The varying roles of parents and the cognitive–emotional variables regarding the different types of adolescent prosocial behavior

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Abstract

This article studies the relationship between parental variables (authoritative parental style, maternal and paternal challenges), empathy, and prosocial flow with different types of prosocial behaviors (prosocial behaviors toward different targets and different motivations of prosocial behavior). The sample included 539 students of both sexes (42.5% males; $M_{\text{age}} = 19.13$ years old, $SD = 1.92$). The hierarchical multiple regression analyses indicated that prosocial behaviors toward family, followed by toward friends, are motivated to a much greater extent by the parental variable than by empathy and prosocial flow. Conversely, when the prediction of prosocial behavior toward strangers was analyzed, the variables that had greater weight were prosocial flow and empathy. In relation to prosocial tendencies, the results showed that parental variables, empathy, and prosocial flow explained a similar percentage of variables in the different types of public, responsive, altruist, and anonymous prosocial tendencies.

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Keywords

Authoritative parental style, empathy, flow, maternal and paternal challenges, prosocial behavior

Introduction

This article examines whether the different aspects of parental variables, empathy, and a positive mental state are associated with prosocial behavior toward different targets and different motivations to help others. There are several studies that have analyzed the importance of parental styles (Carlo, White, Streit, Knight, & Zeiders, 2017; Mesurado et al., 2014) and empathy (Carlo, Padilla-Walker, & Nielson, 2015; Knight, Carlo, Basilio, & Jacobson, 2015; Mesurado et al., 2014) in relation to prosocial behavior in children and adolescents. However, there are only a few studies that consider the relationship between parental style and challenge, empathy, and prosocial flow jointly with the different targets and motivations of prosocial behavior. Our analyses may help identify the specific role of each predictor variable on different types of prosocial behavior (toward a different target and motivation to help).

Parental variables and prosocial behavior

Previous studies have shown the prominent roles that relational variables (e.g., parental relationship, parental styles, and parental practices) play in the promotion of prosocial behavior. Specifically, cross-sectional and longitudinal studies have shown that parents who are more authoritative in their parenting style (Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000), express more warmth and support and use positive parental practices have more prosocial children (Carlo, MacGinley, Hayes, Batenhorst, & Wilkinson, 2007; Richaud, Mesurado, & Lemos, 2013).

Baumrind (1966, 1996) defined the authoritative parental style as a combination of high levels of demandingness (or control) and responsiveness (or warmth) with their children. Chao and Willms (2002) found that positive parenting practices (sensitive, rational, strong parenting) had a significant positive effect on children's achievement, including low levels of behavior problems and prosocial behaviors. When children perceive that their parents accept them, respect their opinions, and are proud of them, their security is increased, which allows them to develop secure relationships and establish positive and altruistic relationships with others (Richaud de Minzi, Lemos, & Mesurado, 2011).

Dailey (2008) suggested that although the definition of authoritative parental style embodies the idea of challenging through the promotion of a stimulating family environment, the parental challenge must be evaluated as a different aspect of parenting style. The challenge would be parental behavior that pushes or stimulates the child to enhance their abilities, which would strengthen different cognitive, behavioral, social, and affective aspects (Dailey, 2010). Previous studies suggest that positive challenge from parents is an important predictor for positive development. For example, positive challenge is related to behavioral control, psychological control, self-esteem, and identity

strength (Dailey, 2008). A recent study has shown that high levels of parental challenge and an authoritative parental style are associated with greater involvement with prosocial behavior toward different targets, such as families and friends; however, these factors have no influence on prosocial behavior toward strangers (Mesurado & Richaud, 2017). These authors suggest that in promoting prosociality, both the authoritative style and challenge from parents are important because developing help behavior is a challenging task in itself, as it is necessary to regulate one's own emotions and set aside one's self-interest to put oneself at the service of another who needs it. However, until now, there is no evidence that parental challenge is associated with different motivations of prosocial behavior.

Empathy, prosocial flow, and prosocial behavior

Empathy enables the understanding and perception of the emotional experience of other human beings, and it is essential in establishing successful social interactions (Batson, 2009; Richaud de Minzi, Lemos, & Oros, 2014). Although there are several definitions of empathy, it can be understood as a human ability to put oneself in another person's place. Davis (1983) defined empathy as a multidimensional construct composed of cognitive (e.g., perspective taking) and emotional components (e.g., empathic concern). Perspective taking is the ability to put yourself in the place of the other and understand their thoughts, feelings, and mental states (Epley & Caruso, 2009), while empathic concern is to feel the same as others are feeling, and it is defined as concern for another's welfare (Batson, 2011). Several studies have shown that both aspects of empathy (cognitive and emotional) are positively related to different types of prosocial behavior (Davis, Carlo, Streit, & Crockett, 2017). Davis et al. (2017) have shown that empathic concern is positively associated with emotional sensitivity and altruistic prosocial behavior, while perspective taking is negatively associated with altruism. These results suggest that perspective taking is not enough to promote selfless helping behaviors.

Moreover, a recent study has shown that another cognitive-emotional variable, prosocial flow, is an important predictor of prosocial behavior toward different targets, including family, friends, and particularly strangers (Mesurado & Richaud, 2017). Prosocial flow has been defined as a positive mental state when performing prosocial activities. This mental state includes cognitive and affective aspects and the simultaneous ability to perceive the need of others and to feel capable of filling that requirement (Mesurado & Richaud, 2017). However, until now, no studies have evaluated whether prosocial flow can be associated with prosocial behavior when it is based on different types of motivations.

Prosocial behavior

Prosocial behavior is a tendency to benefit others in different ways, such as by helping, sharing, and comforting (Eisenberg et al., 1999). Previous research suggests that such behaviors promote social skills and protect against externalization problems, such as aggression.

Prosocial behavior can be motivated by different reasons. Therefore, Carlo and Randall (2002) proposed a multidimensional model of prosocial behavior based on different types of motivations: intrinsic motivation, involving the desire to benefit others without expecting anything in return, and extrinsic motivation, involving the objective of receiving material things or social rewards (Mesurado & Richaud, 2017). These different motivations give rise to different types of prosocial behavior, such as altruistic (intrinsic motivation), public (extrinsic motivation by social approval search), or responsive (external motivation by other requirements) (Carlo & Randall, 2002; Richaud, Mesurado, & Kohan Cortada, 2012).

Padilla-Walker and collaborators (2011, 2015) suggest that it is important to consider prosocial behavior within the context of interpersonal relationships. Children and adolescents make distinctions between potential receptors of help; for example, prosocial behavior toward friends and family is more common than toward strangers (Padilla-Walker & Christensen, 2011; Padilla-Walker, Nielson, & Day, 2016). Padilla-Walker and colleagues (2015) have suggested that prosocial behavior toward different targets can be predicted by different variables. For example, they found that positive mothering is a significant predictor of prosocial behavior toward family, while dispositional traits (empathy and self-regulation) are marginally related to it. Moreover, empathy is less strongly related to prosocial behavior toward family than it is toward strangers and friends (Padilla-Walker & Christensen, 2011).

Based on previous findings, we are interested in studying the relationship between parental variables, empathy, and prosocial flow with different types of prosocial behaviors (prosocial behavior toward different targets and different motivations for prosocial behavior). Specifically, we are interested in analyzing the unique contribution of the authoritative parental style, maternal and parental challenges, parental variables, perspective taking and empathic concern, cognitive-affective and ability, and achievement dimensions of prosocial flow toward an adolescent's prosocial behavior. Finally, we will analyze how much explained variance of different types of prosocial behaviors can be attributed to different parental variables, empathy, and prosocial flow in adolescents.

Methods

Participants and procedure

The sample included 539 students of both sexes (42.5% males; $M_{\text{age}} = 19.13$ years, $SD = 1.92$). The participants included in the study grew up with both parents. The distribution of the mothers' educational level was as follows: 13% of them had completed primary education, 30% had completed secondary education, and 57% had completed higher educational studies. The distribution of the occupation of the head of the family was as follows: 2% were retired, 20% were qualified manual laborers, 30% were administrative and sales managers, and 48% were university-level professionals, financiers, or business people.

The participants were registered for undergraduate social responsibility courses at an Argentinean university. In this university, all students must fulfill a course on social responsibility and must perform 6 months of volunteer social work, either in an NGO or

in another charity of their choice. Student activities may include tutoring, legal assistance, low-income assistance, volunteering as firefighters, or home construction for people in need, and these activities depend on the needs of the organization where they are conducted. After completing their social work, students were asked to complete the study questionnaires.

Ethics procedures

Before beginning the study, consents were requested. First, the project was presented and explained to the heads of the university. To this end, the objectives and the description of the procedure to be followed were presented. It was explained that participation was voluntary and anonymous. After obtaining permission from the authorities, the students were invited to participate in the project. The objectives of the project were explained, and the students were informed that their participation was voluntary and that not participating would not have any consequences for them. There was no compensation of any kind for participating in this study.

Measurement

Parental style. The Parental Authority Questionnaire (PAQ) was used to measure parental style. The PAQ was developed by Buri (1991) and includes 30 items using a 5-point Likert-type scale. The scale measures three types of parental styles (10 items for each parental style): authoritative, authoritarian, and permissive. In this study, only the authoritative parental style dimension was used. Authoritative parents display high levels of both warmth and control (e.g., “As growing up, my parents directed the activities and decision of the children in the family through reasoning and discipline”). Cronbach’s α in the present sample was .86.

Parental challenge. The short version of the Parental Challenge Questionnaire (PCQ) was used to measure the challenges from both the mothers and the fathers. The PCQ was developed by Dailey (2008) and includes 10 items using a 7-point Likert-type scale, such as “My mother/father made me deal with the consequences of my decisions or behaviors.” The Cronbach’s α s in the present sample were .92 for the father and .84 for the mother.

Empathy. The Interpersonal Reactivity Index (IRI) was developed by Davis (1980) and measures four factors of empathy: two cognitive (perspective taking and fantasy) and two emotional (empathic concern and personal distress). In this study, only perspective taking (e.g., “I believe that there are two sides to every question and try to look at them both”) and empathic concern (“I often have tender, concerned feelings for people less fortunate than me”) dimensions were included because previous studies indicated that they are the most important aspects of empathy. The IRI includes 28 items using a 5-point Likert-type scale. Cronbach’s α s in the present sample were .70 for perspective taking and .71 for empathic concern.

Prosocial flow. The Optimal Experience Scale (Mesurado, 2008) was used to assess prosocial flow. This measure includes 26 items about flow experienced by the subjects when they performed voluntary social assistance activities. Of the 26 items, 13 were semantic differential items related to affective (e.g., happy vs. sad, excited vs. bored) and cognitive states (e.g., alert vs. drowsy, clear vs. confused) and were answered on a 7-point scale. The remaining 13 items measured achievement perceptions (e.g., were you succeeding at what you were doing?) and ability (e.g., do you think that you have enough capacity to overcome that challenge?) and were answered on a 5-point Likert-type scale rating from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's α s in the present sample were .82 for ability and achievement perception and .88 for cognitive–affective dimension.

Prosocial behavior toward a different target. To study adolescents' prosocial behaviors, a modified version of the Kindness and Generosity subscale (Padilla-Walker & Christensen, 2011) extracted from the Values in Action Inventory of Strengths (Peterson & Seligman, 2004) was used. The measure contains 27 items, including 9 items for each prosocial target (sample items include “I help people I don't know, even if it is not easy for me” and “I always listen to my friends talk about their problems”) in a 5-point Likert-type scale, ranging from 1 (*not like me at all*) to 5 (*very much like me*). Cronbach's α s in the present sample were .82 for prosocial behavior toward friends, .70 for prosocial behavior toward strangers, and .87 for prosocial behavior toward family.

Prosocial tendencies measure. To study prosocial behavior from the point of view of motivation, we used the Argentinean version of the prosocial tendencies measure (Carlo & Randall, 2002; Richaud, Mesurado, & Kohan Cortada, 2012). The Argentine version defines four types of prosocial tendencies: altruism, public, anonymous, and responsive (a combination of direct, emotional, and compliant prosocial tendencies of the original version by Carlo & Randall, 2002) and includes 21 Likert-type items with five response options ranging from 1 (*does not describe you at all*) to 5 (*describes you very well*). Public prosocial behavior is defined as a behavior that is supposed to benefit another person, but it is carried as to fit well with significant others (sample item: “I get the most out of helping others when it is done in front of others,” $\alpha = .80$). Anonymous prosocial behavior is the tendency to benefit another person but without this person knowing it (“Most of the time, I help others when they do not know who helped them,” $\alpha = .79$). Responsive prosocial behavior is the tendency to help in response to someone else's request (“I never hesitate to help others when they ask for it,” $\alpha = .81$). Altruistic prosocial behavior refers to helping others without expecting anything in return (reverse scored: “I think there should be more recognition for the time and energy people spend on charity work,” $\alpha = .63$).

Data analysis

First, descriptive and correlation analyses of all variables included in the study were performed. Second, seven hierarchical multiple regression analyses (Tabachnick &

Fidell, 2007) were conducted using different types of prosocial behaviors as criterion variables and parental variables, empathy, and prosocial flow as predictor variables.

Results

Preliminary analysis

Table 1 presents the descriptive and correlation analyses of all variables included in this study.

The results of the correlations showed a moderate positive association between the parental variables, empathy, prosocial flow, and prosocial behaviors toward different targets.

Parental variables, empathy and prosocial flow as predictors of prosocial behavior toward different targets in adolescents

Three hierarchical multiple regression analyses were conducted using prosocial behavior toward strangers, friends, and family as criterion variables and parental variables, empathy, and prosocial flow as predictor variables. In the first step, age and gender were included as control variables because they were found to be related to prosocial behavior in previous studies (e.g., Diekman & Clark, 2015). In the second step, the parental authoritative and mother and father challenges were added. In the third step, the two dimensions of empathy (perspective taking and empathic concern) were added, and in the fourth and final step, the two dimensions of prosocial flow were added. The results of the three hierarchical multiple regression analyses are displayed in Table 2.

Prosocial behavior toward strangers

The assessment of prosocial behavior toward strangers revealed that gender ($\beta = .17$) was significantly related to prosocial behavior toward strangers. Female adolescents were more inclined to exhibit prosocial behavior than boys. The model based on gender and age explained 3% of the prosocial behavior toward strangers ($R^2 = .03$). In the second step, authoritative parental style ($\beta = .16$) was significantly associated with prosocial behavior toward strangers. Adolescents who scored high on the authoritative parental style reported higher levels of prosocial behavior toward strangers. The parental variables (authoritative parental style and maternal and paternal challenges) increased the model's explanatory potential to 8% ($R^2 = .08$). In the third step, both dimensions of empathy (perspective taking, $\beta = .27$, and empathic concern, $\beta = .12$) were significantly related to prosocial behavior toward strangers. The model based on empathy explained 18% of prosocial behavior toward strangers ($R^2 = .18$). In the fourth and final step, ability and achievement perception (prosocial flow dimension) showed the strongest relationship with prosocial behavior toward strangers ($\beta = .26$), followed by cognitive-affective (prosocial flow dimension; $\beta = .18$). Adolescents with high levels of prosocial flow reported higher levels of prosocial behavior toward strangers after controlling for parental variables and empathy. Taken together, 32% of prosocial behavior toward strangers can be explained by age, gender, parental variables, empathy, and prosocial

Table 1. Correlation matrix among variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Authoritative parental style	—													
2. Mother challenge	.53***	—												
3. Father challenge	.41***	.45***	—											
4. Empathy: Perspective taking	.27***	.24***	.15***	—										
5. Empathy: Emotional concern	.17***	.11*	.09	.34***	—									
6. Flow: Cognitive-affective	.28***	.23***	.13**	.28***	.21***	—								
7. Flow: Ability and achievement perception	.31***	.29***	.19***	.21***	.14**	.69***	—							
8. Prosocial behavior toward stranger	.21***	.14***	.07	.36***	.27***	.39***	.39***	—						
9. Prosocial behavior toward friend	.29***	.32***	.18***	.31***	.41***	.42***	.37***	.37***	—					
10. Prosocial behavior toward family	.37***	.44***	.29***	.27***	.30***	.37***	.37***	.31***	.68***	—				
11. Altruist	.07	.04	-.01	.17***	.23***	.12***	.05	.01	.08	.12**	—			
12. Anonymous	.13**	.16***	.06	.22***	.10*	.16***	.19***	.34***	.18***	.12**	-.05	—		
13. Public	-.15**	-.09*	-.07	-.24***	-.32***	-.14***	-.02	-.04	-.12**	-.12**	-.61***	-.00	—	
14. Responsive	.19***	.15***	.08	.31***	.31***	.36***	.35***	.51***	.42***	.29***	-.05	.33***	-.01	—
M	3.66	3.92	3.76	3.72	3.88	5.94	3.90	3.62	4.49	4.47	4.31	3.27	1.66	3.73
SD	.72	.69	.89	.56	.55	.64	.42	.66	.53	.61	.69	.94	.87	.60

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table 2. Hierarchical multiple regression results for prosocial behavior toward different targets.

Variables	Prosocial behavior toward different targets					
	Toward stranger		Toward friend		Toward family	
	$R^2/\Delta R^2$	β	$R^2/\Delta R^2$	β	$R^2/\Delta R^2$	β
Step 1						
Gender	.03**	.17***	.13***	.35***	.06***	.21***
Age		.05		-.04		-.06
Step 2						
Gender	.08/.05***	.17***	.25/.12***	.34***	.27/.21***	.21***
Age		.08		-.02		-.03
Authoritative parental style		.16***		.16**		.17***
Mother challenge		.10		.20***		.28***
Father challenge		.04		.06		.12**
Step 3						
Gender	.18/.10***	.09	.32/.07***	.23***	.29/.03***	.13**
Age		.06		-.03		-.04
Authoritative parental style		.08		.09		.12**
Mother challenge		.08		.19***		.28***
Father challenge		.01		.04		.11*
Perspective taking		.27***		.13**		.10*
Emotional concern		.12*		.23***		.15**
Step 4						
Gender	.32/.14***	.04	.38/.07***	.19***	.36/.07***	.09*
Age		.03		.04		-.06
Authoritative parental style		.00		.04		.06
Mother challenge		.01		.15**		.23***
Father challenge		-.01		.04		.10*
Perspective taking		.21***		.08*		.05
Emotional concern		.11*		.22***		.14**
Cognitive-affective		.18**		.22***		.20**
Ability and achievement perception		.26***		.08*		.12*

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

flow ($R^2 = .32$), in which prosocial flow was the strongest contributory variable in the model. Hence, these results demonstrate the incremental validity of prosocial flow over and above parental variables and empathy in explaining prosocial behavior toward strangers.

Prosocial behavior toward friends

The analyses of prosocial behavior toward friends revealed a significant relationship between genders ($\beta = .35$), indicating that women were more prosocial toward friends than men. The model based on gender explained 13% of the prosocial behavior toward

friends ($R^2 = .13$). In the second step, maternal challenge ($\beta = .20$) and authoritative parental style ($\beta = .16$) were found to be significant predictors of prosocial behavior toward friends. Adolescents who scored high on maternal challenge and authoritative parental style reported higher levels of prosocial behavior toward friends. The parental variable increased the model's explanatory potential to 25% ($R^2 = .25$). In the third step, both dimensions of empathy (empathic concern, $\beta = .23$, and perspective taking, $\beta = .13$) were significantly related to prosocial behavior toward friends. The model based on empathy explained 32% of the prosocial behavior toward friends ($R^2 = .32$). In the fourth and final step, cognitive-affective (prosocial flow dimension) showed the strongest relationship with prosocial behavior toward friends ($\beta = .22$), followed by ability and achievement perception (prosocial flow dimension; $\beta = .08$). Adolescents with high levels of prosocial flow reported higher levels of prosocial behavior toward friends, after controlling for parental variables and empathy. Hence, prosocial behavior toward friends can be explained by gender, parental variables, empathy, and prosocial flow at a rate of 38% ($R^2 = .38$). Parental variables were the strongest contributory variable in the model, whereas empathy and prosocial flow had a similar contribution in the model.

Prosocial behavior toward family

The analyses of prosocial behavior toward family revealed a significant relationship between genders ($\beta = .21$), indicating that women were more prosocial toward family than men. The model based on gender explained 6% of the prosocial behavior toward friends ($R^2 = .06$). In the second step, maternal challenge ($\beta = .28$), authoritative parental style ($\beta = .17$), and paternal challenge ($\beta = .12$) were found to be significant predictors of prosocial behavior toward family. Adolescents who scored high on both maternal and paternal challenges and authoritative parental style reported higher levels of prosocial behavior toward family. The parental variable increased the model's explanatory potential to 27% ($R^2 = .27$). In the third step, both dimensions of empathy (empathic concern, $\beta = .15$, and perspective taking, $\beta = .10$) were significantly related to prosocial behavior toward family. The model based on empathy explained 29% of the prosocial behavior toward family ($R^2 = .29$). In the fourth and final step, cognitive-affective (prosocial flow dimension) showed the strongest relationship with prosocial behavior toward family ($\beta = .20$), followed by ability and achievement perception (prosocial flow dimension; $\beta = .12$). Adolescents with high levels of prosocial flow reported higher levels of prosocial behavior toward family after controlling for parental variables and empathy. Hence, 36% of prosocial behavior toward friends can be explained by gender, parental variables, empathy, and prosocial flow ($R^2 = .36$). Parental variables were the strongest contributory variable in the model, followed by prosocial flow and empathy.

Parental variables, empathy, and prosocial flow as predictors of prosocial behavior tendencies in adolescents

Four hierarchical multiple regression analyses were conducted using prosocial tendencies (altruist, anonymous, public, and responsive) as criterion variables and parental

variables, empathy, and prosocial flow as predictor variables. In the first step, age and gender were included as control variables. In the second step, the authoritative parental style and maternal and paternal challenges were added. In the third step, the two dimensions of empathy (perspective taking and empathic concern) were added, and in the fourth and final step, the two forms of prosocial flow were added. The results of the four hierarchical multiple regression analyses are displayed in Table 3.

Altruism

The analyses on altruism revealed a significant relationship between genders ($\beta = .22$), indicating that women were more altruistic than men. The model based on gender explained 5% of the altruism shown ($R^2 = .05$). In the second step, the authoritative parental style ($\beta = .11$) was found to be a significant predictor of altruism. Adolescents who scored high on authoritative parental style reported higher levels of altruism. The parental variable increased the model's explanatory potential to 6% ($R^2 = .06$). In the third step, both dimensions of empathy (empathic concern, $\beta = .12$, and perspective taking, $\beta = .12$) were significantly related to altruism. The model based on empathy explained 9% of the altruism ($R^2 = .09$). In the fourth and final step, only one dimension of prosocial flow, cognitive-affective ($\beta = .13$), was significantly related to altruism. Adolescents with high levels of cognitive-affective prosocial flow reported higher levels of altruism after controlling for parental variables and empathy. Consequently, only 10% of altruism can be explained by gender, parental variables, empathy, and prosocial flow ($R^2 = .10$).

Anonymous

For anonymous prosocial behavior, the analyses revealed no significant relationship for any predictor variables with the exception of the empathy dimension of perspective taking ($\beta = .18$), which explained only 8% of the variance of anonymous prosocial behavior.

Public

For public prosocial behavior, the analyses revealed a significant relationship between genders ($\beta = -.25$), indicating that men were more public than women. The model based on gender explained 6% of public prosocial behavior ($R^2 = .06$). In the second step, the authoritative parental style ($\beta = -.15$) was found to be a significant negative predictor of public prosocial behavior. Adolescents who scored low on authoritative parental style reported higher levels of public prosocial behavior. The parental variable increased the model's explanatory potential to 9% ($R^2 = .09$). In the third step, both dimensions of empathy (empathic concern, $\beta = -.20$, and perspective taking, $\beta = -.14$) were significantly related to public prosocial behavior. The model based on empathy explained 15% of the public prosocial behavior ($R^2 = .15$). In the fourth and final step, cognitive-affective prosocial flow ($\beta = -.15$) and ability and achievement perception ($\beta = .19$) were significantly related to public prosocial behavior. Adolescents with low levels of

Table 3. Hierarchical multiple regression results for prosocial behavior with different intentions.

Variables	Prosocial behavior with different intentions					
	Altruist		Anonymous		Public	
	$R^2/\Delta R^2$	β	$R^2/\Delta R^2$	β	$R^2/\Delta R^2$	β
Step 1						
Gender		.22***		.04		.25***
Age		.05		.08		.01
Step 2						
Gender	.06/.01	.22***	.03/.03*	.04	.09/.03**	.25***
Age		.05		.09		.02
Authoritative parental style		.11*		.09		.12*
Mother challenge		.04		.10		.12*
Father challenge		.04		.00		.02
Step 3						
Gender	.09/.03***	.15**	.06/.03*	.01	.15/.06***	.17**
Age		.04		.08		.01
Authoritative parental style		.07		.04		.05
Mother challenge		.05		.08		.10
Father challenge		.05		.00		.01
Perspective taking		.12*		.18***		.20***
Emotional concern		.12*		.02		.15**
Step 4						
Gender	.10/.01	.14**	.08/.02	.00	.17/.02**	.13**
Age		.04		.07		-.01
Authoritative parental style		.06		.02		-.01
Mother challenge		.05		.06		.05
Father challenge		.05		.00		.01
Perspective taking		.11*		.17***		.16***
Emotional concern		.12*		.01		.13**
Cognitive-affective		.13*		-.01		.13**
Ability and achievement perception		.09		.12		.21***

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

cognitive–affective and high levels of ability and achievement perception scored high on public prosocial behavior after controlling for parental variables and empathy. Hence, only 17% of public prosocial behavior can be explained by gender, parental variables, empathy, and prosocial flow ($R^2 = .17$).

Responsive

Finally, for responsive prosocial behavior, the analyses revealed a significant relationship between genders ($\beta = .25$), indicating that women were more responsive than men. The model based on gender explained 6% of the responsive prosocial behavior ($R^2 = .06$). In the second step, the authoritative parental style ($\beta = .12$) and maternal challenges ($\beta = .12$) were found to be significant predictors of responsive prosocial behavior. Adolescents who scored high on authoritative parental style and maternal challenge reported higher levels of responsive prosocial behavior. The parental variable increased the model's explanatory potential to 11% ($R^2 = .11$). In the third step, both dimensions of empathy (perspective taking, $\beta = .20$ and empathic concern, $\beta = .15$) were significantly related to responsive prosocial behavior tendencies. The model based on empathy explained 18% of the responsive prosocial behavior ($R^2 = .18$). In the fourth and final step, ability and achievement perception ($\beta = .21$) and cognitive–affective prosocial flow ($\beta = .13$) were significantly related to responsive prosocial behavior tendencies. Adolescents with high levels of prosocial flow reported higher levels of responsive prosocial behavior after controlling for parental variables and empathy. Hence, 26% of responsive prosocial behaviors can be explained by gender, parental variables, empathy, and prosocial flow ($R^2 = .26$).

Discussion

The current findings indicate that parental variables, empathy, and prosocial flow have varying roles in different types of adolescent prosocial behavior. Thereof, this study was intended to identify in depth to what extent each of the included variables contribute to the prediction of the different types of prosocial conducts.

The hierarchical multiple regression analyses indicated that prosocial behavior toward family, followed by prosocial behavior toward friends, is motivated to a much greater extent by the parental variable than by empathy and prosocial flow. The parental variables explain 21% of a total of 38% of the variance that is explained in the complete model regarding prosocial behavior toward family members; when prosocial behavior toward friends (after controlling for gender) was assessed, the parental variables explained 12% of the total of the variance that the model explains. These results agree with previous investigations that show that prosocial behaviors toward family and friends are motivated by an effort to maintain warm relationships (Eberly & Montemayor, 1998; Padilla-Walker & Christensen, 2011; Padilla-Walker, Dyer, Yorgason, Fraser, & Coyne, 2015). Furthermore, when warm and nutritive relationships have developed with parents and friends during childhood and adolescence, this motivates the tendency to help and comfort them in various circumstances of life. Conversely, our study showed that authoritative parental style and maternal challenges were the parental

variables with the greatest association with prosocial behaviors toward family and friends. However, no association was found between the paternal challenges with any of the prosocial behaviors, except for prosocial behaviors toward family. Although no previous studies have evaluated the relationship between maternal and paternal challenges separately with prosocial behavior, other investigations about parental styles developed in Argentina and other Latin root countries found that when they studied the parental styles of the mother and father separately, the latter were not associated with the prosocial behavior of their children (Richaud, Mesurado, & Lemos, 2013). This may have occurred because in these cultures, the children's upbringing is directly the responsibility of the mothers instead of the fathers, and although this tendency has been reverted in the past few years, the maternal presence remains stronger than the paternal presence.

In the analysis of the prediction of prosocial behavior toward strangers, the variables that had greater weight were prosocial flow (explaining 14% of the variance of a total of 32% in the model) and cognitive and emotional empathy (explaining 10% of the variance). These results are in line with previous investigations showing that prosocial behavior toward strangers is more motivated by dispositional traits, such as sympathy or emotional regulation (Eberly & Montemayor, 1998; Padilla-Walker & Christensen, 2011; Padilla-Walker et al., 2015). Our results add that this type of prosocial behavior would also be motivated by more fluctuating cognitive–emotional states such as the flow during the implementation of activities to help others. This would indicate that when an adolescent experiences high levels of attention and enjoyment while helping a stranger, that positive experience will promote the appearance of new occurrences of helping.

In relation to prosocial tendencies, the hierarchical multiple regression analyses showed that parental variables, empathy, and prosocial flow explain similar percentages of variances in the types of public, responsive, altruist, and anonymous prosocial tendencies. In other words, the differences in prosocial behaviors toward different parental variable targets, empathy, and prosocial flow contribute to the variance of the model in a similar way to the prediction of prosocial tendencies. These results have also shown that in regard to the parental variables, paternal challenge is not a good predictor for any of the prosocial tendencies. The findings coincide with longitudinal investigations recently published on Mexican-American adolescents that indicate an association between “mothers, but not fathers, socialization of family values and prosocial tendencies” (Knight, Carlo, Mahrer, & Davis, 2016, p. 1767), suggesting that the mother is the principal model of socialization for children (Knight et al., 2016).

Conversely, both empathy and prosocial flow predict responsive, altruist, and public prosocial tendencies, but in different ways. The empathy and cognitive–affective dimensions of prosocial flow have a positive influence on responsive, altruist, and negative influences in public, while the ability and achievement dimensions of prosocial flow have a positive influence on responsive and public prosocial tendencies. The literature sustains that experiencing prosocial flow emerges from the realization of activities that are intrinsically motivating for adolescents; thereof, it has caught the attention of its association with public prosocial tendencies that are extrinsically

motivated (Mesurado & Richaud, 2014). However, this likely occurs because in this type of prosocial tendency, the conduct of helping others is motivated by the desire to “seem nice” or to ingratiate with the benefactor; consequently, the cognitive and affective aspects of the flow experience can mitigate this type of prosocial behavior since it is not directed to a selfless help. However, being able to perceive ability and achievement during the realization of the act of helping can “show the other person their capacity” toward the specific task, which is what truly motivates them. For example, one of the activities performed by these adolescents was the construction of houses for people in need. In this case, intrinsic motivation would not lead them to construct more houses or to do a better job to help others; instead, it manifests by showing their abilities or capacity of performing this action in the eyes of others, or simply because it is a university requirement. Consequently, this would also indicate that the mere perception of achievement and ability during the realization of prosocial activities is not enough to mitigate selfish internal conducts such as public prosocial tendencies; instead, this action is more “calculating.” Conversely, it is important to note that the relationship between the dimensions of prosocial flow and altruism is inverse to what occurs with public types of behavior since the cognitive–affective dimension is positively related to altruism and not the perception of ability and achievement. This could be explained because altruistic behavior would be more motivated by the conduct and enjoyment during the implementation of helping without the intention of looking for a posterior social or material reward. With regard to the negative influence of empathy on public prosocial tendency, it is worth mentioning that empathy is directed to come from within, which would not occur in this prosocial tendency, in which the motivation is directly related to the pursuit of a personal benefit.

Finally, the prosocial tendencies of anonymous types were poorly explained by the variables included in this study. The only variable that predicted this type of prosocial behavior was the cognitive aspect of empathy (perspective taking). These results agree with previous investigations that have not found a connection between empathic concern and anonymous prosocial tendencies, although they have found an association between them and perspective taking (Davis et al., 2017). This might occur because anonymous conducts of help in general are intended toward strangers, and it is possible that what motivated the implementation of this help is the cognitive perception of the need of others without having to share that need emotionally.

Limitations and future studies

The main limitation of this research is that the nature of correlations does not allow us to establish causal explanations between variables. This study was based on cross-sectional data; therefore, the direction of the effects in the regression models may not be clear. Future lines of investigation could include longitudinal data to clearly establish the direction of the variables. Moreover, other lines of investigation should deepen the relationship of the variables considered in this study, making an approach that includes not only the self-perception of the subjects on this matter but also an external view of what the perception of families and friends could be.

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