

Cooperative conflict-solving during adolescence: Relationships with cognitive-behavioural and predictor variables

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Abstract

The purpose of the study was to analyse the existence of sex differences in three styles of interpersonal conflict resolution, to explore the relationships between cooperative and aggressive conflict resolution with diverse cognitive-behavioural variables, and to identify predictor variables of cooperative interpersonal conflict resolution. The sample included 313 adolescents, aged 15 to 17 years. Descriptive and correlational methodology was used, and 6 assessment instruments were administered. The ANOVAs showed significantly higher scores for the females in cooperative conflict resolution, and for the males in aggressive conflict resolution. Pearson coefficients confirmed that adolescents of both sexes who used a cooperative conflict-solving style also had a high self-concept, many positive cognitions and empathy towards victims of violence, a high consideration of prosocial values and behaviours, high empathy, many positive and few aggressive social behaviours. Regression analysis identified 3 predictor variables of the use of a "cooperative resolution" style: many behaviours of social sensitivity, a good self-concept and a high level of empathetic concern.

Keywords: Conflict resolution, self-concept, violence, empathy, social behaviour, cooperation.

Resolución de conflictos cooperativa durante la adolescencia: relaciones con variables cognitivo-conductuales y predictores

Resumen

El estudio tuvo como objetivos analizar diferencias entre sexos en diferentes estilos de resolución de conflictos interpersonales, explorar las relaciones entre resolución cooperativa y agresiva con diversas variables cognitivo-conductuales e identificar variables predictoras de la resolución cooperativa de los conflictos. La muestra incluyó 313 adolescentes de 15 a 17 años. Se utilizó una metodología descriptiva y correlacional, aplicando 6 instrumentos de evaluación. Los ANOVAs evidenciaron puntuaciones significativamente superiores en resolución de conflictos cooperativa en las chicas y en resolución agresiva en los chicos. Los coeficientes de Pearson confirmaron que los adolescentes de ambos sexos que usaban un estilo de resolución cooperativo tenían también alto autoconcepto, muchas cogniciones positivas y empatía hacia las víctimas de la violencia, alta consideración de los valores y conductas prosociales, alta empatía, muchas conductas sociales positivas y pocas agresivas. El análisis de regresión identificó 3 variables predictoras del uso de un estilo de "resolución cooperativa": muchas conductas de sensibilidad social, alto nivel de autoconcepto y de preocupación empática.

Palabras clave: Resolución de conflictos, autoconcepto, violencia, empatía, conducta social, cooperación.

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Introduction

Interest in the identification and measurement of personal styles of coping with conflicts, understood as the way in which a person habitually responds to such conflicts, began in the 1960s with the work of Blake and Mouton (1964). Conflicts are a part of life in society and can be solved constructively, which contributes some benefit to those in conflict, or negatively, because they are inadequately managed or are not resolved, and this causes some damage and increases the tension that already exists between the parties in conflict.

Human beings must acquire certain skills to initiate and maintain relationships with other members of society, and solving interpersonal conflict is one kind of skill to maintain such relationships (Wied, Branje & Meeus, 2007). Various authors have studied how people behave in conflictive situations, although few studies have analyzed conflict resolution during adolescence. Some investigations have shown that conflict resolution skills improve with age, and that adolescence is characterized by a change from coercive strategies to more constructive strategies (Laursen, 1996; Laursen, Finkelstein & Townsend Betts, 2001).

Adequate management of conflicts is not an easy task, and children and adolescents who do not learn to solve conflicts adequately will probably have this deficit throughout their adult lives. To help adolescents deal with conflict, psychologists design and assess conflict resolution programs that are applied by the teachers at school. These programs could be more effective if we knew more about the factors that are related to the skill to cope with conflicts, and attitude towards conflict is one of these factors.

Current studies indicate that attitudes influence behavior and can predict it to some degree, although such influence is not simple and is affected by various moderators related to situational and personal aspects (Baron, Branscombe & Byrne, 2008). Attitudes toward conflict will inevitably affect the way that children approach their resolution. Positive or negative feelings towards conflict—the way in which it is perceived—will determine the way it is dealt with to a great extent. Therefore, children and adolescents who have a positive attitude towards conflict (cooperative, problem-oriented via negotiation) will be more capable of coping with and solving conflicts than those who have a negative attitude (aggressive or avoidant).

When faced with conflict, there are many ways to react, both individually and collectively, and, depending on whether one accepts, avoids, or denies conflict, the following attitudes are displayed: 1) overcoming (one acknowledges the existence of conflict and has the will to overcome it); 2) denial (one avoids acknowledging its existence); 3) avoidance (one acknowledges its existence but does not have the will to face it); 4) accommodation (one acknowledges its existence but chooses not to respond); 5) arrogance (one acknowledges its existence, but does not give an appropriate response); and 6) aggressiveness (conflict is responded to with hostility and violence) (Fisas, 2005).

The literature about children's and adolescents' attitudes towards conflict focuses particularly on the assessment of the efficacy of the conflict resolution programs applied at school. Most of the results of these studies confirm that this kind of programs produce positive effects in students' attitudes towards conflict and increase effective strategies to solve conflicts adequately (Dudley, Johnson & Roger, 1996; Heydenberk, 2002; Stewart, 2000), supporting the proposal of conflict resolution programs in the classroom.

The studies of conflict resolution are recent and there are hardly any investigations among them that analyze the relations between conflict resolution styles and other behavioral, cognitive, and emotional variables. Nevertheless, in recent years, some works have studied more profoundly the topic of conflict resolution in school settings (Álvarez et al., 2009; Fernández García, 2006; Martín, Fernández, Andrés, del Barrio & Echeita, 2003; Pifarré & Sanuy, 2002) and in family contexts (Rodrigo, García, Máiquez, Rodríguez & Padrón, 2008; Rodrigo, Máiquez, Padrón & García, 2009), making important contributions. Within this context, the monograph on getting on well with others and conflict in schools, edited by *Infancia y Aprendizaje* (Martín & del Barrio, 2003), is noteworthy.

Conflict resolution: Sex differences

The studies that have explored *sex differences* in conflict resolution style during adolescence have found that girls have higher scores in communication skills to solve conflicts (Black, 2000), they are more precise in the perception of conflict (Haugen, 2007), they tend to use more cooperative conflict resolution strategies (Alexander, 2001), they have more empathy-related skills (Taylor, Liang, Tracy, Williams & Seigle, 2002), higher scores in resolution strategies based on compromise and commitment (Owens, Daly & Slee, 2005), and they obtain higher scores in the use of a problem-oriented or cooperative resolution style, whereas boys score higher in the use of aggressive resolution style (Laca, Alzate, Sánchez, Verdugo & Guzmán, 2006).

Relations between conflict resolution styles and self-concept, attitudes toward violence, prosociability, and empathy

Another line of research has studied the relations between conflict resolution and a series of cognitive-behavioral variables. Although there are hardly any studies that have correlated conflict resolution and *self-concept*, a line of study has shown the positive effect on self-concept of programs that promote the skill to solve conflicts. In the study of Garaigordobil (2002), it was shown that an intervention program for adolescents that stimulated reflection about ways of solving conflicts, communication, expression of emotions... improved self-concept. Batiuk, Boland and Wilcox (2004) conducted a camp to strengthen group relations among the members of diverse groups, which included various elements of education for peace and conflict resolution, and they confirmed that the participants improved their self-concept. Along these same lines, the work of Ian, Byrne and Butler (2000) showed that participation in a program aimed at promoting conflict resolution skills improved adolescents' self-concept.

Concerning the relation between conflict resolution strategies and *attitudes toward violence*, the scientific literature shows that a lack of conflict resolution skills is related to the use of violence against an intimate partner (Kirsten & Tamar, 2009). Moreover, the cognitive-behavioral interventions and interventions based on learning skills to treat anger and aggressiveness, which teach young people conflict resolution strategies, have received the most empirical validation (Blake & Hamrin, 2007). In this sense, the prevention programs called "training in life skills" which focus on violence in the media, coping with anger and conflict resolution, show significant reductions of violence and delinquency in the subjects who received the intervention (Botvin, Griffin & Nichols, 2006).

Another study (Lansford et al., 2006), which related conflict resolution and *prosociability*, showed that the girls who were less popular had fewer prosocial attitudes and conflict resolution skills than the more popular girls. Concerning the relations between conflict resolution and *empathy*, the study of Alexander (2001) revealed the existence of a relation between cooperative resolution and perspective taking and empathetic response. Björkqvist, Österman and Kaukiainen (2000) found that empathy correlates strongly with peaceful conflict resolution, and Wied et al. (2007) confirmed the hypothesis that postulated that high dispositional empathy was positively related to a higher level of success in dealing with conflicts.

Objectives and hypotheses

The study carried out had three goals: 1) to analyze the existence of sex differences in three styles of conflict resolution; 2) to explore the relations of cooperative and aggressive conflict resolution with cognitive-behavioral variables (self-concept; attitudes towards violence, and prosocial values; empathy and social behaviors); and 3) to identify predictor variables of cooperative resolution of interpersonal conflicts.

Four hypotheses were postulated in this investigation. Firstly, in order to test the hypothesis of gender differentiation that proposes fewer aggressive responses in women than in men when faced with social relation conflicts, Hypothesis 1 of the study proposes that girls will score significantly higher in problem-oriented or cooperative conflict resolution and lower in aggressive conflict resolution. Secondly, taking into account the previous studies, Hypothesis 2 proposes that adolescents with high scores in cooperative conflict resolution will display a better self-concept, low acceptance of violence, high sensitivity and empathy towards the victims of violence, as well as about prosocial values and behaviors, high capacity of empathy, many behaviors of social conformity, social sensitivity, helping-collaboration, and few aggressive behaviors. And, in the same direction, Hypothesis 3 postulates that adolescents with high levels of aggressive conflict resolution will have a poor self-concept, high levels of justification of violence, little sensitivity and empathy towards the victims of violence, many cognitions about rejection of prosocial values and behaviors, low capacity of empathy, few behaviors of social conformity, social sensitivity, helping-collaboration, and many aggressive behaviors. Lastly, considering the results of the studies that have assessed the effects of interventions aimed at improving the capacity to resolve conflicts, Hypothesis 4 proposes that positive self-concept, high capacity of empathy, many positive social behaviors and few negative ones, will be predictor variables of cooperative conflict resolution. If these hypotheses are confirmed, educational guidelines and programs of conflict resolution should aim not only at taking steps about aggression, but they should also increase empathy, understood as the capacity to adopt the other's viewpoint, both cognitively and emotionally, the capacity to listen, the respect for differences, emotional regulation when faced with a classmate's attack and aggression, improvement of self-concept...

Method

Participants

The sample comprises 313 adolescents from the 4th grade of Secondary Education, aged between 15 and 17 years, distributed in 15 groups from 5 schools (see Table I). The schools were randomly selected from the list of schools of the Autonomous Community of the Basque Country (ACBC) Spain. There were 143 boys (45.7%) and 170 girls (54.3%). Mean age of the participants was 15.55 years, with a standard deviation of .69.

TABLE I
Sample Description

School	Province	Area	Type of school	Participants (%)	Sex	
					boys	girls
1	Bizkaia	Urban	Public	75 (24,0%)	37	38
2	Bizkaia	Rural	Public	67 (21,4%)	29	38
3	Alava	Urban	Private	95 (30,4%)	46	49
4	Gipuzkoa	Rural	Private	39 (12,5%)	15	24
5	Gipuzkoa	Urban	Public	37 (11,7%)	16	21

Assessment instruments

In order to measure the target variables of the study, we administered 6 instruments with adequate guarantees of psychometric reliability and validity.

CONFLICTALK. An instrument for measuring youth and adolescent conflict management message styles (Kimsey & Fuller, 2003). This self-report is designed to identify the style of dealing with conflict through the messages used. The test measures three styles to manage conflicts: self-oriented (it implies wanting to do everything one's own way, being

aggressive and authoritarian when dealing with conflict); problem oriented (it implies interest in finding the cause of the conflict and in specifically identifying the problem in collaboration with the other; focus is on finding the best solution and in cooperative action); and other oriented (it implies thinking that conflict is always bad, being passive when dealing with conflict). The questionnaire presents 18 sentences one could use in a conflictive situation, and the adolescents are asked to rate each sentence on a 5-point Likert-type scale ranging from 1 (I never say things like that) to 5 (I almost always say things like that). Studies have shown that the internal consistency of CONFLICTALK is adequate (Cronbach alpha: problem-oriented = .87, self-oriented = .81, and other oriented = .63), and it has been confirmed with our sample (Cronbach alpha: .92, .78, and .73). Validity studies with the Spanish version (Laca et al., 2006) have found positive significant correlations ($p < .05$) between communication skills and a problem-oriented style of managing conflicts (cooperative), and negative correlations between communication skills and self-oriented style of managing conflicts (aggressive).

LAEA. Adjective checklist for self-concept assessment with adolescents and adults (Garaigordobil, 2008, 2011). This checklist is made up of 57 positive adjectives which respondents are asked to score on a scale of 0-4 (*not at all – very well*) according to the degree to which they define or describe their personality. Reliability analysis with the original sample ($n = 1423$) (Garaigordobil, Pérez & Mozaz, 2008) and with the sample of this study evidenced high internal consistency (Cronbach's alpha = .92). In order to analyze the validity of the LAEA, were calculated correlations with other instruments measuring self-concept (AF-5. García & Musitu, 1999) and self-esteem (RS. Rosenberg, 1965), obtaining significant positive correlations between the LAEA and the AF-5 ($r = .71, p < .001$) and with the RS ($r = .63, p < .001$), which indicate acceptable construct or concurrent validity.

VIOLENCE. The attitudes toward violent behavior questionnaire (Garaigordobil, 2009a). This questionnaire is made up of 3 scales: S1) Attitude towards violence; S2) Sensitivity towards the victims of terrorist violence; and S3) Empathy towards the victims of violence in general. Example items of each scale are: "The end justifies the means, a good end can justify the use of violence", "The victims of terrorist violence deserve our acknowledgement and solidarity"... The first two scales are cognitive and they assess a person's thoughts about violence, whereas the last scale assesses people's empathetic feelings and behaviors towards the victims of diverse kinds of violence. The test has 47 statements and the adolescents rate their degree of agreement with the content on a scale ranging from 1 to 5. On the S1, high scores indicate a high level of acceptance of violent behavior, whereas on the S2 and S3, high scores indicate higher sensitivity towards the victims of terrorist violence and a higher capacity of empathy towards victims of violence. Cronbach's alphas obtained with the sample of this study show an adequate level of internal consistency (S1 = .90, S2 = .70, S3 = .78). Validity studies have revealed the following significant correlations ($p < .001$): 1) the attitude of acceptance of violence (S1) with anger expression ($r = .30$) and with aggressive behaviors ($r = .36$); 2) sensitivity towards the victims of terrorist violence (S2) with aggressive behaviors ($r = -.24$), with empathy ($r = .24$), and with helping behaviors ($r = .29$); and 3) empathy towards the victims violence (S3) with empathy ($r = .56$) and with helping behaviors ($r = .59$).

PROSOCIALITY. The prosocial attitudes towards values and behaviors questionnaire (Garaigordobil, 2009a). This assesses attitudes towards four prosocial values and behaviors: justice, forgiveness, dialogue, and remorse. It is made up of 56 statements, 14 statements for each one of the four values (for example, "Justice is essential for a better world, to forgive is what makes us more human", "Dialogue is one of the best ways to achieve peace", "To feel remorse is a sign of wisdom, it is a great value"). The test appraises people's cognitions or thoughts with regard to these four constructs, as well as a global evaluation of their attitude towards prosociality. Statements are presented and adolescents must rate their degree of agreement with the contents on a 1-to-5-scale.

Internal consistency obtained (Cronbach's alpha) with the sample of this study was high (a prosociability total = .82; α justice = .87; α forgiveness = .87; α dialogue = .89; α remorse = .89). Validity studies revealed significant correlations ($p < .001$) of prosociability with positive coping strategies versus violent behavior ($r = .33$), empathy ($r = .51$), anger control ($r = .35$), and aggressive behavior ($r = -.40$).

IRI. Interpersonal reactivity index (Davis, 1980; 1983). Empathy was measured using Davis's IRI which evaluates the capacity of empathy through 28 statements, 7 for each one of the 4 factors explored: *perspective taking* (tendency of skill to adopt other people's perspective or viewpoint), *fantasy* (tendency to identify with fictitious characters from books and films), *empathic concern* (tendency to experience feelings of compassion and concern towards others), and *personal distress* (capacity to experience feelings of discomfort and anxiety when observing others' negative experiences). The adolescents were requested to indicate the extent to which they could self-apply the content of each statement on a Likert-type scale ranging from 1 to 5. In the psychometric study of the IRI, carried out with the sample of this study, Cronbach's alpha coefficients confirmed the internal consistency of the test (a empathy total = .81; α perspective taking = .71; α fantasy = .75; α empathic concern = .74; α personal distress = .70). In the original version of the IRI (Davis, 1980), the reliability ranged between .70 and .78, and significant positive correlations were found with the *Hogan Empathy Scale* (Hogan, 1969) that confirmed the validity of the instrument. The Spanish adaptation of IRI has also confirmed its validity. Factor analysis reflects a structure similar to that obtained in the original version of the test (Pérez-Albéniz, de Paúl, Etxeberría, Montes & Torres, 2003). In addition, positive relations have been found between empathy and prosocial behavior-prosocial reasoning, and negative relations with aggressiveness (Mestre, Frías & Samper, 2004).

SCAS. Social cognitive attitudes and strategies (Moraleda, González & García-Gallo, 1998/2004). This questionnaire assesses four types of social behaviors: 1) *social conformity* (obeying rules and social norms that facilitate living together and mutual respect, awareness of the rules and social norms as rational, democratically accepted principles, awareness of one's own moral responsibility); 2) *social sensitivity* (a tendency to syntonize with others' feelings, a disposition to accept that others are different, to value them and to have a positive image of them); 3) *helping-collaboration* (a tendency to share with others, to reinforce them, to participate and collaborate in common work, to achieve consensuated solutions); and 4) *aggressiveness-stubbornness* (a tendency towards violent expressions against people or things, to threaten and intimidate, towards rigid tenacity as a form of aggressiveness). Cronbach's alpha coefficients obtained with the sample of this study provided evidence of the consistency of the test (conformity = .71, sensitivity = .86, helping = .84, aggressiveness = .77). Criterial validity studies were carried out with a sample of 150 participants. The procedure followed was the analysis of the mean scores obtained in the scales by two extreme groups according to their level of social adjustment (B1-B2, socially maladapted and adapted). All the scales presented discriminative values between the participants of the B1 and B2 group. The adolescents from Group B1 presented significantly higher values in the antisocial factor and the Group B2 adolescents presented significantly higher values in the prosocial factor.

Procedure

This study used a descriptive and correlational cross-sectional methodology, in an attempt to establish concomitant relations between diverse styles of conflict resolution (cooperative, aggressive, passive) and other cognitive-behavioral variables (self-concept; attitudes towards violence, and prosocial values and behaviors; empathy and social behaviors). First, the headmasters of the schools were interviewed to present goals of the investigation, describe the assessment instruments, request permission, and promote their collaboration. Subsequently, a meeting was held with the parents to explain the study to them and request their consent. The questionnaires were completed collectively.

The assessment battery was administered by three Psychology postgraduates, who had been trained to this end, with the collaboration of the teachers in the five schools. All the participants were informed about the goals of the work, of the voluntary nature of their participation, and their informed consent was requested.

Results

Conflict Resolution: Sex Differences

The result of the MANOVA carried out for the three conflict resolution styles as a function of sex yielded significant differences, Multivariate Pillai, $F(1, 311) = 9.65, p < .001$, although the effect size was small ($\eta^2 = .087, r = .29$). The ANOVAs confirmed statistically significant differences in self-oriented or aggressive conflict resolution style, with higher scores for boys (boys, $M = 11.68, SD = 4.38$; girls, $M = 9.80, SD = 3.59, F(1, 311) = 17.13, p < .001$), and in problem-oriented or cooperative conflict resolution style, with higher scores for girls (boys, $M = 18.08, SD = 6.11$; girls, $M = 20.37, SD = 5.83, F(1, 311) = 11.32, p < .001$). However, there was no evidence of significant differences between adolescent boys and girls in avoidant conflict resolution style (boys, $M = 13.37, SD = 4.66$; girls, $M = 12.87, SD = 3.85, F(1, 311) = 1.07, p > .05$).

Relations between conflict resolution and cognitive-behavioral variables

In order to analyze the concomitant relations between conflict resolution style and cognitive-behavioral variables, we calculated Pearson correlation coefficients between the scores obtained in the CONFLICTALK and the scores obtained in the rest of the assessment instruments administered (see Table II).

As can be seen in Table II, taking into account the entire sample, significant positive correlations ($p < .05$) were found between *cooperative conflict resolution* and self-concept, $r(311) = .38$, sensitivity towards victims of terrorism, $r(311) = .19$, empathy towards victims of violence in general, $r(311) = .34$, a positive attitude towards prosocial values and behaviors, $r(311) = .20$, (only in boys and with the exception of justice), empathy, $r(311) = .20$, and behaviors of social conformity, $r(311) = .27$, social sensitivity, $r(311) = .41$, and helping-collaboration, $r(311) = .39$. Significant, albeit low, negative correlations between cooperative resolution and aggressive behaviors, $r(311) = -.13$, could also be observed but when the sample was analyzed separately, these correlations became nonsignificant.

On the one hand, we found significant positive correlations ($p < .05$) between *aggressive conflict resolution* and acceptance of violence, $r(311) = .32$, and aggressive behaviors, $r(311) = .33$, as well as significant negative correlations with sensitivity towards victims of terrorist violence, $r(311) = -.15$ (of low magnitude and which lost significance when the sample was analyzed separately by sex), empathy towards victims of violence, $r(311) = -.28$, positive attitudes towards prosocial values and behaviors, $r(311) = -.37$, empathy, $r(311) = -.19$ (of low magnitude and which lost significance when the sample was analyzed separately by sex), behaviors of social conformity, $r(311) = -.37$, social sensitivity, $r(311) = -.29$, and helping-collaboration, $r(311) = -.32$.

No relations between these cognitive-behavioral variables and *avoidant resolution style* were observed in the sample of girls. However, in the boys, significant correlations were confirmed between avoidant style and self-concept, $r(311) = .17$, empathy, $r(311) = .27$, and aggressive behaviors, $r(311) = -.21$.

Predictor variables of cooperative and aggressive style of conflict resolution

In order to identify the variables that predict a high score in the use of the cooperative and aggressive conflict resolution styles, we carried out stepwise multiple linear regression analysis, both in the entire sample and in the sample separated by sex (see Tables III and IV).

TABLE II
Pearson correlations between conflict resolution styles and cognitive-behavioral variables

	Avoidant Resolution		Aggressive Resolution		Cooperative Resolution	
	Boys (n = 143)	Girls (n = 170)	Boys (n = 143)	Girls (n = 170)	Boys (n = 143)	Girls (n = 170)
LAEA	.17*	.12	.15**	-.11	.00	-.06
Self-concept					.42***	.35***
VIOLENCE						
Acceptance violence	-.05	.09	.07	.19*	.37***	.32***
Sensitivity victims terrorist violence	.09	.00	.04	-.11	-.11	-.15**
Empathy victims violence	.00	.08	.01	-.22**	-.23**	-.28***
PROSOCIALITY						
Justice	.11	.01	.06	-.21*	-.20**	-.22***
Forgiveness	.17*	-.01	.07	-.30***	-.23**	-.31***
Dialogue	.11	-.11	.00	-.26**	-.38***	-.35***
Remorse	.20*	.01	.10	-.29***	-.30***	-.33***
Prosociality Total	.17	-.05	.06	-.32***	-.36***	-.37***
IRI						
Perspective taking	.18*	.04	.10	-.16*	-.11	-.16**
Fantasy	.21*	.05	.13*	-.10	-.01	-.10
Empathic concern	.11	-.01	.01	-.30***	-.10	-.28***
Personal distress	.24**	.14	.17**	.19*	.04	.06
Empathy Total	.27**	.07	.13*	-.14	-.07	-.19***
SCAS						
Social conformity	.00	.12	.05	-.45***	-.22**	-.37***
Social sensitivity	.09	.06	.05	-.20*	-.27***	-.29***
Helping-collaboration	.03	.05	.02	-.31***	-.23**	-.32***
Aggressiveness-stubbornness	-.21*	.02	-.08	.31***	.31***	.33***

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

TABLE III
Predictor variables of cooperative conflict resolution

	R	R ²	ΔR ²	Error Standard	B	Error Standard	Constant	β	t
Boys + Girls									
Social sensitivity	.42	.18	.17	5.69	.209	.05	3.48	.258	3.53 ***
Self-concept	.48	.23	.22	5.51	.064	.01	-3.23	.238	3.50 ***
Empathic concern	.50	.25	.24	5.46	.195	.09	-5.33	.149	2.17 *
Boys									
Self-concept	.42	.18	.17	5.11	.051	.02	2.64	.222	2.09 *
Social sensitivity	.47	.22	.21	5.37	.156	.06	0.12	.232	2.29 *
Empathy: Fantasy	.51	.26	.23	5.28	.199	.09	-0.79	.204	2.14 *
Girls									
Social sensitivity	.35	.12	.11	5.56	.305	.09	1.59	.277	3.31 ***
Self-concept	.41	.17	.16	5.41	.072	.02	-6.61	.235	2.81 **
Sensitivity victims terrorist violence	.45	.20	.18	5.35	.094	.04	-7.31	.164	2.02 *

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

TABLE IV
Predictor variables of aggressive conflict resolution

	R	R ²	ΔR ²	Error Standard	B	Error Standard	Constant	β	t
Boys + Girls									
Prosociality Total	.38	.14	.14	3.718	-.029	.01	13.34	-.209	-2.81 **
Social conformity	.44	.19	.19	3.612	-.123	.03	17.80	-.262	-3.89 ***
Aggressive behavior	.49	.24	.23	3.514	.106	.03	13.96	.214	3.16 **
Boys									
Social conformity	.48	.23	.22	3.87	-.230	.04	22.16	-.444	-5.30 ***
Aggressive behavior	.53	.28	.27	3.74	.131	.04	17.68	.228	2.72 **
Personal distress	.56	.32	.30	3.67	.167	.07	14.65	.186	2.23 *
Girls									
Acceptance violence	.34	.11	.11	3.28	.10	.03	4.80	.270	3.19 **
Aggressive behavior	.42	.18	.16	3.18	.11	.03	3.05	.261	3.07 **

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

As shown in Table III, taking into account the entire sample, out of the set of predictor variables of the "use of a cooperative conflict resolution style", three were statistically significant: behaviors of social sensitivity ($\beta = .258$), self-concept ($\beta = .238$), and empathetic concern ($\beta = .149$). The standardized Beta regression coefficients indicate that these variables have some influence on the variable "cooperative resolution." According to this, the percentage of explained variance (adjusted determination coefficients) for each predictor variable was low (17%, 22%, and 24%). Three variables predicted the criterion variable "cooperative resolution": many behaviors of social sensitivity, a high level of self-concept, and a high level of empathetic concern, which explain 24% of the variance.

Out of the set of predictor variables of the "use of an aggressive conflict resolution style" (see Table IV), three variables were statistically significant: positive attitude towards prosocial values and behaviors ($\beta = -.209$), behaviors of social conformity ($\beta = -.262$), and aggressive behaviors ($\beta = .214$). The standardized Beta regression coefficients indicate that these variables have some influence on the variable "aggressive resolution." The percentage of explained variance for each predictor variable was low (14%, 19%, and 23%). Three variables predicted the criterion variable "aggressive resolution": low level in positive attitude towards prosocial values and behaviors, few behaviors of social conformity, and many aggressive behaviors, which explain 23% of the variance.

Discussion

The purpose of the study was to analyze sex differences in three styles of conflict resolution, to explore the relations between cooperative and aggressive conflict resolution and diverse cognitive-behavioral variables, and to identify predictor variables of cooperative interpersonal conflict resolution. Firstly, the results have shown that boys score significantly higher in aggressive conflict resolution style and girls score higher in cooperative conflict resolution style. The results ratify Hypothesis 1 and confirm the findings of other studies that have reported that adolescent girls have more communication skills when they try to resolve conflicts (Black, 2000), that is, they tend to use more cooperative conflict resolution strategies (Alexander, 2001; Laca et al., 2006).

Secondly, the results confirm that adolescents of both sexes who tended to use a cooperative conflict resolution style also had a good self-concept, high sensitivity and empathy towards victims of violence, a positive attitude towards prosocial values and behaviors (forgiveness, dialogue, and remorse), a high capacity of empathy, many social behaviors of social conformity, social sensitivity, helping-collaboration, and few aggressive behaviors. Therefore, the results practically confirm Hypothesis 2, although the number of positive cognitions about justice was not significant among the individuals who used the cooperative style. Although correlational studies of the connections between cooperative resolution style and these variables have not been carried out, they do point in the same direction as the studies that have assessed the effects of intervention programs to promote the capacity of constructive conflict resolution, observing a positive effect of these interventions on self-concept (Batiuk et al., 2004; Garaigordobil, 2002; Ian et al., 2000).

Thirdly, the results suggest that adolescents of both sexes who use an aggressive conflict resolution style have a high level of acceptance-justification of violence, many aggressive behaviors, little empathy towards victims of violence, little consideration for prosocial values and behaviors, low capacity for perspective-taking and empathetic concern (boys only), few social behaviors of social conformity, social sensitivity, and helping-collaboration. Therefore, Hypothesis 3 is almost completely confirmed, although the adolescents with an aggressive conflict resolution style did not display a poor self-concept. These results are coherent with those obtained in other studies that have revealed that the lack of skills to resolve conflicts is related to violent behaviors (Kirsten & Tamar, 2009), and the studies that have related positive conflict resolution

with prosociability (Lansford et al., 2006) and with empathy (Alexander, 2001; Björkqvist et al., 2000).

Furthermore, in the results obtained, the positive correlation that was only found in boys between avoidant conflict resolution and empathy is noteworthy. This result may be explained by the significantly higher scores in empathy obtained by girls at all ages and that have been confirmed in all the studies (see Garaigordobil, 2009b; Garaigordobil & García de Galdeano, 2006).

Lastly, the results have allowed us to identify the following predictor variables of cooperative conflict resolution: many behaviors of social sensitivity, a good self-concept, and a high level of empathetic concern. And the following variables were identified as predictors of aggressive resolution style: little consideration for prosocial values and behaviors, few behaviors of social conformity and many aggressive behaviors. The results confirm Hypothesis 4.

The data from this study provide evidence of the close relations between a positive attitude towards conflict—the first step to address and resolve it adequately—with diverse cognitive-behavioral variables. The work has practical implications because it identifies relevant variables related to using cooperative ways to resolve interpersonal conflicts, which should be taken into account when designing intervention programs for children and adolescents. The results of this study suggest that in order to promote the capacity of cooperative, constructive, problem-oriented conflict resolution, and to avoid the use of aggressive strategies, intervention programs to promote socio-emotional development should enhance: 1) positive self-concept; 2) the capacity of empathy, especially its dimensions of empathetic concern (tendency to experience feelings of compassion and concern for others), and perspective-taking (the skill to adopt other people's perspective or viewpoint); 3) sensitivity and empathy towards the victims of violence; 4) a positive attitude towards prosocial values and behaviors; and 5) positive social behaviors, of social sensitivity (tendency to syntonize with others' feelings, to accept that other people behave differently, to value others, to have a positive image of them), of social conformity (respecting the social rules and norms that facilitate living together and mutual respect, awareness of one's own moral responsibility), of helping-cooperation (a tendency to share with others, to collaborate at common work, to find solutions by consensus).

The results have confirmed the importance of empathy in positive conflict resolution; therefore, intervention programs should stimulate progressive egocentric decentering by presenting the perspectives of others' feelings, using of reasoning as an educational technique, explaining the consequences for others of one's behavior, exposure to empathetic models accompanied by a moral reflection about them, promoting the expression of positive messages to others, observing models that solve conflicts in diverse ways, analyzing the consequences of the different solutions...

A program to develop the capacity of conflict resolution should include five steps aimed at solving the problem: 1) focus on the problem and define it, 2) seek alternative solutions, 3) analyze these alternatives and make decisions, 4) put the selected solution into practice, and 5) assess the results. An intervention proposal should promote actions aimed at distinguishing between person and behavior, expressing feelings assertively, and suggesting solutions to the conflict. It is essential for adolescents to learn to: 1) distinguish the person from the topic of conflict (the most recurrent source of conflicts is the strong human tendency to confound person and behavior or conflict topic); 2) use "I" messages because they are a useful tool to distinguish between person and topic (when one is annoyed with another person, it is essential to be able to express oneself in order to begin to solve the problem and, for this purpose, it is necessary to do so without offending the other person; the key is to talk about the behavior that offends or annoys, not the person); and 3) talk, listen, understand, and not seek guilty parties (dialogue is essential to solve the situation; it is not a question of blaming others, but of finding a reasonable solution to the conflict). And for this purpose, it is important for adults to model the

behavior of nonviolent conflict solution because in order to teach appropriate ways to solve conflicts, models of behavior are more useful than speeches.

Adolescence is a period of profound changes, marked by instability and impermanence. Adolescents must face three types of transformations: 1) biological and psychosexual transformations: adolescence is a world of physiological transformation and these changes have great impact on the affective-emotional sphere; 2) psychological transformations: adolescence is the key and critical moment of identity formation; it is a stage of transition between childhood and adulthood in which identity is restructured; and 3) social transformations because, in adolescence, the primary social orientation towards one's parents is reoriented towards one's peers. Adolescents' departure from the family orbit coincides with their entrance into another orbit of influence, that of the group and the classmates. In adolescence, emancipation from the family, as an element of the process of acquiring personal autonomy and social independence, may be the most noteworthy trait of social behavior of the adolescent's new situation. However, the new network of relations with society and with the subculture of contemporaries is not without problems. Adolescents must face conflicts both within the family and the peer group, so skills to resolve interpersonal conflicts constructively will be very useful for their personal and social growth (Garaigordobil, 2000).

Among the limitations of the study is the small sample size; hence, the results should be interpreted with precaution. Another limitation of the study is the fact of having used a self-report to assess conflict resolution style, with the bias of social desirability this implies. When interpreting the results of a self-report about attitudes towards conflict, it is important to take into account that this may not be a precise indicator of the students' behavior in real life situations. Therefore, it can be suggested ratifying the results obtained by assessing this variable with observational methodology or other techniques. Moreover, other individual variables (for example, communication skills) and situational factors (for example, group pressure) may affect a person's reactions when coping with troublesome real life situations. Situational questionnaires might be more appropriate to measure the capacity of conflict resolution. The instrument applied in this study was not based on real conflicts for the sample analyzed, which might affect the results obtained. The studies indicate that the type of conflict and the importance attributed to it condition the type of strategies employed, which, in turn, is mediated by developmental and situational variables. However, taking into account the complexity of the context, the results of our investigation provide valuable information that should be considered when designing and applying school programs for the prevention of violence, such as programs of conflict resolution and peer mediation.

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