–101. https://doi.org/10.1037/0033-2909.115.1.74

Crocker, J., & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin, 130*, 392–414. https://doi.org/10.1037/0033-2909.130.3.392

Dereli, E. (2019). The relationship between prosocial behaviours, aggression types and moral-social rule knowledge in preschool children. *Cypriot Journal of Educational Sciences, 14*(1), 42–55.

Dodge, K. A., & Coie, J. D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology, 53*(6), 1146–1158. https://doi.org/10.1037/0022-3514.53.6.1146

Domènech-Llaberia, E., Jané, M. C., Corbella, T., Ballespí, S., Mitjavila, M., & Canals, J. (2008). Teacher reports of peer aggression in preschool: Its relationship to DSM-IV externalizing symptoms. *The Spanish Journal of Psychology, 11*(2), 433–442. https://doi.org/10.1017/S1138741600004443

Douvlous, C. (2019). Bullying in preschool children. *Psychological Thought, 12*(1), 131–142. https://doi.org/10.5964/psyct.v12i1.284

Durbin, J., & Watson, G. S. (1971). Testing for serial correlation in least squares regression. III. *Biometrika, 58*(1), 1–19. https://doi.org/10.2307/2334313

Eisenberg, N., Fabes, R. A., & Spinrad. T. L. (2006). Prosocial development. In W. Damon & R. Lerner (Eds.), *Handbook of Child Psychology, Vol.3. Social, emotional, and personality development.* 6th ed. (pp.646–718). John Wiley & Sons. https://doi.org/10.1002/9780470147658.chpsy0311

Evans, S. C., Frazer, A. L., Blossom, J. B., & Fite, P. J. (2019). Forms and functions of aggression in early childhood. *Journal of Clinical Child & Adolescent Psychology, 48*(5), 790–798. https://doi.org/10.1080/15374416.2018.1485104

Freeman, L. C. (1978). Centrality in social networks conceptual clarification. *Social Networks, 1*(3), 215–239. https://doi.org/10.1016/0378-8733(78)90021-7

Giesbrecht, G. F., Leadbeater, B. J., & MacDonald, S. W. S. (2011). Child and context characteristics in trajectories of physical and relational victimization among early elementary school children. *Development and Psychopathology, 23*, 239–252.

Gómez-Ortiz, O., Romera, E. M., Jiménez-Castillejo, R., Ortega-Ruiz, R., & García-López, L. J. (2019). Parenting practices and adolescent social anxiety: A direct or indirect relationship? *International Journal of Clinical and Health Psychology, 19*, 124–133. https://doi.org/10.1016/j.ijchp.2019.04.001

Hanish, L. D., Sallquist, J., DiDonato, M., Fabes, R. A., & Martin, C. L. (2012). Aggression by whom-aggression toward whom: Behavioral predictors of same-and other-gender aggression in early childhood. *Developmental Psychology, 48*, 1450–1462. https://doi.org/10.1037/a0027510

Hawley, P. H. (1999). The ontogenesis of social dominance: A strategy-based evolutionary perspective. *Developmental Review, 19*, 97–132. https://doi.org/10.1006/drev.1998.0470

Hawley, P. H. (2014). Evolution, prosocial behavior, and altruism: A roadmap for understanding where the proximate meets the ultimate. In L. Padilla-Walker & G. Carlo (Eds.), *Prosocial development: A multidimensional approach* (pp. 43–69). Oxford University Press.

Hawley, P. H., & Geldhof, G. J. (2012). Preschoolers' social dominance, moral cognition, and moral behavior: An evolutionary perspective. *Journal of Experimental Child Psychology, 112*, 18–35. https://doi.org/10.1016/j.jecp.2011.10.004

Huitsing, G., & Monks, C. P. (2018). Who victimizes whom and who defends whom? A multivariate social network analysis of victimization, aggression, and defending in early childhood. *Aggressive Behavior, 44*(4), 394–405. https://doi.org/10.1002/ab.21760

Johnson, S., Seidenfeld, A., Izard, C., & Kobak, R. (2013). Can classroom emotional support enhance prosocial development among children with depressed caregivers? *Early Childhood Research Quarterly, 28*, 282–290. https://doi.org/10.1016/j.ecresq.2012.07.003

Köster, M., Cavalcante, L., de Carvalho, R., Resende, B., & Kärtner, J. (2016). Cultural influences on toddlers' prosocial behavior: How maternal task assignment relates to helping others. *Child Development, 87*(6), 1727–1738. https://doi.org/10.1111/cdev.12636

Kutnick, P., Brighi, A., Avgitidou, S., Genta, M. L., Hännikäinen, M., Karlsson-Lohmander, M., Ortega, R., Rautamies, E., Colwell, J., Tsalagiorgou, E., Mazzantini, C., Nicoletti, S., Sansavini, A., Guarini, A., Romera, E. M., Monks, C., & Lofqvist, M. (2007). The role and practice of interpersonal relationships in European early education settings: Sites for enhancing social inclusion, personal growth and learning? *European Early Childhood Education Research Journal, 15*, 379–406. https://doi.org/10.1080/13502930701679429

Ladd, G. W., & Burgess, K. B. (1999). Charting the relationship trajectories of aggressive, withdrawn, and aggressive/withdrawn children during early grade school. *Child Development, 70*, 910–929. https://doi.org/10.1111/1467-8624.00066

Lee, S. H., Smith, P. K., & Monks, C. P. (2016). Participant roles in peer-victimization among young children in South Korea: Peer-, self-, and teacher-nominations. *Aggressive Behavior, 42*(3), 287–298. https://doi.org/10.1002/ab.21623

Lee, S. H., Smith, P. K., & Monks, C. P. (2021). Moral reasoning about aggressive behavior in relation to type of aggression, age and gender in South Korean pupils. *International Journal of Environmental Research and Public Health, 18*(5), 2288. https://doi.org/10.3390/ijerph18052288

Lee, J., Roh, B. R., & Yang, K. E. (2022). Exploring the Association between Social Support and Patterns of Bullying Victimization among School-aged Adolescents. *Children and Youth Services Review, 136*, 106418. https://doi.org/10.1016/j.childyouth.2022.106418

Marín, J. (2010). Revisión teórica respecto a las conductas prosociales. *Análisis Para Una Reflexión. Psicogente, 13*(24), 369–388.

Ministry of Education, Culture and Sport (2018). *Data and figures school year 2018/2019.* Ministry website: https://www.mecd.gob.es/servicios-al-ciudadano-ecd/estadisticas/educacion/indicadores-publicaciones-sintesis/datos-cifras.html

Monks, C. P., & O'Toole, S. (2021). Bullying in preschool and infant school. In P. K. Smith & J. O'Higgins-Norman (Eds.), *The Wiley-Blackwell Handbook of Bullying* (Vol. 2, pp. 2–19). Wiley & Sons Ltd.

Monks, C. P., Palermiti, A., Ortega, R., & Costabile, A. (2011). A crossnational comparison of aggressors, victims and defenders in preschools in England, Spain and Italy. *The Spanish Journal of Psychology, 14*, 133–144. https://doi.org/10.5209/rev_SJOP.2011.v14.n1.11

Monks, C. P., & Smith, P. K. (2010). Peer, self and teacher nominations of participant roles taken in victimisation by five- and eight-year-olds. *Journal of Aggression, Conflict and Peace Research, 2*(4), 4–14. https://doi.org/10.5042/jacpr.2010.0532

Monks, C. P., Smith, P. K., & Kucaba, K. (2021). Peer victimisation in early childhood; observations of participant roles and sex differences. *International Journal of Environmental Research and Public Health, 18*(2), 415. https://doi.org/10.3390/ijerph18020415

Monks, C. P., Smith, P. K., & Swettenham, J. (2003). Aggressors, victims, and defenders in preschool: Peer, self-, and teacher reports. *Merrill-Palmer Quarterly, 49*, 453–469. https://doi.org/10.1353/mpq.2003.0024

Mora-Merchán, J., Espino, E., & Del Rey, R. (2021). Development of effective coping strategies to reduce school bullying and their impact on stable victims. *Psychology, Society & Education, 13*(3), 55–66.

Mouratidou, K., Karamavrou, S., Karatza, S., & Schillinger, M. (2019). Aggressive and socially insecure behaviors in kindergarten and elementary school students: A comparative study concerning gender, age and geographical background of children in Northern Greece. *Social Psychology of Education, 23*(1), 259–277. https://doi.org/10.1007/s11218-019-09536-z

Murray-Close, D., & Ostrov, J. M. (2009). A longitudinal study of forms and functions of aggressive behaviour in early childhood. *Child Development, 80*, 828–842. https://doi.org/10.1111/j.1467-8624.2009.01300.x

O'Toole, S., Monks, C. P., & Tsermentseli, S. (2017). Executive function and theory of mind as predictors of aggressive and prosocial behavior and peer acceptance in early childhood. *Social Development, 26*, 907–920. https://doi.org/10.1111/sode.12231

Olweus, D. (1993). *Bullying at school, what we know and what we can do.* Blackwell Publishing.

Ortega, R., & Monks, C. (2005). Agresividad injustificada entre preescolares. *Psicothema, 17*(3), 453–458.

Ortega, R., Monks, C., & Romera, E. M. (2013). Unjustified aggression among preschoolers: A review. Bullying. In Carozzo, J. C. (2013), *Bullying reunited opinions* (pp. 11–31). Observatory on Violence and Convivencia in the School.

Ostrov, J. M. (2008). Forms of aggression and peer victimisation during early childhood: A short-term longitudinal study. *Journal of Abnormal Child Psychology, 36*, 311–322. https://doi.org/10.1007/s10802-007-9179-3

Padilla-Walker, L. M., Fraser, A. M., Black, B. B., & Bean, R. A. (2015). Associations between friendship, sympathy, and prosocial behavior toward friends. *Journal of Research on Adolescence, 25*, 28–35. https://doi.org/10.1111/jora.12108

Perren, S., & Alsaker, F. D. (2006). Social behavior and peer relationships of victims, bully-victims, and bullies in kindergarten. *Journal of Child Psychology and Psychiatry, 47*(1), 45–57. https://doi.org/10.1111/j.1469-7610.2005.01445.x

Persson, G. E. B. (2005). Young children's prosocial and aggressive behaviors and their experiences of being targeted for similar behaviors by peers. *Social Development, 14*(2), 206–228. https://doi.org/10.1111/j.1467-9507.2005.00299.x

Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interaction effects in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of Educational and Behavioral Statistics, 31*, 437–448. https://doi.org/10.3102/10769986031004437

Reijntjes, A., Vermande, M., Olthof, T., Goossens, F. A., Vink, G., Aleva, L., & van der Meulen, M. (2018). Differences be-tween resource control types revisited: A short term longitudinal study. *Social Development, 27*(1), 187–200. https://doi.org/10.1111/sode.12257

Roberts, A. P., Monks, C. P., & Tsermentseli, S. (2020). The influence of gender and resource holding potential on aggressive and prosocial resource control strategy choice in early childhood. *Frontiers in Education, 5*, 1–11. https://doi.org/10.3389/feduc.2020.593763

Romera, E. M., Jiménez, C., Bravo, A., & Ortega-Ruiz, R. (2020). Social status and friendship in peer victimization trajectories. *International Journal of Clinical and Health Psychology, 21*(1), 100191. https://doi.org/10.1016/j.ijchp.2020.07.003

Romera, E. M., Luque-González, R., García-Fernández, C. M., & Ortega-Ruiz, R. (2022). Social competence and bullying: The role of age and sex. *Educación XXI, 25*(1), 309–333.

Romera, E. M., Ortega-Ruiz, R., Runions, K., & Camacho, A. (2021a). Bullying perpetration, moral disengagement and need for popularity: Examining reciprocal associations in adolescence. *Journal of Youth and Adolescence, 50*, 2021–2035. https://doi.org/10.1007/s10964-021-01482-4

Romera, E. M., Ortega-Ruiz, R., Runions, K., & Falla, D. (2021b). Moral disengagement strategies in online and offline bullying. *Psychosocial Intervention, 30*(2), 85–93. https://doi.org/10.5093/pi2020a21

Rose, C. A. (2011). Bullies and victims: Understanding bullying in an early childhood context. *The Journal of the Texas Association for the Education of Young Children, 32*(1), 18–21.

Rudolph, K. D., Abaied, J. L., Flynn, M., Sugimura, N., & Agoston, M. (2011). Developing relationships, being cool, and not looking like a loser: Social goal orientation predicts children's responses to peer aggression. *Child Development, 82*, 1518–1530. https://doi.org/10.1111/j.1467-8624.2011.01631.x

Savina, E. (2021). Self-regulation in preschool and early elementary classrooms: Why it is important and how to promote it. *Early Childhood Education Journal, 49*(3), 493–501. https://doi.org/10.1007/s10643-020-01094-w

Schäfer, M., Korn, S., Brodbeck, F., Wolke, D., & Schulz, H. (2005). Bullying roles in changing contexts: The stability of victim and bully roles from primary to secondary school. *International Journal of Behavioural Development, 29*(4), 323–335. https://doi.org/10.1177/01650250544000107

Schmidt, L. A., Fox, N. A., Rubin, K. H., Hu, S., & Hamer, D. H. (2002). Molecular genetics of shyness and aggression in pre-schoolers. *Personality and Individual Differences, 33*(2), 227–238. https://doi.org/10.1016/S0191-8869(01)00147-7

Smith, P. K., & Boulton, M. (1990). Rough-and-tumble play, aggression and dominance: Perception and behaviour in children's encounters. *Human Development, 33*(4–5), 271–282. https://doi.org/10.1159/000276524

Stubbs-Richardson, M., Sinclair, H. C., Goldberg, R. M., Ellithorpe, C. N., & Amadi, S. C. (2018). Reaching out versus lashing out: Examining gender differences in experiences with and responses to bullying in high school. *American Journal of Criminal Justice, 43*(1), 39–66. https://doi.org/10.1007/s12103-017-9408-4

Suárez-García, Z., Álvarez-García, D., Rodríguez, C., & De Lleida, U. (2020). Predictors of being a victim of bullying in primary education: A systematic review. *Revista De Psicología y Educación, 15*(1), 1–15.

Veenstra, R., Lindenberg, S., Munniksma, A., & Dijkstra, J. K. (2010). The complex relation between bullying, victimization, acceptance and rejection: Giving special attention to status, affection and sex differences. *Child Development, 81*, 480–548.

Vitaro, F., Brendgen, M., & Barker, E. D. (2006). Subtypes of aggressive behaviors: A developmental perspective. *International Journal of Behavioral Development, 30*, 12–19. https://doi.org/10.1177/0165025406059968

Vlachou, M., Andreou, E., Botsoglou, K., & Didaskalou, E. (2011). Bully/victim problems among preschool children: A review of current research evidence. *Educational Psychology Review, 23*, 329–358. https://doi.org/10.1007/s10648-011-9153-z

Vlachou, M., Botsoglou, K., & Andreou, E. (2016). Early bullying behaviour in preschool children. *Hellenic Journal of Research in Education, 5*(1), 17–45.

Willer, E. K., & Cupach, W. R. (2010). The meaning of social aggression in girls: Nasty or mastery? In W. R. Cupach, & B. H. Spitzberg (Eds.), *The dark side of close relationships* (2nd Ed.). (pp. 297–326). Erlbaum.

Ybarra, M. L., Espelage, D. L., & Mitchell, K. J. (2014). Differentiating youth who are bullied from other victims of peer-aggression: The importance of differential power and repetition. *Journal of Adolescent Health, 55*(2), 293–300.

Zych, I., & Llorent, V. J. (2020). An intervention program to enhance social and emotional competencies in pre-service early childhood education teachers. *Psychology, Society & Education, 12*(1), 17–30.