

The Relationship Between Parental Variables, Empathy and Prosocial-Flow with Prosocial Behavior Toward Strangers, Friends, and Family

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Abstract The goal of this study was to explore the relationship between two different aspects of the parent–child relationship (parental challenge and authoritative parental style) and empathy as well as prosocial flow with prosocial behavior toward strangers, friends, and family. The participants were 422 young adults who were enrolled in undergraduate social responsibility courses at a University. The results show that the combination of parental support and parental challenge has an important influence on prosocial flow and on positive behavior such as prosocial behavior toward friends and family, but no influence on that toward strangers. Moreover, in the same way, empathy and prosocial flow promote prosocial behavior toward these three targets. The interpretations of these findings are delineated in the discussion.

Keywords Empathy · Prosocial flow · Authoritative parental style · Parental challenge · Prosocial behavior · Young adults

1 Introduction

Prosocial behaviors are “voluntary actions that are intended to help or benefit another individual or group of individuals” (Eisenberg and Mussen 1989, p. 3). Usually, they are positive social actions carried out to promote the wellbeing of others (Brief and Motowidlo 1986). Carlo and Randall (2002) propose, for their part, that prosocial behaviors are based on different types of motivations such as, for example, an intrinsic motivation or primary desire to benefit others. These activities take place in the absence of obvious external

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rewards and usually imply incurring a cost to oneself. In contrast, other types of prosocial behaviors might be motivated by extrinsic processes or concerns (e.g., social approval, money, social power) or by avoiding punishment (Carlo and Randall 2001; Eisenberg and Fabes 1998).

Most studies on prosocial behavior have focused on prosocial behavior toward strangers, despite evidence that children can aptly distinguish between the potential recipients of their helping behaviors (de Guzman et al. 2008), and engage in prosocial behavior toward family and friends more frequently than toward strangers (Eberly and Montemayor 1998). Indeed, closeness with the recipient of the prosocial behavior appears to be the principal measure for these distinctions (Eisenberg 1983). Self-reported levels of prosocial behaviors among children reflect a lesser propensity for prosocial actions toward siblings, teachers, and peers than toward their parents and close friends (Bigelow et al. 1992). Adolescents also showed important differences in prosocial behaviors toward parents, siblings, and grandparents (Kumru and Yağmurlu 2013). For example, Kumru and Yağmurlu (2013) have found that girls were more prosocial toward all of their family members and showed more respectful behavior toward their mother and grandparents.

Padilla-Walker and colleagues, for their part, have highlighted the importance of considering prosocial development within the context of relationships (2011, 2015), and have asserted that predictors of prosocial behavior differ according to the target (Padilla-Walker and Christensen 2011). These studies have identified higher mean levels of prosocial behavior among adolescents in relationships with friends than with parents or strangers. The primary explanation for this difference is the prominence of friend relationships during adolescence (Padilla-Walker and Christensen 2011). This may indicate that high levels of prosocial behavior are not necessarily shared uniformly across multiple targets. An individual may have high levels of prosocial behavior toward one target (e.g. friends), with lower levels towards another (e.g. parents). This reveals that prosocial behaviors are not one-dimensional and indicates that there may be value in analyzing these behaviors according to various different targets.

Besides the importance of relational context in the development of prosocial behaviors, there are intrapersonal variables such as empathy that have proven influence on this development (Mesurado et al. 2014; Richaud et al. 2013; Carlo et al. 2011).

1.1 Empathy and Prosocial Behavior

Several studies have demonstrated an important relationship between empathy and prosocial behavior at various life stages (Lockwood et al. 2014). Empathy permits one to understand the intentions of others, and to predict their behavior, as well as the emotional experiences caused by their emotions. It also allows people to interact effectively in social environments and helps to hold the social world together, bringing people closer to one another and preventing people from harming each other (Baron-Cohen and Wheelwright 2004). Studies on adolescents highlight the relationship between high levels of empathy and high levels of prosocial behavior, showing this link to be stronger in girls than boys (Carlo et al. 2003). Empathy is an emotional reaction produced by, and in synch with, another person's emotional state (Holmgren et al. 1998; Eisenberg et al. 2001), which implies the use of perspective taking in the cognitive dimension and emotional concern in the emotional dimension. Perspective taking refers to the cognitive ability to put oneself in another person's shoes, while emotional concern refers to the capacity to share in another person's feelings. Both empathic aspects -cognitive and affective- are important in predicting prosocial behavior.

Another intrapersonal variable likely associated with prosocial behavior is that of the flow or optimal experience. Indeed, previous studies have shown that prosocial behavior is associated not only with empathy, but also with dispositional aspects such as the ability to concentrate (Eisenberg et al. 1993, 1997, 2000), positive emotional states (Salovey et al. 2000) and the perception of self-efficacy (Fabes et al. 1999; Caprara et al. 2011), all processes involved in the flow state.

1.2 Prosocial-Flow and Prosocial Behaviors

Csikszentmihalyi (1999) defines optimal experience or flow as the mental state that results from total engagement in an activity that requires a high level of concentration. For Csikszentmihalyi (1999), flow experience has numerous characteristics. The most common are clear goals, immediate feedback, extreme concentration, a balance between challenges and skills, exclusion of irrelevant content from consciousness, control over the activity, a distorted sense of time, and viewing the activity as intrinsically rewarding activity. An optimal experience exists when there is a balance between the challenges brought about by the activity and the ability to face the task, as perceived by the subject. Flow is a psychological state in which the person feels simultaneously cognitively efficient, motivated, and happy (Moneta and Csikszentmihalyi 1996).

Despite the fact that the flow experience has been studied when undertaking different activities (e.g. sports, study, work), little research has explored flow experience while doing prosocial activities. However, a recent study, which included 454 children and adolescents, showed that 72 % of participants could identify flow experience while doing collaborative activities. Half of the adolescents, 50 % in fact, reported optimal experience in prosocial activities when they were helping their parents or siblings in a family context (e.g. “helping my mother with cooking”). While about 29 % of the cases, adolescents reported optimal experience in community contexts (e.g. “volunteering with a soup kitchen giving food to the needy”), 11 % reported experiencing flow in school context activities (e.g. “I help my classmates with their homework”, “I explain math to my classmates when they don’t understand”) (Mesurado and Richaud de Minzi 2014). Research seems to indicate that when individuals help others they not only benefit those people but they also benefit themselves. Some studies have shown that prosocial behavior is positively associated with health and wellbeing (Schwartz et al. 2009) and with life satisfaction (Froh et al. 2010). On the other hand, consistent findings obtained by Caprara et al. (2011) showed that, in late adolescents and young adults, helping behaviors may be predicted in large part by perceived competence. Others studies found that attentional regulation has been related to social competence and prosocial behavior (Eisenberg et al. 1993, 1997, 2000). Giving that flow state is a multidimensional construct (Jackson and Marsh 1996) that includes both cognitive (e.g. high levels of attention, perceived competence or ability) and affective components (e.g. happiness, excitement) (Luna et al. 2002; Mesurado 2008; Mesurado and Richaud de Minzi 2014) it is probably that the mental state of flow could also be associated with prosocial behavior. In this study, we will apply the concept of flow to prosocial situations, and we will define *prosocial-flow* as an optimal experience during prosocial activities (e.g. tutoring sessions, legal assistance for low-income individuals) which are characterized by cognitive (e.g. attention, control, engagement) and affective aspects (e.g. happy, excited) on one hand, and the ability perception required to identify prosocial activity and achievement perception on the other.

Previous studies have shown that flow experience can be promoted by the interaction of family support and challenge (Rathunde 1996, 2001). At the same time, it is necessary to

highlight the prominent role of parents (e.g. parental relationship, parental styles, etc.) in promoting both empathy and prosocial behavior.

1.3 The Parental Relationship in Promoting Empathy, Flow and Prosocial Behavior

A large number of studies have demonstrated the importance of parenting style in the transmission of values and in the encouragement of prosocial behaviors (Carlo et al. 2011; Richaud et al. 2013; among others). One of the key impacts of parental support is its relationship with a strong sense of self-worth and security, greater psychological well-being, and other positive outcomes among children (Coplan et al. 2002; Steinberg 2001). Children's sense of responsible conformity and self-control may be influenced in large part by the control imposed by parents. Two aspects of such controls are rules and guidelines, which may serve as a pedagogical device about group behavior and societal standards (Baumrind 1996). However, different "parenting styles" may influence controls as such. Maccoby and Martin (1983) have set out a list of different styles on a spectrum of responsiveness (i.e., support) and demandingness (i.e., control) from parents. In this typology, *authoritative* parents are those who exhibit high levels of both demandingness and responsiveness. They tend to be warm, nurturing and sensitive, and have age-appropriate responses and behavioral expectations (Rothrauff et al. 2009). Authoritative parenting styles (high support, high demanding) are the most likely to be associated with prosocial behaviors in children, as compared with authoritarian (low support, high demanding) or neglectful (low support, low demanding) styles (Baumrind 1991; Carlo 2006; Maccoby and Martin 1983). Moreover there is evidence that authoritative style helps kids become more empathic, helpful, and kind to others (Krevans and Gibbs 1996; Knafo and Plomin 2008). Research by Rothrauff et al. (2009) showed that parenting styles from childhood as remembered by adults, have an import influence even during adult life. Specifically, adults who have a recollection of authoritative parenting styles in childhood report greater psychological well-being, a lower occurrence of depression, and less substance abuse than those who have memories of authoritarian, neglectful, or indulgent (high support, low demanding) parenting styles. Based on these precedents, it is possible to put forward the hypothesis that authoritative parenting styles promote prosocial behavior not only during childhood or early adolescence, but also in later adolescence and young adulthood.

Dailey (2008) suggests that "Baumrind's (1966, 1980) description of the authoritative parenting style included the notion of challenge through providing a stimulating environment" (p. 643). Csikszentmihalyi et al. (1994) found that teenagers from families that combined support and challenge, experience and perform productive work with more enjoyable intensity, in other words, this type of parenting helps young people enjoy activities, even when they imply hard work. However, Dailey (2008) argues that some challenging behaviors prompted by parents may be either positive or negative for adolescents' development. In fact, challenging behaviors that are manipulative or aggressive are qualitatively different from more constructive forms of challenges, and as such, they belong to domains such as psychological control. The effect of challenges on adolescent development is moderated by the support the adolescent receives. When challenge is accompanied by support, the former brings about clear opportunities for development. On the contrary, when there is a lack of support, challenge leads to results that are not as positive.

Although authoritative parenting styles would include the notion of challenge, Dailey (2008) suggests that parental challenge should be measured as a different aspect of parenting style; however, research has not largely focused on how parents challenge their children nor on their possible facilitating role in the development of adaptive behavior, including prosocial behavior.

Based on the above considerations, the objective of the present study is to test a model that proposes the following hypothesis:

1. Parental challenge and support (mother and father challenge and authoritative parental style) are directly related to prosocial behavior.
2. Parental challenge and support are indirectly related to prosocial behavior through prosocial flow.
3. Authoritative parental style is associated with empathy, which in turn, is associated with prosocial flow and prosocial behavior.

The model will be tested in each prosocial behavior toward different target stranger, friend, and family.

2 Methods

2.1 Participants and Procedure

Participants were 422 university students (138 males, 284 females; of 18 to 25 years of age; M age = 22.27 years, $SD = 1.84$) who were enrolled in undergraduate social responsibility courses at University of Córdoba, a private university in the city of Córdoba, Argentina.

Students in all of the university's departments are obliged to take a social responsibility course and are also required to undertake at least 4 h per week of volunteer work for 6 months with an NGO (non-governmental organization) or charity of their choice. The activities that the students do during their volunteering depend on the organization that they are working with, and may include, for example, tutoring, legal assistance for low-income individuals, volunteer firefighting or building homes for people in need. Once the students have completed their volunteer work, they are expected to complete a series of questionnaires, which have been included in this study.

2.2 Ethics Procedures

Consent for this project was obtained at multiple levels. First, the researchers informed the heads of the Universities of the project. They were provided with a copy of the research proposal and the characteristics of the research were explained. They were told that participation would be voluntary and anonymous. Once permission was obtained, students were invited to participate. The students were informed of the purpose of the study and were reminded that participation was voluntary and that they could refuse to take part in the study with no consequence. Students did not receive any compensation for participating in the study.

2.3 Measurement

Challenge from Parents, the brief version of the Parental Challenge Questionnaire, was used to measure parental challenge. This scale was developed by Dailey (2008) and includes 10 items measured on 7-point Likert-type scales, for example “My mother/father asked me what I learned from my failures”.

A psychologist, who is also a qualified professional English–Spanish translator and has expertise in employing the terminology of the subjects covered by the instruments, translated the Scale. The translator is fluent in English, and is a native Spanish speaker. We gave instructions to her in the approach to translating, emphasizing conceptual rather than literal translations, as well as the need to use natural and appropriate language for the students. During the second stage, the original translator, a psychologist, as well as an expert with experience in instrument development and translation revised the first translation for semantic and syntactic equivalence. Lastly, an independent translator, who is a native speaker of English, and has expertise in questionnaire design for the field of psychology, translated the scales back into English. As in the initial translation, emphasis on the back-translation was on conceptual and cultural equivalence and not linguistic equivalence. The two translators revised the differences until satisfactory versions were reached.

2.4 Parental Style

The Parental Authority Questionnaire (PAQ) was used to measure parental style. This scale was developed by Buri (1991) and includes 30 items measured on 5-point Likert-type scales. The scales measure three types of parental styles: Authoritative (e.g. “As I was growing up my parents gave me clear directions for my behaviors and activities, but my parents were also understanding when I disagreed with them”), Authoritarian (e.g. “As I was growing up my parents often told me exactly what they wanted me to do and how they expected me to do it”) and Permissive (e.g. “As I was growing up my parents did not feel that I needed to obey rules and regulations of behavior simply because someone in authority had established them”). Authoritative parents display high levels of both responsiveness and control, and they are warm, nurturing, and sensitive to their child’s needs. Authoritarian parents display low responsiveness and high levels of control, and lastly, permissive parents use high responsiveness but low control. In this study only the authoritative parental style dimension will be considered. We used the same translation procedure described for the parental challenge scale.

2.5 Empathy

The Interpersonal Reactivity Index (Davis 1980; Spanish version of Mestre Escrivá et al. 2004) allows us to assess empathic disposition through four factors; two cognitive and two emotional: Perspective taking, the ability to understand another person’s point of view (e.g. “I find it difficult to see things from another person’s point of view.” reverse item); Fantasy, the tendency to identify with characters in films and in literature; in other words, it assesses the subject’s imaginative capacity to place him or herself in fictitious situations (e.g. “I really get involved with the feelings of the characters in a novel”); Empathic concern, feelings of compassion, concern and care towards others (e.g. “I am concerned and moved by people less fortunate than myself”); and Personal Distress, feelings of

anxiety and uneasiness shown by the subject upon observing other people's negative experiences (e.g. "Being in a tense emotional situation scares me"). The Index includes 28 items in a Likert answer format, with five possible answers and a score from 1 to 5. In this study only Perspective taking and Empathic Concern dimensions will be considered.

2.6 Prosocial-Flow

The Optimal Experience Scale by Mesurado (2008) was used to measure prosocial-flow. The participants were asked to rate 26 items about flow during his/her prosocial activities with the NGO (non-governmental organization) or charity, where they were doing their volunteer activity. Thirteen items were semantic differential items related to affective (e.g., happy versus sad, excited versus bored) and cognitive states (e.g., alert versus drowsy, clear versus confused). Participants rated each affective and cognitive item on a seven-point scale. The other 13 were Likert items that measured the perceptions of achievement (e.g., were you succeeding at what you were doing?) and ability (e.g., do you think that you have the enough capacity to overcome that challenge?). Participants rate each perception of achievement and ability items on a 5-point scale rating from 1 (disagree strongly) to 5 (agree strongly).

2.7 Prosocial Behavior

Adolescents' prosocial behavior was measured using a modified version of the Kindness and Generosity subscale of the Values in Action Inventory of Strengths (Peterson and Seligman 2004) as proposed in other studies (Padilla-Walker and Christensen 2011). The original measure was designed to assess behaviors toward strangers. The current study used only nine of these original items (sample items include, "I help others even if it's not easy for me" and "I volunteer in programs to help others in need"). We also used 18 items adapted by Padilla-Walker and Christensen (2011) from the Kindness and Generosity subscale of the Values in Action Inventory of Strengths, to assess prosocial behavior toward friends (nine items, e.g., "I go out of my way to cheer up my friends" and "I volunteer to help my friends") and family (nine items, e.g., "I watch out for members of my family" and "I really enjoy doing small favors for my family"). Respondents answered how much they disagreed or agreed with statements based on a 5-point Likert scale ranging from 1 (not like me at all) to 5 (very much like me). Higher scores indicate greater levels of kindness and generosity toward strangers, friends, and family. We used the same translation procedure described for the parental challenge scale.

2.8 Analysis Plan

Preliminary analyses using five Confirmatory Factor Analyses (CFA) were carried out to analyze the constructive validity of each scale included in this study using the AMOS 16.0 program (SPSS Inc. 2007). Subsequently, to analyze the equality of reliability between the original scales and the versions used in the present study, differences in Cronbach's alpha were studied.

Common method bias is of particular concern when self-report measures are used into both independent and dependent variables. In the present study Harman's one-factor test (Podsakoff and Organ 1986) and a fully saturated causal model (Williams et al. 2003) were carried out to test common method bias.

Finally, Structural Equation Modeling (SEM) was carried out to test the fit of the proposed theoretical model. The following goodness of fit indices were used: Chi square, the ratio of the Chi square statistic to degrees of freedom (χ^2/df), the goodness of fit index (GFI), adjusted goodness of fit index (AGFI) and Bentler-Bonett normed fit index (NFI). Root Mean residual (RMR) and root mean square error of approximation (RMSEA) were used to measure error.

3 Results

3.1 Preliminary Analyses: CFA and Study of Equality of Reliability of Scales

Before performing the Confirmatory Factor Analysis (CFA) to study the validity of each scale, we examined the skewedness and kurtosis of the data of the measurement model, to confirm their normality, an essential prerequisite to perform an adequate estimation. When performing the test univariately, we obtained acceptable results as all the parameters were between -1 and 1, indicating that the data were normally distributed. Table 1 displays the results of the Confirmatory Factor Analysis (CFA) for each scale included in this study, with the exception of the Empathy Interpersonal Reactivity Index where a Spanish version was used. As presented in Table 1, in all cases the results were acceptable.

To analyze the equality of reliability between the original scales and the versions used in the present study, differences in Cronbach's alpha were studied. These differences were tested by the statistic $(1 - \alpha_1)/(1 - \alpha_2)$ that follows an F distribution with $(N_1 - 1)$ and $(N_2 - 1)$ degrees of freedom (van der Vijver and Leung 1997). The results have shown no statistically significant differences or a better alpha in our samples (See, Table 2).

3.2 Descriptive Analysis

Table 3 displays means, standard deviations, skew, kurtosis and correlations for Challenge from parents (challenge from father and mother), Parent Authoritative parental style, Perspective taking and Empathic concern (both dimensions of empathy), Prosocial-flow and Prosocial behavior. The results show a moderate correlation among the variables included in this study.

3.3 Common Method Bias

To perform Harman's single-factor test, all variables—both dependent and independent—are analyzed into through EFA. The results of an un-rotated solution were analyzed to determine the number of actual factors that emerge. Common method bias is present if a single or general factor appears that accounts for the majority of variances. In this study a one-factor model of the un-rotated solution explained 25 % of variance; this indicates that common method variance was small. Common method bias will only be an issue if the single factor accounts for more than 50 % of the variance in the model.

In a second moment, a fully saturated model was also developed in which all indicators are linked to all constructs. The results of this test also show that common method bias was not present because item loadings were generally found to be statistically insignificant with unrelated constructs.

Table 1 Confirmatory factor analyses for each scale

	Chi square	gl	Chi square/gl	GFI	AGFI	NFI	RMR	RMSEA
Mother challenge	150	35	4.28	.93	.92	.90	.05	.07
Father challenge	147	35	4.2	.92	.90	.90	.06	.07
Authoritative parental style	130	35	3.71	.93	.92	.92	.04	.04
Prosocial flow	1275	323	3.95	.93	.90	.90	.05	.07
Prosocial behavior	1599.8	321	4.98	.95	.94	.94	.04	.09

Table 2 Comparison of reliability between original scales and Argentinean version

Scales	Cronbach's alpha		F	<i>p</i>
	Original scale*	Argentina	Original scale versus Argentina	Original scale versus Argentina
Parental challenge				
Mother challenge	.85	.85	1	ns
Father challenge	.85	.92	1.87	.01
Parental style				
Authoritative	.82	.88	1.5	.01
Empathy				
Perspective taking	.75	.70	0.83	ns
Empathic concern	.72	.70	0.93	ns
Prosocial-flow				
Cognitive and affective experience	.80	.90	2	.01
Achievement and ability perceptions	.77	.83	1.35	.01
Prosocial behavior				
Toward strange	.83	.77	0.68	ns
Toward friends	.90	.83	0.59	ns
Toward family	.91	.87	0.69	ns

* This column includes Cronbach's alpha of the original scales reported by authors. Please see Dailey (2008); Buri (1991); Mestre Escrivá et al. (2004); Mesurado (2008) and Padilla-Walker and Christensen (2011)

3.4 Structural Models

The main objective of this study was to test a theoretical model, which proposes that the combination of parental challenge and authoritative parental styles are associated with prosocial behaviors and with prosocial flow, which in turn could promote prosocial behavior towards stranger, friends and family. The same model studies the relationship between authoritative parental style and empathy, and the influence of empathy on both prosocial flow and prosocial behavior toward strangers, friends and family.

Table 3 Summary of intercorrelations, means, standard deviations, skew and kurtosis for scores on parental challenge, Authoritative parental style, empathy, and prosocial behaviors

Variables	Mother challenge	Father challenge	Authoritative parental style	Perspective taking	Empathic concern	Prosocial-flow cognitive and affective experience	Prosocial-flow achievement and ability perceptions	PB toward strangers	PB toward friends	PB toward family
Mother challenge	—									
Father challenge	.42***	—								
Authoritative parental style	.53***	.41***	—							
Perspective taking	.24***	.15**	.27***	—						
Empathic concern	.11*	.09	.17***	.34***	—					
Prosocial-flow cognitive and affective experience	.25***	.13**	.28***	.28***	.22***	—				
Prosocial-flow achievement and ability perceptions	.31***	.19***	.31***	.22***	.15**	.70***	—			
PB toward strange	.19***	.10*	.21***	.36***	.27***	.46***	.46***	—		
PB toward friends	.33***	.19***	.29***	.31***	.41***	.44***	.37***	.44***	—	
PB toward family	.44***	.29***	.37***	.28***	.30**	.44***	.41***	.36**	.70***	—
M	3.98	3.79	3.66	3.72	3.88	4.97	3.92	3.59	4.51	4.49
SD	.68	.91	.72	.56	.55	.65	.44	.64	.54	.59
Skew	-.74	-1	-.71	-.19	-.27	-.99	-.85	-.03	-.98	-.97
Kurtosis	.88	.99	1.03	.03	-.49	1.02	1	.18	.89	.99

PB prosocial behaviors

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

3.5 Factors that Promote prosocial Behavior Towards strangers

A Structural Equation Modeling was carried out to test the model before described prosocial behavior towards stranger. The results have shown that the theoretical model fit the data very well, $X^2(15) = 19.11, p = .21, X^2/df = 1.27; GFI = .99; AGFI = .99, NFI = .99, RMR = .01, RMSEA = .03$. The model explained 41 % of the variance.

3.6 Factors that Promote prosocial Behavior Towards Friends

A second Structural Equation Modeling was carried out to test the model of prosocial behavior towards friends. The results have shown that the theoretical model fit the data well, $X^2(15) = 40.13, p \leq .001, X^2/df = 2.68; GFI = .98; AGFI = .95, NFI = .96, RMR = .02, RMSEA = .06$. The model explained 44 % of the variance.

3.7 Factors that Promote prosocial Behavior Towards Family

The third Structural Equation Modeling was carried out to test the model of prosocial behavior towards family. The results, have also shown that the theoretical model fit the data well, $X^2(15) = 32.50, p \leq .006, X^2/df = 2.17; GFI = .98; AGFI = .96, NFI = .96, RMR = .01, RMSEA = .05$. The model explained 42 % of the variance.

The three models are depicted in Fig. 1. As it can be seen in Fig. 1, in all cases the combination of parental challenge and authoritative parental style among young adults are positively associated with prosocial flow, which in turn has a positive influence on different types of prosocial behavior towards strangers, friends and family.

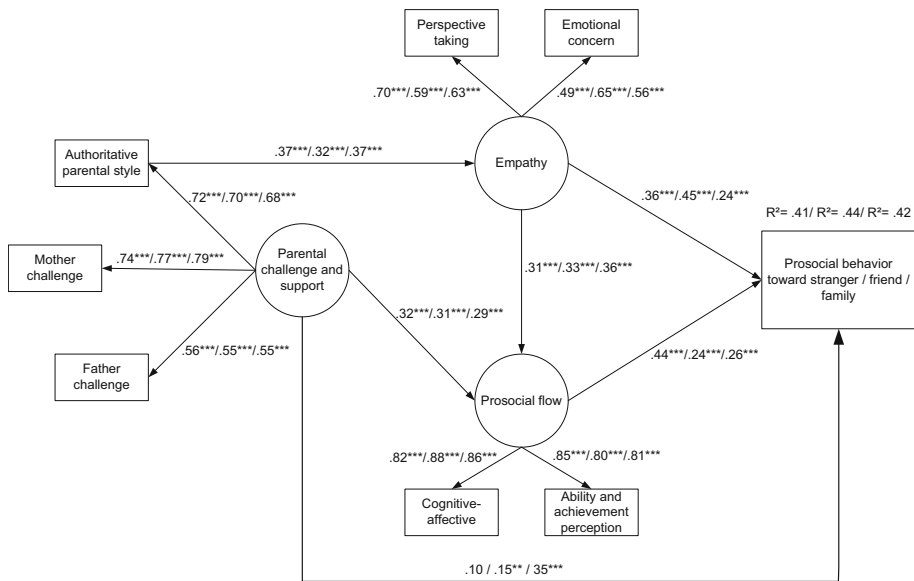


Fig. 1 Structural Equation Model for Prosocial behavior toward stranger, friend and family. *Note* The first path values correspond to prosocial behavior toward stranger, the second path values corresponds to prosocial behavior toward friend and the third path values corresponds to prosocial behavior toward family ** $p < .01$; *** $p < .001$

Moreover, authoritative parental style has a direct and positive relationship with empathy, which in turn is associated in a positive way with prosocial-flow and prosocial behaviors towards strangers, friends and family in young adults.

Furthermore, the model shows that the combination of challenges from parents (mother and father) and authoritative parental style are related to prosocial behaviors towards friends and family, but not to prosocial behavior toward strangers in young adults.

4 Discussion

The purpose of the current study was to examine the relationship between two different aspects of the parent–child relationship in young adults (parental challenge and authoritative parental style), empathy and prosocial flow with prosocial behavior toward strangers, friends, and family. Several studies have analyzed the influence of parental styles on prosocial behaviors in children and adolescents (Carlo et al. 2011). However, the present study has two peculiarities: the first is that we studied this influence during young adulthood, and the second was to include a measure of challenge from mother and father given research has not largely focused on positive effect of parental challenge on their children. In the context of parent–child interaction, a challenge is characterized by Daley (2008) as a factor that provides “opportunities for stimulation and growth: pushing or testing the child’s existing abilities and skills that may result in building or strengthening cognitive, behavior, social, or affective knowledge or skills” (pp. 644–645). Our results provide empirical support for this definition because we have found that the combination of parental support and parental challenge has an important influence on positive cognitive and affective mental state (prosocial flow) and an influence on positive behaviors, such as prosocial behavior toward friends and family, but no influence on behavior towards strangers. These findings are in line with previous studies that established that authoritative parenting style in childhood as remembered by adults, is a predictor of healthy psychological functioning, which prevents psychological maladjustment in middle and late adulthood (Rothrauff et al. 2009). It is known that parents with an authoritative parenting style are more warm and sensitive to the needs of their children, and thus these childhood memories may make children more sensitive and empathic to the needs of others, and therefore more prosocial. This is especially so when they are united by family ties or friendship in which they repeat the positive patterns of behavior learned as children.

Concerning why the combination of authoritative parental styles and parental challenge is not associated with prosocial behavior toward strangers, it is possible to hypothesize at least three closely related answers. The first possibility is that having had a good relationship with one’s parents could drive people to develop a more positive perception of those close to them, seeing them as warm, friendly people, who want the best for them. Consequently it may be easier to have prosocial behavior toward family members and friends than toward strangers. The second possible answer is the mediation of attribution theory, i.e. the mediating belief that family members or friends are worthy of helping behavior for the support and love they have given previously, which would not happen with a stranger. A third explanation may be that characteristics that make up authoritative parental style and parental challenge, are influenced by the age and level of maturity of the child in forming expectations about their personal behavior. It is thus likely that the attitude of positive challenge from parents is manifested in young adulthood as a capacity to analyze the needs of others before providing help. This analysis would be stronger in the

case of family members or friends, because of young adults' knowledge of them. While, it could fail more easily in analyses of interactions with strangers, with them sometimes not providing help that could be necessary. However, future research is needed to deepen the explanations of why the combination of authoritative parental style and parental challenge are more salient for prosocial behavior toward family members and friends than toward strangers.

Previous studies developed in adolescents have suggested that parental styles are important for prosocial development overall, not just prosocial behavior toward family members (Eisenberg et al. 2006; Padilla-Walker and Christensen 2011; Padilla-Walker et al. 2015). A specific contribution of our research is to show that when other aspects of parent–child relationships, such as parental challenge, for example, are considered, it is possible to find differences in the predictors of prosocial behaviors toward different targets. These results highlight the concept that prosocial behaviors make no sense outside the context of a relationship (Clark-Polner and Clark 2014). In the same way, these findings strengthen the thesis proposed by Padilla-Walker and Christensen (2011) who suggested both the utility and necessity of considering prosocial development within the context of relationships.

Moreover, we found that the combination of authoritative parental support and parental challenge were related to prosocial flow. These findings are consistent with Rathunde's studies (1996, 2001; Rathunde and Csikszentmihalyi 1991) that have reported that the combination of support and challenges should result in higher intrinsic motivation and flow. The specific contribution of our study is that we evaluated a specific type of flow: prosocial flow, which is a state of optimal experience during prosocial activities, while Rathunde evaluated overall flow state. On the other hand, these results are interesting because optimal experience had always been studied during individualistic activities, such as work, study, sports, etc., and it was associated only with a hedonistic wellbeing and perhaps "selfish", or at least self-centered motivation. However we found that flow could be experienced during activities whose principal objective is to help or to benefit other people. This would confirm the findings of Mesurado and Richaud de Minzi (2014) who found that 72 % of participants (children and adolescents) reported optimal experience when undertaking prosocial activities.

Previous research has found that community engagement during college (specifically time spent volunteering and taking at least one service-learning course) is positively related to wellbeing 13 years after college graduation (Bowman et al. 2010). More specifically, Bowman et al. (2010) suggest that community engagement contributes to future volunteer work and prosocial orientation, both of which are associated with greater wellbeing. Our results also underscore the fact that undertaking volunteering activities in the university context also promotes flow experience when these activities are prosocial activities, which also encourages commitment and facilitates continued involvement in the activity.

Csikszentmihalyi and colleagues wrote eleven years ago "the most critical task in human development is to learn to create flow in productive, prosocial activities, thereby making it possible to maximize the quality of both personal and social life. This is what Plato meant when he said that the most important task of education is to teach young people to find pleasure in the right things" (Csikszentmihalyi et al. 1994, p. 15). This inspiring phrase highlights the importance of our findings in two directions: (1) the important role that parents play (authoritative parent styles and parental challenge) in promoting flow states during prosocial activities, and (2) the influence of prosocial flow on the three targets of prosocial behavior studied here in. This would mean that prosocial flow experience is not only an outcome variable but, in turn, is a predictor variable of prosocial

behavior toward different targets: family, friends, and strangers. Different variables have failed as predictors of prosocial behavior toward strangers, which led to Padilla-Walker et al. (2015) to state that “prosocial behavior toward strangers is complex and may have very different motivations than prosocial behavior toward those with whom adolescents have a relationship” (p. 146).

The fact that we have identified flow experience in prosocial activities as a significant predictor of prosocial behavior towards different targets can shed new light on the study of prosociality. Evidently, when someone gets involved in a volunteer activity, in such a way that when they do the activity in question they feel that time flies because their attention is on the helping activity and this leads to enjoyment, this experience creates positive feedback that leads them to strengthen their involvement in the activity and to repeat it over time. Indeed prosocial flow or subjective experience in undertaking prosocial behavior could be an important aspect to consider in future research about prosocial behavior.

There is an abundance of empirical evidence supporting the association between parental styles and empathy (Carlo et al. 2003, 2011; Eisenberg et al. 2001; Richaud et al. 2011) and prosocial behaviors (Padilla-Walker and Carlo 2014; Richaud et al. 2013). Specifically, authoritative parenting—characterized by warmth, support, positive affect, behavioral control, responsiveness, and autonomy support—has been positively related to empathy and prosocial behavior in children (Carlo et al. 2011). Also, authoritative parents often foster more secure attachment, as well as expressing and modeling well-regulated emotions, which facilitates prosocial behaviors (Eisenberg and Murphy 1995; Mesurado et al. 2014; Richaud de Minzi 2010; Richaud et al. 2013). Our findings are in line with these findings, showing that whether young adults remember their parents to have been authoritative still has an important relationship with both aspects of empathy (cognitive and emotional) and prosocial behaviors towards different targets. Once again, parental warmth/support shows its pivotal role in functional aspects of psychological development.

As expected, our theoretical models have shown that empathy promotes prosocial behavior toward the three different targets: family members, friends and strangers. Moreover, our current findings suggest that the relationship between prosocial flow and empathy and prosocial behavior toward strangers, friends and family are similar in the three targets. These findings differ from those of Padilla-Walker and Christensen’s longitudinal study (2011), which found that empathy and self-regulation mediated the relationship between positive parenting and adolescents’ prosocial behavior toward strangers and friends, but not toward family. Further research is needed given that our study is transversal and was developed for research with young adults.

5 Limitations

Some limitations can be identified in this study. Firstly, the sample employed was relatively lacking in socioeconomic diversity. Also, it is possible that data variability was limited given the single data collection site (all participants are students of the same university) and the relative homogeneity of the sample. Thus, findings may not be completely generalizable. In addition, the present study comes from the use of one-time self-reporting, which means that there is an inherent method effect contributing to the strength of all of the relationships. Also, the study was based on cross-sectional data; therefore, the direction of the effects in the models may not be clear. Moreover, in our study we included a general

measure of authoritative parental style for parents, rather than separate measures for mothers and fathers.

5.1 Future Directions for Research

Although the results of the present study have allowed for advances in the understanding of prosocial behavior toward different targets, it is important to open this field of research to the study additional variables, such as religiosity, spirituality or perceptions of others' intentions that could predict prosocial behavior toward strangers, family, and friends differently. Also, in future research, it would be of interest to analyze the role of gender of both children and parents, especially in regards to its role in empathy and prosocial behavior. There is evidence that gender is an important consideration in examining how the parents' empathy influences in child's empathy, especially when taking cultural patterns into account that may influence both children and parents' gender roles. Cultural norms, which establish the role of each parent in children's socialization, are very different from one culture to another. It is essential therefore that indevelopmental studies of prosociality we examine relationship patterns involving children's perception of their mother and father's relationship style, separately from children's prosociality itself. Furthermore, collecting data from more diverse samples, including different socioeconomic contexts and cultures, should be considered in the future.

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