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The Mediating Role of Prosocial Motivation in the Relationship Between Empathy and Prosocial Behavior in Early Adolescence

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Abstract

Engagement in prosocial actions is essential for promoting positive peer relationships and empathy in adolescence dynamically reinforces these outcomes. The aim of the present study was to explore the possible underlying mechanisms that link empathy and prosocial behavior and, more specifically, the mediating role of prosocial motivation, in early adolescence. 393 adolescents (*M* age = 12.28 years, *SD* = .90) participated in the study. Self-report measures were used to assess empathy, prosocial behavior, and prosocial motivation within the framework of Self-Determination Theory (SDT). Results indicated that both cognitive and affective empathy significantly predicted prosocial behavior through identified motivation, an autonomous form of motivation, which acted as a mediator in this relationship. In contrast, external motivation, a more controlled form of motivation, did not mediate the relationship between empathy and prosocial behavior. Overall, findings are consistent with SDT, highlighting the importance of autonomous motivation and psychological autonomy in fostering prosocial behavior and well-being in adolescence.

Keywords

Empathy, prosocial motivation, Self Determination Theory, autonomous motivation, early adolescence

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El Papel Mediador de la Motivación Prosocial en la Relación entre la Empatía y el Comportamiento Prosocial en la Adolescencia Temprana

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Resumen

La participación en acciones prosociales es fundamental para fomentar relaciones positivas entre pares y el desarrollo moral durante la adolescencia, y la empatía contribuye de manera dinámica a estos resultados. El objetivo del presente estudio fue explorar los posibles mecanismos subyacentes que vinculan la empatía con el comportamiento prosocial y, en particular, el papel mediador de la motivación prosocial en la adolescencia temprana. En el estudio participaron 393 adolescentes (edad media = 12.28 años, DE = 0.90). Se utilizaron cuestionarios de autoinforme para evaluar la empatía, el comportamiento prosocial y la motivación prosocial, en el marco de la Teoría de la Autodeterminación (TAD). Los resultados indicaron que tanto la empatía cognitiva como la afectiva predijeron significativamente el comportamiento prosocial a través de la motivación identificada, una forma autónoma de motivación, que actuó como mediadora en esta relación. En cambio, la motivación externa, una forma más controlada, no medió la relación entre la empatía y el comportamiento prosocial. En conjunto, los hallazgos son coherentes con la TAD y subrayan la importancia de la motivación autónoma y la autonomía psicológica para fomentar el comportamiento prosocial y el bienestar durante la adolescencia.

Palabras clave

Empatía, motivación prosocial, Teoría de la Autodeterminación, motivación autónoma, adolescencia temprana

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In adolescence prosocial behaviors, voluntary actions of supporting and assisting play a critical role in socio-emotional development, as they facilitate the development of meaningful interpersonal relationships. Empathy often serves as the emotional basis for such behaviors, prompting individuals to act with care and compassion toward others (Hoffman, 2000; Mesurado & Richaud, 2017). Theoretical and empirical evidence suggests that both empathy and prosocial behavior display greater stability over time when driven by internalized autonomous motives rather than external pressures (Ryan & Deci, 2019). Understanding the mechanisms that promote internalization and autonomy of action is particularly important during early adolescence, a period marked by significant developmental shifts.

Despite the well-reported link between empathy and prosocial behavior, research on the mechanisms underlying this association is still sparse. The present study investigates whether prosocial motivation, the drive to engage in behaviors that benefit others, mediates the empathy-prosocial behavior link, under the theoretical framework of Self-Determination Theory.

Empathy and Prosocial Behavior

Empathy is a basic social skill that enables individuals to both understand and experience the perspectives of others and to foresee their reactions (Davis & Franzoi, 1991; Hoffman, 2000). It is a developmental construct (Allemand et al., 2015), positively related to moral development (Chen et al., 2018), social competence (Eisenberg et al., 2006), and emotional awareness (Riffe & Camodeca, 2016).

Empathy is best understood as multidimensional, including both cognitive and affective aspects (Batson, 2023). Cognitive empathy, linked with stronger perspective-taking capacities, refers to the ability to recognize, understand and process the emotional state and/or perspective of others. Affective empathy indicates the capacity to experience and share emotions, such as sadness, compassion or anger, motivated by the other person's emotional state (Batson, 2023; Hoffman, 2000). While these components are interrelated (Shamay-Tsoory, 2011), they contribute differentially to development. Cognitive empathy is more closely linked to moral reasoning and conflict resolution (Decety & Jackson, 2004; De Wied et al., 2007), whereas affective empathy predicts emotion regulation and prosocial responding. Van Lissa et al. (2016), for example, found that adolescents with stronger emotional understanding demonstrated lower aggression and greater conflict resolution skills, while Rieffe et al. (2010) showed that affective empathy predicted higher emotional responsiveness and concern for others.

Prosocial behaviors, or positive social behaviors, refer to intentional and voluntary interpersonal behaviors that aim at benefiting others (Eisenberg et al., 2006). The term has been described as an “umbrella term” (El Mallah, 2020) as it encompasses a wide range of actions (helping, sharing, cooperating, comforting, supporting, volunteering, caring for others). Beyond empathy, prosocial behavior has also been linked to positive developmental outcomes, such as academic success (Gerbino et al., 2018), social competence (Aikins & Litwack, 2011)

and self-concept development (Fu et al., 2017). Longitudinal findings indicate that higher prosocial engagement predicts reduced aggression, highlighting its protective role in socio-emotional adjustment (Malonda et al., 2019). In early adolescence, prosocial behavior further supports adaptation to novel social environments—such as the transition to secondary school—by promoting peer integration and reducing delinquent behaviors (Hay et al., 2021).

The connection between empathy and prosocial behavior is well documented. Empathy enables individuals to understand others' needs and feelings, which in turn motivates prosocial responses (Batson & Powell, 2003). Empathy and compassion are often considered "prosocial emotions" (Luberto et al., 2018) and, in longitudinal studies, empathic concern was associated with the likelihood of helping behavior (Van der Graaff et al., 2018).

Despite the extensive research on the impact of prosocial behavior in development, relatively few studies have examined the motivational drivers behind prosocial behavior. While empathy is recognized as a key precursor to helping (Decety & Cowell, 2014; Batson, 2023), the processes through which it translates into concrete action are less understood. Understanding the motivational underpinnings of prosocial actions is particularly relevant, especially in adolescence, when identity development, abstract reasoning, and moral thinking undergo significant transformations (Hart & Carlo, 2005).

The process of developing an internal value system that promotes prosocial engagement has been explored by multiple theoretical frameworks (e.g., Eisenberg et al., 2006; Warneken & Tomasello, 2011) and has been associated with behaviors such as helping or expressing sympathy (Carlo et al., 2003), but also with lower levels of aggression and delinquency (Taylor et al., 2020). The present study builds upon this theoretical foundation by investigating the role of motivation—specifically, the distinction between externally driven motives and internalized values—in mediating the link between empathy and prosocial behavior, using the framework of Self-Determination Theory (Ryan & Deci, 2020).

Self-Determination Theory

Self-Determination Theory (SDT) (Deci & Ryan, 1985) attempts to explain the reasons that regulate individuals' actions and the processes through which behaviors emerge. According to SDT motives that drive behavior fall along a continuum reflecting different degrees of autonomy. At one end are externally determined (or controlled) motives, where behaviors are regulated by reward, fear, or the desires or principles of others. At the opposite end are internally determined (or autonomous) motives, where behaviors stem from self-interest, pleasure or internal fulfilment (Howard et al., 2017).

The SDT distinguishes between 4 types of regulation:

a) External Regulation, where behavior is motivated by reasons outside the individual (e.g. teacher's praise, avoiding punishment, complying with rules),

b) Introjected Regulation where behavior is driven by internalized but externally oriented pressures such as guilt, shame, or the desire for approval,

c) Identified Regulation, where behavior is guided by personally endorsed values or goals,
d) Integrated Regulation where behavior is fully aligned with one's core values and identity.

Identified and integrated regulation are considered relatively internalized, self-determined and autonomous forms of motivation, whereas introjected and external are considered more controlled. Developmentally, children gradually progress from external to more autonomous forms of motivation, especially when supported by autonomy-promoting environments (Joussemet et al., 2008).

Studies across domains link autonomous motivation to positive outcomes such as academic achievement (Howard et al., 2021; Osei & Bjorklund, 2024), self-esteem and emotion regulation (Day et al., 2022), and positive school climate (Manzano-Sánchez et al., 2021). Extending this framework to prosocial behavior provides an opportunity to explore how internalized motivations support behaviors that benefit others.

SDT, Empathy and Prosocial Behaviours

The application of SDT to prosocial behavior attempts to explain why individuals engage in behaviors such as helping, sharing or cooperating and emphasizes the interplay between affective, cognitive processes that drive prosocial behavior (Ryan & Connell, 1989; Weinstein & Ryan, 2010). SDT proposes that due to the wish to connect, individuals understand the needs and experiences of others, and thus externally controlled motives are gradually internalized and integrated into the individual's central belief system, and become the most autonomous. The above process is supported by research with adult populations in various contexts. For example, Barry et al. (2008) found that external motives negatively predicted prosocial behavior, whereas autonomous motives had a positive effect. Weinstein and Ryan (2010) reported similar findings in emerging adults, while Peetz and Milyavskaya (2021) observed that both controlled and autonomous motives were linked to daily helping, but autonomous motives were more consistent.

There are far fewer studies that examine this relationship in children and adolescents particularly within school contexts. Hardy et al. (2015) investigated engagement in helping behaviors and abstinence from delinquent behaviours in a group of late adolescents and found that the more internalized the motivation to act, the more likely they were to engage in prosocial acts and avoid risky behaviours. Padilla-Walker et al. (2012) reported that the internalization of prosocial values, shaped by parenting, predicted adolescents' prosocial behaviors. Similarly, Bayar et al. (2020) explored how autonomous motivation influences prosocial behavior in a sample of Turkish adolescents. They found that adolescents exhibiting higher levels of autonomous motivation—engaging in prosocial acts out of personal values and internalized reasons—tended to display increased prosocial behaviors.

Empathy, has also been found to foster autonomous motivation for pro-social action. Behaviors motivated by empathy are considered more stable and are interpreted differently than

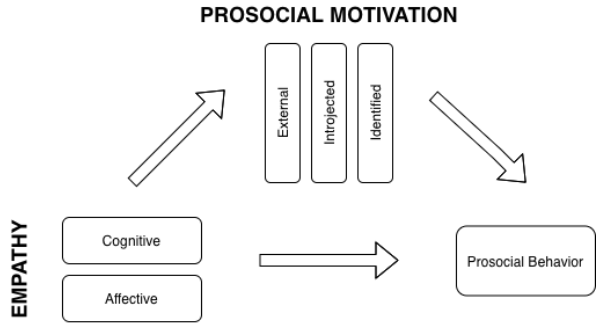
those motivated by external rewards, such as praise or acceptance. Pavey et al. (2011) reported that empathy predicted autonomous motivation, which in turn mediated the link between empathy and prosocial actions. Likewise, Eisenberg et al., (2014) highlight that empathy is associated with higher levels of autonomy as it enhances connection with others, supports the development of moral reasoning, and motivates individuals to take action for the well-being of others. When individuals understand the needs and desires of others and link their actions to these needs, the process of internalizing prosocial values is facilitated. This emotional connection creates a stronger motivation to act, resulting from personal satisfaction and a sense that their actions are morally right (Ryan & Connell, 1989).

Aim and Hypotheses of the Present Study

Although the link between prosocial motives and prosocial behavior is well-established in recent studies involving adult populations (e.g., Ferguson et al., 2015; Peetz & Milyavskaya, 2021), fewer studies address this relationship in adolescence. Furthermore, there is a notable absence of empirical studies addressing these issues in the context of Greece. The present study aims to examine the relationships between empathy, prosocial behavior, and different forms of motivation in early adolescence. Specifically, it investigates whether prosocial motivation mediates the relationship between empathy and prosocial behavior—i.e., whether the type of motivation influences the extent to which empathy leads to prosocial behavior (Figure 1). Given the multidimensional nature of empathy, both cognitive and affective components are examined separately to better understand their distinct roles in promoting prosocial behavior.

Figure 1

Conceptual Model of Relationships between Empathy, Prosocial Motivation (Proposed Mediator) and Prosocial Behavior



Accordingly, we hypothesized that

H1: Empathy will be more positively linked to identified motivation compared to introjected or external motivation

H2: Both prosocial motivation and empathy will be positively linked to prosocial behaviors

H3: The relationship between empathy and prosocial behavior will be mediated by motivation, type such that higher empathy will predict more identified motivation which in turn will be related with a greater likelihood of prosocial behavior.

Method

Participants

A total of 393 adolescents (210 boys and 183 girls) (*M* age =12.28 years, *SD* = 0.90) participated in the study. The participants were 1st grade students from 12 urban and semi-urban public secondary schools of Thessaloniki, Greece. Power analysis using G*Power 3.1 (Faul et al., 2009) was used to determine the sample size. The power analysis suggested that the minimum number of participants required for the multiple regression analysis was 191, based on a probability level of 0.05 and a desired statistical power level of 0.80.

The socio-economic status of the participants' families ranged from medium to high based on the parents' occupation (self-employed or employed in the private sector) and education level (secondary or technical education, university education and degrees). Convenience sampling was used in this study.

Measures

Prosocial Behavior. Adolescents' participation in prosocial behaviors was assessed with the *Altruistic Behaviors Scale* (Battistich et al., 1997), translated into Greek. The scale measures the degree to which children engage in helping and caring behaviors in their daily lives. This scale consists of 10 items (e.g., "I helped a schoolmate who fell down"). Children rate the frequency of these behaviors on a 5-point Likert scale (1 = "never" to 5 = "many times"). Higher scores indicate more frequent prosocial behavior. Cronbach's alpha (α) was .80 in the present study.

Empathy. Children's empathy skills were assessed using the *Bryant's Empathy Index* (Bryant, 1982), adapted for the Greek population (Mitsopoulou & Giovazolias, 2013), a self report dichotomous questionnaire where higher scores reflect greater empathy. The scale includes three subscales: a) Understanding Feelings: e.g., "It's hard for me to see why someone else gets upset" (cognitive dimension), b) Empathetic Sadness: e.g., "I feel sad when I see a child with no one to play with", c) Tearful Reactions: e.g., "A boy who cries makes me want to cry, too" (affective dimensions). Cronbach α' s were: Understanding of emotions .55, Feelings of Sadness .70, and Tearful Reaction .68. The reliability for Understanding Feelings subscale was lower than optimal, however, comparable to that found in similar studies (e.g., Aristu et al., 2008; Mitsopoulou & Giovazolias, 2013).

Motivation for Prosocial Behavior. Prosocial motivation was assessed using the *Prosocial Self-Regulation Questionnaire* (SRQ-P; Ryan & Connell, 1989), which evaluates the extent to which prosocial actions are driven by external, introjected, or identified motivations. Participants responded to five hypothetical helping scenarios, each followed by five reasons rated on a 4-point Likert scale (1 = "does not apply at all" to 4 = "applies perfectly"). Sample items include: External ("because I might get into trouble"), Introjected ("because I want my classmates to like me"), and Identified ("because I believe it is important to help others"). Internal consistency for the three subscales was α = .75 (External), .78 (Introjected), and .85 (Identified).

Demographic Data. Information on children's gender, age, ethnicity, household characteristics and parents' occupation and educational level was also collected through preliminary questions.

Procedure

The study was approved by the Greek Ministry of Education and the Institute of Educational Policy. The dataset analyzed in this paper was part of a larger longitudinal project examining children's peer relationships during the transition to adolescence. Children participated voluntarily. Parental consent was and anonymity was ensured. Questionnaires were administered by the first author in the classroom during 50-minute sessions held during school hours, and the pupils completed them on paper. Throughout the procedure, pupils could request assistance and completed practice questions beforehand to familiarize themselves with the scales.

Plan for Data Analysis

The data were analyzed using the Statistical Package for Social Sciences (*SPSS*) version 29.0; all tests were run at the .05 significance level. Associations between study variables were explored via Pearson correlations coefficients. Consequently, mediation analysis was employed to check relationships between empathy and prosocial behavior and the possible mediating role of prosocial motivation types. Each prosocial motivation type was modelled separately. According to Baron and Kenny (1986) support for mediation is found if (a) independent variable, mediator and the outcome are significantly associated, (b) the independent variable predicts the outcome less (partial mediation) or non-significantly (complete mediation) after controlling for the mediator. Prior to analysis, all continuous predictor variables, including the independent variables (Understanding Fellings, Empathetic Sadness and Tearful Reactions) and mediators (i.e., External Motivation, Introjected Motivation, and Identified Motivation), were mean-centered to reduce multicollinearity. Mediation analyses were conducted using Hayes' *PROCESS* macro for *SPSS* (Model 4; Hayes, 2022), with 5,000 bootstrap samples and 95% bias-corrected bootstrap confidence intervals.

Results

Associations between Empathy, Prosocial Motivation (Proposed Mediator) and Prosocial Behavior

Means, standard deviations, and bivariate correlations for each of the variables are provided in Table 1. As expected, cognitive and affective dimensions of empathy were positively related to prosocial behavior, i.e., Understanding Feelings (r = .132, p < .05), Empathetic Sadness (r = .354, p < .001), and Tearful Reactions (r = .266, p < .001). In relation to prosocial motivation, external motivation was related only to Understanding Feelings negatively (r = –.219, p < .001). Introjected motivation correlated positively with prosocial behavior (r = .187, p < .001), Empathetic Sadness (r= .223, p < .001), and Tearful Reactions (r = .137, p < .01). Identified motivation had the strongest positive correlations with prosocial behavior (r = .207, p < .001) and empathy dimensions—namely, Understanding Feelings (r = .334, p < .001), Empathetic Sadness (r = .375, p < .001), and Tearful Reactions (r = .283, p < .001).

Table 1

Pearson Correlation Coefficients Among Study Variables

	1.	2.	3.	4.	5.	6.	7.	M	SD
1. Prosocial B.	-							3.35	.70
2. UnderFeel-ings	.132*	-						.81	.18
3. Emp.Sadness	.354**	.356**	-					.79	.25
4. TearfulR	.266**	.295**	.403**	-				.41	.34
5. External M.	-.048	-.219**	-.072	-.067	-			2.23	.77
6. Introjected M.	.187*	.052	.223**	.137**	.532**	-		2.84	.62
7. Identified M.	.207**	.334**	.375**	.283**	.047	.547**	-	3.38	.60

*$p \leq 0.05$, **$p \leq 0.001$*

Empathy, Prosocial Motivation (Proposed Mediator) and Prosocial Behavior

For each of the proposed mediators separate mediation analyses were conducted using Model 4 of *PROCESS* macro v4.2 for *SPSS* (**Hayes, 2022**), with 5,000 bootstrap samples and a 95% confidence interval. The proposed models examined whether empathy predicted prosocial motivation types and prosocial behavior and if the relationship between empathy, i.e. Understanding Feelings, Empathetic Sadness and Tearful Reactions and prosocial behavior, was mediated by prosocial motivation types, i.e. external, introjected or identified motivation.

Identified Motivation as a Mediator

Understanding Feelings significantly predicted identified motivation (b = 1.109, SE = 0.162, $t(375) = 6.86$, $p < .001$, 95% CI [0.7910, 1.4265]), and identified motivation was a significant predictor of prosocial behavior ($b = 0.221$, $SE = 0.062$, $t(374) = 3.56$, $p < .001$, 95% CI [0.0988, 0.3422]). The total effect of Understanding Feelings on prosocial behavior (path c) was statistically significant (b = 0.434, SE = 0.197, $t(375) = 2.20$, p = .028, 95% CI [0.0469, 0.8205]), indicating that identified motivation may play a mediating role. Supporting this, the indirect effect of Understanding Feelings on prosocial behavior through identified motivation was significant ($b = 0.244$, Boot$SE = 0.078$, 95% CI [0.1040, 0.4076]), as was the completely standardized indirect effect ($\beta = 0.064$, Boot$SE = 0.020$, 95% CI [0.0276, 0.1054]), suggesting that identified motivation mediated the relationship between Understanding Feelings and prosocial behavior.

In the case of Empathetic Sadness, it significantly predicted identified motivation (b = 0.927, SE = 0.118, $t(375) = 7.85$, $p < .001$, 95% CI [0.6948, 1.1590]) and prosocial behavior ($b = 0.869$, $SE = 0.149$, $t(374) = 5.84$, $p < .001$, 95% CI [0.5767, 1.1620]). The total effect of Empathetic Sadness on prosocial behavior was also significant ($b = 0.969$, $SE = 0.138$, $t(375) = 7.00$, $p < .001$, 95% CI [0.6966, 1.2406]). When controlling for identified motivation (b = 0.107, $SE = 0.060$, $t(374) = 1.77$, $p = .077$, 95% CI [0.0116, 0.2257]), it significantly predicted prosocial behavior, and the indirect effect of Empathetic Sadness on prosocial behavior through identified motivation was statistically significant ($b = 0.109$, Boot$SE = 0.060$, 95% CI [0.0107, 0.2255]).

As with the previous empathy dimensions, Tearful Reactions predicted identified motivation (b = 0.492, SE = 0.086, $t(375) = 5.73$, $p < .001$, 95% CI [0.3230, 0.6610]) and prosocial behavior ($b = 0.433$, $SE = 0.103$, $t(374) = 4.19$, $p < .001$, 95% CI [0.2295, 0.6358]), and, in turn, identified motivation significantly predicted prosocial behavior ($b = 0.169$, SE = 0.060, $t(374) = 2.84$, $p = .005$, 95% CI [0.0518, 0.2859]). The total effect of Tearful Reactions on prosocial behavior was also significant ($b = 0.516$, $SE = 0.100$, $t(375) = 5.16$, $p < .001$, 95% CI [0.3191, 0.7123]). Moreover, the indirect effect of tearful reactions on prosocial behavior through identified motivation was statistically significant ($b = 0.083$, Boot$SE = 0.032$, 95% CI [0.0252, 0.1501]), as was the completely standardized indirect effect (β = 0.041, BootSE = 0.016, 95% CI [0.0126, 0.0748]), which again suggested that identified motivation partially mediates the relationship between tearful emotional reactions and prosocial behavior.

Introjected Motivation as a Mediator

Understanding of emotions was found to be a significant predictor of prosocial behavior (b = 0.397, SE = 0.194, t(374) = 2.05, p = .041, 95% CI [0.0161, 0.7788]) with a total effect (path c) also significant (b = 0.434, SE = 0.197, t(375) = 2.20, p = .028, 95% CI [0.0469, 0.8205]). However, the relationship between Understanding Feelings and introjected motivation (path a) was not statistically significant (b = 0.178, SE = 0.176, t(375) = 1.01, p = .313, 95% CI [–0.1686, 0.5251]), though introjected motivation significantly predicted prosocial behavior (b = 0.203, SE = 0.057, t(374) = 3.59, p< .001, 95% CI [0.0919, 0.3149]) (path b). Furthermore, the indirect effect of Understanding Feelings on prosocial behavior through introjected motivation was non-significant (b = 0.036, BootSE = 0.038, 95% CI [–0.0322, 0.1189]), suggesting that introjected motivation did not mediate the relationship between emotional understanding and prosocial behavior.

In the second model, Empathetic Sadness was found to be a significant predictor of introjected motivation (b = 0.567, SE = 0.128, t(375) = 4.43, p < .001, 95% CI [0.3156, 0.8188]) and prosocial behavior (b = 0.894, SE = 0.141, t(374) = 6.34, p < .001, 95% CI [0.6170, 1.1717]). Additionally, introjected motivation significantly predicted prosocial behavior (b = 0.131, SE = 0.056, t(374) = 2.36, p = .019, 95% CI [0.0218, 0.2400]). The total effect of Empathetic Sadness on prosocial behavior was also significant (b = 0.969, SE = 0.138, t(375) = 7.00, p < .001, 95% CI [0.6966, 1.2406]) and the indirect effect of Empathetic Sadness on prosocial behavior through introjected motivation was significant (b = 0.074, BootSE = 0.039, 95% CI [0.0085, 0.1583]), with a small but significant standardized indirect effect (β = 0.026, BootSE = 0.014, 95% CI [0.0029, 0.0552]), indicating that introjected motivation partially mediates the relationship between Empathetic Sadness and prosocial behavior.

Tearful Reactions significantly predicted introjected motivation (b = 0.244, SE = 0.092, t(375) = 2.67, p = .008, 95% CI[0.0642, 0.4239]), and introjected motivation significantly predicted prosocial behavior (b = 0.173, SE = 0.056, t(374) = 3.10, p = .002, 95% CI [0.0636, 0.2831]). The total effect of Tearful Reactions on prosocial behavior was also significant (b= 0.516, SE = 0.100, t(375) = 5.16, p < .001, 95% CI [0.3191, 0.7123]). When controlling for mediation, the indirect effect of tearful reactions on prosocial behavior through introjected motivation was significant (b = 0.042, BootSE = 0.021, 95% CI [0.0076, 0.0901]), with a small but significant standardized indirect effect (β = 0.021, BootSE = 0.011, 95% CI[0.0037, 0.0447]), suggesting partial mediation.

External Motivation as a Mediator

As shown in Table 2, Understanding Feelings significantly and negatively predicted external motivation (b = –0.922, SE = 0.212, t(375) = –4.35, p < .001, 95% CI [–1.3392, –0.5051]) (path a) and, as expected, positively predicted prosocial behavior (b = 0.413, SE = 0.202, t(374) = 2.05, p = .041, 95% CI [0.0164, 0.8101]). The total effect (path c) of Understanding Feelings

on prosocial behavior was also significant (b = 0.434, SE = 0.197, t(375) = 2.20, p = .028, 95% CI[0.0469, 0.8205]). When controlling for Understanding Feelings, external motivation did not significantly predict prosocial behavior (b = –0.022, SE = 0.048, t(374) = –0.46, p = .644, 95% CI [–0.1164, 0.0721]). The indirect effect of Understanding Feelings on prosocial behavior through external motivation was non-significant (b = 0.020, BootSE = 0.050, 95% CI [–0.0783, 0.1210]), indicating that external motivation did not mediate the relationship between Understanding Feelings and prosocial behavior.

Empathetic Sadness significantly predicted prosocial behavior (b = 0.964, SE = 0.139, t(375) = 7.00, p < .001, 95% CI[0.6966, 1.2406]) and the total effect was also significant (b = 0.969, SE = 0.138, t(375) = 7.00, p < .001, 95% CI [0.6966, 1.2406]). However, it did not significantly predict external motivation (b = –0.224, SE = 0.161, t(375) = –1.39, p = .165, 95% CI [–0.5407, 0.0928]) and the indirect effect of Empathetic Sadness on prosocial behavior through external motivation was non-significant (b = 0.005, BootSE = 0.014, 95% CI [–0.0177, 0.0405]), suggesting that external motivation did not mediate the relationship between Empathetic Sadness and prosocial behavior.

In the third model, Tearful Reactions significantly predicted prosocial behavior, as indicated by the total effect (b = 0.5157, SE = 0.1000, t(375) = 5.16, p < .001, 95% CI [0.3191, 0.7123]). In the case of the mediator, Tearful Reactions did not significantly predict external motivation (b = –0.1465, SE = 0.1134, t(375) = –1.29, p = .197, 95% CI [–0.3694, 0.0764]), and external motivation did not significantly predict prosocial behavior when controlling for Tearful Reactions (b = –0.0282, SE = 0.0456, t(374) = –0.62, p = .537, 95% CI [–0.1178, 0.0615]). When external motivation was included as a mediator, the direct effect of Tearful Reactions on prosocial behavior remained significant (b = 0.5116, SE = 0.1003, t(374) = 5.10, p < .001, 95% CI [0.3143, 0.7088]). Furthermore, the indirect effect of Tearful Reactions on prosocial behavior through external motivation was non-significant (b = 0.0041, BootSE = 0.0098, 95% CI [–0.0129, 0.0285]), indicating, again, that external motivation did not mediate the relationship between tearful reactions and prosocial behavior.

Table 2

Mediation Effects of Different Forms of Motivation Types on the Relationship Between Empathy and Prosocial Behavior

Empathy Variable	Motivation	Path a (IV → Mediator)	Path b (Mediator→ DV)	Indirect Effect	95% CI (indirect)	Mediation
UnderFeelings	Identified	b = 1.109, p < .001	b = 0.221, p < .001	b = 0.244	[0.1040, 0.4076]	Partial
Emp.Sadness	Identified	b = 0.927, p < .001	b = 0.107, p = .047	b = 0.109	[0.0107, 0.2255]	Partial
Tearful R	Identified	b = 0.492, p < .001	b = 0.169, p = .005	b = 0.083	[0.0252, 0.1501]	Partial

Empathy Variable	Motivation	Path a (IV → Mediator)	Path b (Mediator→ DV)	Indirect Effect	95% CI (indirect)	Mediation
UnderFeelings	Introjected	$b = 0.178$, $p = .313$	$b = 0.203$, $p < .001$	$b = 0.036$, ns	[-0.0322, 0.1189]	None
Emp.Sadness	Introjected	$b = 0.567$, $p < .001$	$b = 0.131$, $p = .019$	$b = 0.074$	[0.0085, 0.1583]	Partial
Tearful R	Introjected	$b = 0.244$, $p = .008$	$b = 0.173$, $p = .002$	$b = 0.042$	[0.0076, 0.0901]	Partial
UnderFeelings	External	$b = -0.922$, $p < .001$	$b = -0.022$, $p =$ ns	$b = 0.020$, ns	[-0.0783, 0.1210]	None
Emp.Sadness	External	$b = -0.224$, $p = .165$	$b = -0.028$, $p =$ ns	$b = 0.005$, ns	[-0.0177, 0.0405]	None
Tearful R	External	$b = -0.147$, $p = .197$	$b = -0.028$, $p =$ ns	$b = 0.004$, ns	[-0.0129, 0.0285]	None

Discussion

The present study examined how cognitive and affective empathy relate to prosocial motivation and whether the well reported link between empathy and prosocial behavior, is mediated by distinct forms of motivation. Drawing on Self-Determination Theory (SDT; Deci & Ryan, 1985), we explored whether autonomous motivation predicts greater prosocial engagement among adolescents. Results confirmed that both empathy dimensions positively predicted prosocial motivation, which, in turn, predicted prosocial behavior. This mediating role of prosocial motivation highlights the importance of internalized, self-endorsed reasons for helping.

Findings of the present study are consistent with previous research demonstrating that autonomous forms of regulation, enhance the stability and frequency of prosocial behavior (Barry et al., 2008; Donald et al., 2020; Weinstein & Ryan, 2010). Particularly in early adolescence—a developmental period characterized by identity formation and social reorganization— fostering autonomous motivation appears particularly important. Results of our study contribute to the existing literature by highlighting that the development of prosocial behavior in early adolescence depends not only on the capacity for empathy (i.e., understanding and sharing others' emotions), but also on the degree to which motivational forces are internalized and autonomous.

The Link between Empathy and Motivation

Both cognitive and affective empathy predicted identified motivation. Adolescents who could understand others' feelings and consequently sympathize with them were more likely to help and support others for personally endorsed reasons. SDT assumes that identified motivation is rooted in deep understanding of others' needs and feelings and prior studies reporting that empathy predicts autonomous forms of motivation (Peetz & Milyavskaya 2021; Weinstein and Ryan, 2010).

Interestingly, affective empathy was a stronger predictor compared to cognitive empathy. This finding aligns with theoretical perspectives emphasizing the emotional roots of internal motivation (Ryan & Deci, 2000). Experiencing sadness in response to another's suffering, may foster a more salient drive to help (Eisenberg et al., 2006), as helping becomes personally meaningful and aligned with one's sense of self (Ryan & Deci, 2000). Previous studies have also demonstrated that empathetic concern predicted autonomous motivation (Pavey et al., 2012) and reported that adolescents who showed higher empathic sensitivity were more likely to express value-based reasons for helping -an indication of identified motivation (Hardy et al., 2015).

Affective empathy also predicted introjected motivation, a form of motivation where helping stems by, externally oriented, internal processes such as guild (Deci & Ryan, 1985). Affective empathy is associated with distress and empathetic concern and often relates with emotions like guilt or sorrow (Decety & Cowell, 2014). Adolescents experiencing distress in response to others' suffering may help in part to alleviate their own discomfort (Eisenberg et al., 1998). Van der Graaff et al. (2014) demonstrated that adolescent girls with higher affective empathy showed increased guilt-proneness, which could mediate between affective responses and helping behavior. In contrast, cognitive empathy involves a less emotionally driven understanding (Batson & Powell, 2003) and engages higher-order executive and mentalizing processes (Decety & Jackson, 2004). It may provide individuals with the capacity to understand another person's perspective or emotional state but does not necessarily create the internal pressure or emotional discomfort that drives behavior through introjected motives (López-Pérez et al., 2017).

Neither dimension of empathy predicted external motivation supporting previous findings that externally regulated behavior lacks emotional involvement (Donald et al., 2020; Vansteenkiste & Ryan, 2013). Interestingly, cognitive empathy had a small negative effect on external motivation, suggesting that adolescents who better understood others' emotions were less likely to be driven by external incentives like praise or punishment. In other words, higher empathy reduces reliance on external incentives (e.g., offer help to gain approval or to avoid punishment), which means that individuals may engage in helping behaviors driven by genuine concern rather than compliance with external expectations. Although SDT posits a developmental progression from external to more autonomous forms of motivation, this was not observed in our study. It is possible that external motivation exerts more influence during earlier childhood,

whereas in early adolescence—the developmental period of our sample—the shift toward autonomy and value driven action becomes more prominent (Hardy & Carlo, 2011; Ryan & Connell, 1989).

Prosocial Motivation as a Mediator

The total effect of empathy on prosocial behavior was consistent, aligned with a large body of literature that highlights empathy as a central predictor of helping behaviors (Eisenberg et al., 2006; Batson et al., 2015). Affective empathy, particularly empathetic sadness, was the strongest predictor, suggesting that the capacity to feel concern and resonate with others' suffering may be especially influential in triggering prosocial behavior. Cognitive empathy also had a significant total effect, although with more modest effect sizes. This finding is supported by previous studies (e.g., Decety & Jackson, 2004), suggesting that both cognitive and affective empathy contribute uniquely to prosocial behavior, but that affective components may have a more direct emotional effect toward action.

Despite the fact that the association between empathy and prosocial behaviors was clear, when we tested the mediation effect of prosocial motivation, the mechanisms underlying this relationship varied. Identified motivation significantly mediated the relationship between both types of empathy and prosocial behavior. Adolescents with higher empathy were more likely to internalize helping as a personal value, which in turn made them more likely to actually engage in prosocial behaviors. Despite their conceptual distinctions, both empathy dimensions may operate through a shared motivational mechanism when it comes to prosocial outcomes. Namely, empathy may lead to prosocial action not merely through emotional arousal, but because it activates value-based motivations that are integrated into one’s sense of self. Our findings support the notion that empathy is associated with greater internal motivation, which is then linked to greater prosocial behaviors (Bayar et al., 2020; Gagné, 2003; Hardy et al., 2015; Pavey et al., 2012).

Introjected motivation also partially mediated the link between affective empathy and prosocial behaviors. Adolescents who experience strong emotional attunement to others’ suffering may be inclined to help, at least in part, to reduce their own discomfort or maintain a positive self-image. Personal distress, a correlate of affective empathy, often leads to helping behaviors aimed at self-relief (Eisenberg et al., 1998; Hoffman, 2000). In contrast, although cognitive empathy predicted prosocial behavior, introjected motivation did not work as a mediator in this relationship. Perhaps affective empathy appears to be more emotionally compelling, prompting a "should-help" response tied to internalized social standards or guilt-avoidance. Meanwhile, cognitive empathy seems to encourage helping behavior for reasons more aligned with deliberate moral reasoning than emotional coercion.

Notably, the effect sizes for the mediation pathways involving introjected motivation were modest, suggesting that while internal pressures contribute to prosocial behavior, they are only part of a broader motivational landscape. These findings caution against assuming that all empathy-driven prosocial behavior is purely value-based; for some individuals, especially those

high in affective empathy, helping may serve self-regulatory functions—relieving guilt, avoiding shame, or upholding self-image.

External motivation did not mediate the empathy–prosocial behavior link, nor did it significantly predict prosocial actions. Although external incentives are frequently assumed to drive behavior, our results suggest that such motivation may not effectively promote authentic prosocial engagement. Empirical studies in adult populations support this view, showing that acting out of obligation or the desire for social approval is less predictive of sustained prosociality (Donald et al., 2020; Martinez & Knee, 2024). However, other research has reported that both external and internal motivations can be positively associated with prosocial behavior (Peetz & Milyavskaya, 2021). These discrepancies point to the importance of examining developmental context and the quality of motivation in order to clarify under which conditions external motives might support, rather than undermine, prosocial behavior.

Limitations and Future Directions

Several limitations must be acknowledged. The cross-sectional design of the study precludes causal inferences. Given the developmental trajectory of internalization—from external to more intrinsic forms—future research with longitudinal designs that follow children from early adolescence into adulthood could better illuminate how empathy, motivation and prosocial behavior interact and evolve over time. Moreover, self-report measures that have been used may introduce social desirability bias or inaccuracies due to participants' subjective interpretations; incorporating observational or peer-report data would strengthen the validity of findings. Furthermore, the Understanding Feelings subscale showed low internal consistency. Although this has been reported previously (Aristu et al., 2008; Mitsopoulou & Giovazolias, 2013), implying a recurring, not study-specific, limitation, it suggests a need to refine the subscale or adopt alternative validated measures in future studies. Lastly, our analysis revealed a partial mediation effect that should be interpreted with caution. It may indicate the presence of alternative pathways not captured in the model. Future research should examine parental styles, peer influence, moral identity, and cultural factors. Larger and more diverse samples, alongside intervention studies, are also needed to test practical applications.

Implications

The present findings have several important implications for research, education, and practice. From a theoretical perspective they support Self-Determination Theory's proposition that internalized, autonomous motivation is critical for translating empathic understanding into actual prosocial behavior. Practically, these results suggest that interventions aiming to promote prosocial behavior in adolescents should go beyond teaching empathy and focus on fostering autonomy-supportive environments where youth can internalize prosocial values. For educators

and parents, this means modeling prosocial behaviors, encouraging reflection on personal values, and providing opportunities for adolescents to make independent decisions about helping others. Programs such as Mesurado et al.'s (2018) Hero intervention demonstrate that structured, evidence-based strategies can enhance value-based prosocial engagement. Finally, promoting autonomous prosocial motivation may also have broader social benefits, including increased peer cooperation, reduced antisocial behavior, and the development of morally engaged, empathetic citizens.

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