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Family Climate and Adolescent Aggression: An Analysis of their Relationships

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Abstract

The aim of this study was to examine the relationship between family functioning (problem solving, communication, roles, affective responsiveness, affective involvement, behaviour control and general functioning) and the development of different expressions of aggressive behaviour in adolescents. Data were collected from a sample of 722 Spanish adolescents who completed the *Family Assessment Device* and the self-report form of the *Children's Social Behavior Scale*. Regression analyses confirmed the specific influence of different dimensions of family functioning on specific types of aggressive behaviour in adolescents. These findings pointed out that a better understanding of family functioning dimensions is necessary in order to design specific interventions for aggressive adolescents.

Introduction

Aggressive behaviours are common conduct problems in childhood and adolescence (Hubbard, McAuliffe, Morrow, & Romano, 2010) and several contextual factors contribute to its development (Coie & Dodge, 2006). It has been widely studied that child neglect, abuse and maltreatment within the family have severe negative consequences for later adolescents' behaviour problems such as delinquency, aggression and substance use and abuse (Isira, 2009). Poor family management practices at adolescence have also been shown to be predictive of chronic and later trajectories of adolescent violence (Yu & Gamble, 2008; Williams, Conger & Blozis, 2007). In particular, parental coercion, lack of responsiveness, psychological control and marital conflict have been associated with direct and also indirect aggression (Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998; Hart *et al.*, 2000). Vaillancourt, Miller, Fagbemi, Côté and Tremblay (2007) longitudinal results indicated that, in alignment with findings for direct aggression, low socio-economic status, hostile-ineffective parenting and inconsistent parenting are related to indirect aggression. Nevertheless, several authors have highlighted the importance of differentiating between direct and indirect aggressive behaviours in order to obtain a more fine-grained picture of the family factors involved in the phenomenon of adolescent's aggression (*e.g.*, Côté, Vaillancourt, Barker, Nagin, & Tremblay, 2007). This study was designed to first examine which specific characteristics of the family may be involved in the development of direct vs. indirect aggression at these ages. Secondly, we examined the unique effects of the family dimensions on each form of aggression,

controlling for the overlap between these family dimensions. As a result, a detailed picture of the unique effects of family dimensions on what is specific in each aggression form should arise.

Method

Participants

Adolescents aged 12 to 18 ($M = 14.79$ years; $SD = 1.74$) were recruited from six Secondary Schools in the area of Málaga, Spain, resulting in a total sample of 722 pupils (373 girls and 349 boys). The researchers asked the school principals for permission to request student participation. The adolescents were free to take part in the study or to decline to do it. The sample was 91.1% Spanish, 5.5% South-American, 0.3% Chinese, 0.8% Moroccan, 0.9% from Eastern European countries, and 0.3% from other European countries. Distribution by grade was as follows: 24.7% seventh graders, 14.7% eighth graders, 15.7% ninth graders, 16.1% tenth graders, and 28.9% eleventh graders.

Measures

Aggression was assessed with the *Children's Social Behavior Scale Self-report* (CSBS-S; Crick & Grotpeter, 1995). This instrument has different subscales to measure: aggression, prosocial behaviour, inclusion in the class group, and loneliness. In this study, only the subscales concerning direct (physical and verbal) and indirect aggression were used. Adolescents reported how often they engaged in aggressive behaviours, according to a 5-point scale from 1 (*never*) to 5 (*all the time*). Higher scores indicate a higher degree of self-reported aggression. Each subscale displayed good internal consistency in this sample, with Cronbach's α coefficients for the direct aggression and the indirect aggression subscales being .67 and .69, respectively, and .76 for the total composite scores, which are similar to those reported in previous studies (see Crick & Grotpeter, 1995; Leadbeater, Boone, Sangster, & Mathieson, 2006).

Family functioning was evaluated using the *Family Assessment Device* (FAD; Epstein, Baldwin & Bishop, 1983). This is a self-report instrument designed to measure the individual family member's perception of his/her family functioning on each dimension of the McMaster Model of Family Functioning (MMFF; Ryan, Epstein, Keitner, Miller, & Bishop, 2005). It consists of 60 items grouped into seven subscales: Problem solving, communication, roles, affective responsiveness, affective involvement, behaviour control, and a seventh general functioning subscale which assesses the overall level of the family functioning. Each item can be responded on a 4-point scale with a total score ranging from 1 to 4, where higher scores indicate unhealthier functioning. The response form was reworded from the original 1 to 4 (*strongly agree to strongly disagree*) to the new 1 to 4 (*never to always*) to be more precise on measuring family dysfunction, taking into account the frequency of appearance for each specific situation. The internal consistencies in our sample were $\alpha = .91$ for general functioning, $\alpha = .65$ for problem solving, α

= .78 for communication, $\alpha = .73$ for roles, $\alpha = .79$ for affective responsiveness, $\alpha = .77$ for affective involvement, and $\alpha = .74$ for behaviour control.

Procedures

In a cross-sectional design, two trained research assistants administered the questionnaires to the students as a part of a larger study on social development. Two sessions of 50 minutes each were conducted on two different days to avoid tiring the students. They wrote a code instead of their names on the questionnaires to preserve their anonymity. When explaining the instructions, the assistants encouraged the pupils to ask if they had any questions and answer honestly.

Results

As first approximation to the influence of the seven dimensions of family functioning according to the MMFF on both direct and indirect aggression, several hierarchical regression analyses were conducted. Each family dimension was introduced separately as an independent variable, with direct aggression as dependent variable in the first group of analyses (as shown on Table 1), and indirect aggression as dependent variable in the second group of analyses (as shown on Table 2). For all the regression analyses, the effect of gender was controlled in the first step, and the interaction of gender and each dimension was tested in the last step.

Table 1

Hierarchical Regression Analyses for Each Dimension of the Family Functioning Predicting Direct Aggression

Equation	Entry order	Predictor	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>R</i> ² change
1	1	Gender	-.92	.12	-.27	-7.50	$R^2 = .07, F(1, 720) = 56.38^{***}$
	2	General Functioning	.33	.09	.14	3.84	$\Delta R^2 = .02, F(1, 719) = 14.72^{***}$
2	1	Gender	-.92	.12	-.27	-7.50	$R^2 = .07, F(1, 720) = 56.38^{***}$
	2	Problem Solving	.45	.10	.15	4.37	$\Delta R^2 = .02, F(1, 719) = 19.07^{***}$
3	1	Gender	-.92	.12	-.27	-7.50	$R^2 = .07, F(1, 720) = 56.38^{***}$
	2	Communication	.49	.11	.16	4.62	$\Delta R^2 = .03, F(1, 719) = 21.35^{***}$
4	1	Gender	-.92	.12	-.27	-7.50	$R^2 = .07, F(1, 720) = 56.38^{***}$
	2	Roles	.62	.12	.18	5.16	$\Delta R^2 = .03, F(1, 719) = 26.61^{***}$
5	1	Gender	-.92	.12	-.27	-7.50	$R^2 = .07, F(1, 720) = 56.38^{***}$
	2	Affective Responsiveness	.32	.09	.13	3.66	$\Delta R^2 = .02, F(1, 719) = 13.37^{***}$
6	1	Gender	-.92	.12	-.27	-7.50	$R^2 = .07, F(1, 720) = 56.38^{***}$
	2	Affective Involvement	.20	.10	.07	1.98	$\Delta R^2 = .00, F(1, 719) = 3.92^*$
7	1	Gender	-.92	.12	-.27	-7.50	$R^2 = .07, F(1, 720) = 56.38^{***}$
	2	Behaviour Control	.26	.10	.09	2.52	$\Delta R^2 = .00, F(1, 719) = 6.33^*$

Note: Gender coded as 1 for boys and 2 for girls.

* $p < .05$, *** $p \leq .001$, *n.s.* = nonsignificant

Table 2*Hierarchical Regression Analyses for Each Dimension of the Family Functioning Predicting Indirect Aggression*

Equation	Entry order	Predictor	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>R</i> ² change
1	1	Gender	-.44	.14	-.11	-3.02	$R^2 = .01, F(1, 720) = 9.17^*$
	2	General Functioning	.46	.10	.17	4.57	$\Delta R^2 = .03, F(1, 719) = 20.93^{***}$
2	1	Gender	-.44	.15	-.11	-3.02	$R^2 = .01, F(1, 720) = 9.17^*$
	2	Problem Solving	.54	.12	.16	4.50	$\Delta R^2 = .03, F(1, 719) = 20.16^{***}$
3	1	Gender	-.44	.15	-.11	-3.02	$R^2 = .01, F(1, 720) = 9.17^*$
	2	Communication	.41	.12	.12	3.28	$\Delta R^2 = .01, F(1, 719) = 10.76^{***}$
4	1	Gender	-.44	.15	-.11	-3.02	$R^2 = .01, F(1, 720) = 9.17^*$
	2	Roles	.62	.14	.16	4.39	$\Delta R^2 = .03, F(1, 719) = 19.26^{***}$
5	1	Gender	-.44	.15	-.11	-3.02	$R^2 = .01, F(1, 720) = 9.17^*$
	2	Affective Responsiveness	.46	.10	.16	4.48	$\Delta R^2 = .03, F(1, 719) = 20.10^{***}$
6	1	Gender	-.44	.15	-.11	-3.02	$R^2 = .01, F(1, 720) = 9.17^*$
	2	Affective Involvement	.38	.12	.12	3.27	$\Delta R^2 = .01, F(1, 719) = 10.72^{***}$
7	1	Gender	-.44	.15	-.11	-3.02	$R^2 = .01, F(1, 720) = 9.17^*$
	2	Behaviour Control	.26	.12	.08	2.10	$\Delta R^2 = .00, F(1, 719) = 4.41^*$

Note: Gender coded as 1 for boys and 2 for girls.

* $p < .05$, *** $p \leq .001$, *n.s.* = nonsignificant

The general functioning subscale turned out predictive of direct and indirect aggression. Furthermore, all the family dimensions separately were found to be good predictors of both forms of aggression (see Tables 1 and 2). In regard to direct aggression, the variance explained by each dimension measured with the FAD ranged between 3% for roles and communication, and 0.5% for affective involvement. Regarding indirect aggression, the variance explained by each dimension ranged between 3% for general functioning, problem solving, roles, and affective responsiveness, and 0.6% for behaviour control. Gender by itself was significantly predictive of both forms of aggression, explaining 7% of the variance for direct aggression and 2% of the variance for indirect aggression. Male adolescents were more aggressive than females in both cases, although the differences were considerably smaller with respect to indirect aggressive behaviour. None of the interactions of gender with the family functioning dimensions turned out statistically significant, either in regard to direct or indirect aggression.

Secondly, the unique contribution of each family dimension on aggression was tested while controlling for the effects of the other dimensions. To this purpose, we conducted two additional hierarchical regression equations, one for each aggression form. Again, gender was introduced in the first step, and the alternative form of aggression was introduced in the second step of each equation. Finally, in order to control for the overlap between them, all the family dimensions were introduced together as independent variables (except for general functioning, since it's a composite of the others), with direct or indirect aggression as dependent variable. Table 3 reveals the predictive effects of all the family dimensions together on direct aggression. When focusing on the effects of the dimensions individually, after controlling for their overlap, the results showed that communication and roles were the unique predictors of direct aggression. In contrast, none of the family dimensions were unique in predicting indirect aggression.

Table 3

Hierarchical Regression Analyses Testing the Unique Effect of Each Dimension of Family Functioning on Direct Aggression

Equation	Entry Order	Predictor	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>R</i> ² change
1	1	Gender	-.92	.12	-.27	-7.51	$R^2=.07, F(1, 720) = 56.37^{***}$
	2	Indirect Aggression	.41	.03	.47	14.92	$\Delta R^2=.22, F(1, 719) = 222.61^{***}$
	3	Problem Solving	-.03	.15	-.01	-.23	$\Delta R^2=.02, F(6, 713) = 3.47^*$
		Communication	.33	.14	.11	2.26*	
		Roles	.44	.17	.13	2.61*	
		Affective Responsiveness	-.11	.12	-.04	-.91	
		Affective Involvement	-.18	.11	-.07	-1.60	
		Behaviour Control	-.06	.13	-.02	-.49	

Note: Gender coded as 1 for boys and 2 for girls.

* $p < .05$, *** $p \leq .001$

Discussion

The present study investigated the extent to which a dysfunctional family environment might be related to the adolescents' use of direct and indirect aggression against peers, taking into consideration that both forms of aggression not only have similarities, but they also exhibit well defined distinctive characteristics. In our first set of analyses, results revealed that all the family dimensions of the MMFF (Ryan *et al.*, 2005), when dysfunctional, were predictive of both direct and indirect aggression. Secondly, neutralizing the overlap among all the family dimensions themselves, the results showed that roles and communication were unique predictors of direct aggression, while none of the dimensions on their own showed specific predictive power regarding indirect aggression once their overlap was controlled.

Despite increasing research examining how family functioning and aggression are related, the majority of studies to date in children and adolescents have focused mostly on the phenomenon of aggression as a whole (*e.g.*, Williams *et al.*, 2007). Since different family features might lead to display direct or indirect aggression, these predictions could be masked by the fact of measuring aggression as a whole instead of measuring it through its different forms. In our study, we firstly sought to build on existing research by examining separately whether each dimension of family functioning on the MMFF was predictive of each form of adolescent's aggression. Our results confirm, similar to Yu and Gamble (2008), the influence of an overall unhealthy family functioning on adolescent's direct aggression. This influence has also been demonstrated on children's physical aggression (Côté, Vaillancourt, Le Blanc, Nagin, & Tremblay, 2006; Tremblay, 2001). Our results also expand on prior work with children and adolescents by finding the influence of an overall unhealthy family functioning on adolescents' indirect aggression (Vaillancourt *et al.*, 2007; Yu & Gamble, 2008).

Focusing on the second purpose, that is, the control of the possible overlap between all the family dimensions, the final result concerning direct aggression showed how both roles and communication were the unique dimensions which still remained significantly related to this aggression form after introducing all the family dimensions together in the same statistical model. These results suggest that lacking roles within the family, and also communicating in an unclear and indirect manner, may be important family patterns characterizing adolescents who exert direct aggressive behaviors. Similarly, Yu and Gamble (2008) found that a lack of cohesion and positive expressiveness within family are important features that influence on the development of adolescent's direct aggressive behaviors. Moreover, family management in problem solving, roles and affection did not retain their significant associations while the overall dysfunction of the family was predictive of indirect aggression. Vaillancourt *et al.* (2007), in their longitudinal work about predictors of indirect aggression, measured family functioning with a reduced 12-item scale embracing the same features we measured. In consonance with our results, they found how a general family dysfunction in the very early stages of the childhood was related to the later manifestation of indirect aggression. Yu and Gamble (2008) also found that the overall family environment was significantly associated with siblings' indirect aggression to a greater extent than direct aggression. The dimension of roles, on the contrary, which had been previously found as a significant predictor of both direct and indirect aggression, lost almost completely its predictive value for indirect aggression when overlapping between all the family dimensions was controlled, remaining, however, as a significant predictor of direct aggression. Hence, these last findings showed that when dimensions of family functioning are examined as a whole a clearer pattern can be seen, pointing out that both the inability of parents to establish adequate roles in assuming obligations and responsibilities, and their difficulties to promote clear and unambiguous communication styles among the family members, are significant con-

tributors to direct aggression against peers. However, only the family functioning as a whole, above and beyond any particular dysfunctional family characteristic, is significantly associated with indirect aggressive behaviors in adolescents. The sound knowledge of family risk factors for aggression should be considered when designing specific intervention programmes directed at preventing and mitigating negative consequences of adolescent aggressive behaviour.

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