

Association between emotional intelligence and prosocial tendencies in young adults: the mediating role of empathy

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KEYWORDS

Emotional intelligence
Empathy
Prosocial behavior
University students

ABSTRACT

Emotional intelligence and empathy have been consistently associated with prosocial behaviors in children and adolescents; however, empirical evidence in young adults remains limited, particularly on how these variables relate differently to types of prosocial motivation. Likewise, little is known about empathy's mediating role in the relationship between emotional intelligence and prosociality. This study examined the direct and indirect pathways linking emotional intelligence to prosocial tendencies, with empathy as a mediator, in a sample of young adults. The study used a cross-sectional observational-analytical design and included 514 young people aged 18 to 35 ($M = 21.13$, $SD = 3.71$). The *Trait Meta-Mood Scale*, the Interpersonal Reactivity Index, and the Prosocial Tendencies Measure-Revised were used. Data were analyzed using path models. Emotional intelligence and empathy together explained 14% of the variance in prosocial tendencies ($R^2 = .14$). Emotional repair, empathic concern, and personal distress showed different associations across prosociality dimensions. Mediation analyses indicated that empathy, particularly empathic concern and perspective taking, statistically mediated the association between emotional intelligence and prosocial tendencies. The findings expand the empirical evidence on prosociality in young adulthood and highlight empathy as a socioemotional correlate within the association between emotional self-awareness and prosocial helping.

Relación entre la inteligencia emocional y las tendencias prosociales en adultos jóvenes: el papel mediador de la empatía

PALABRAS CLAVE

Inteligencia emocional
Empatía
Comportamiento prosocial
Estudiantes universitarios

RESUMEN

La inteligencia emocional y la empatía se han asociado sistemáticamente con comportamientos prosociales en menores; sin embargo, la evidencia en adultos jóvenes sigue siendo limitada, especialmente en lo que respecta a sus asociaciones con los distintos tipos de motivación prosocial. Adicionalmente, se sabe poco sobre el papel mediador de la empatía en la relación entre la inteligencia emocional y la prosocialidad. Este estudio examinó las vías directas e indirectas que vinculan la inteligencia emocional con las tendencias prosociales, con la empatía como mediadora, en una muestra de adultos jóvenes. El estudio utilizó un diseño transversal, observacional-analítico e incluyó a 514 jóvenes de entre 18 y 35 años ($M = 21.13$; $DE = 3.71$). Se utilizaron la Escala de Meta-Estado de Ánimo como Rasgo, el Índice de Reactividad Interpersonal y la Medida de Tendencias Prosociales. Los datos se analizaron mediante modelos de trayectoria. La inteligencia emocional y la empatía explicaban conjuntamente el 14 % de las tendencias prosociales ($R^2 = .14$). La reparación emocional, la preocupación empática y la angustia personal mostraron asociaciones con las tendencias prosociales. Además, la preocupación empática y la toma de perspectiva mediaron parcialmente la relación entre la inteligencia emocional y las tendencias prosociales. Los resultados amplían la evidencia empírica sobre la prosocialidad en la edad adulta temprana y destacan la empatía como un mecanismo socioemocional que vincula la autoconciencia emocional con la expresión conductual de la ayuda prosocial.

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Prosocial behavior refers to voluntary actions that benefit others—such as helping, sharing, or cooperating—which may be performed with or without the expectation of receiving external rewards (Eisenberg et al., 2015; Martí-Vilar et al., 2022). Due to the diversity of emotional and motivational factors involved in the intention to help, prosocial behavior is considered multidimensional (Carlo et al., 2024), and consequently, it may be motivated by emotionally evocative or extreme situations, selfish or altruistic moral reasons, the desire to obey or please others, or the prioritization of helping in public situations (Batson & Powell, 2003; Caetano et al., 2023; Carlo et al., 2003).

Research has shown that prosocial behaviors have a positive influence on psychological well-being, interpersonal relationships, and social functioning in adulthood (Fang & Huang, 2023) and play a fundamental role in regulating social life and establishing functional interpersonal relationships, especially during emerging adulthood, a stage characterized by the consolidation of identity and meaningful social bonds (Cheng et al., 2024). Therefore, developing social-emotional competencies in young people is associated with greater awareness of others' needs and increased prosocial concern (Liu et al., 2024). Likewise, the ability to make reflective decisions that consider one's own consequences and those of others is fundamental to adopting prosocial behaviors (Zych et al., 2018).

From a socio-emotional perspective, emotional intelligence can be conceptualized as the set of skills that enable people to perceive, understand, and regulate their own emotions and those of others in an adaptive manner (Čikeš & Humer, 2023; Mayer et al., 2024). Research shows that prosocial behaviors are linked to the ability to understand and manage emotional states, fostering empathetic responses and behaviors that promote others' well-being (Martí-Vilar et al., 2022). Thus, emotional intelligence facilitates emotional regulation in interpersonal contexts and acts as a key psychological resource for expressing prosocial behaviors in everyday life (Mayer et al., 2024; Mestre et al., 2009).

Empathy, particularly in its affective dimension, has been consistently associated with prosocial behavior (Davis, 1983; Davis et al., 2019; Martí-Vilar et al., 2022). Empathy is a multidimensional socioemotional ability that involves understanding and inferring others' emotional states, as well as an emotional response congruent with those states. It is a central component of adaptive interpersonal functioning (Davis, 1983; Davis et al., 2019).

According to the Empathy-Altruism Hypothesis (Batson et al., 2015), empathic concern is the primary antecedent of altruistic motivation and increases the likelihood of acting to benefit others. From this perspective, prosocial tendencies, particularly those driven by a genuine intention to benefit others, require the capacity to experience empathy.

From this perspective, empathy integrates cognitive processes, such as perspective-taking and imagination, and affective processes, such as empathic concern and personal distress (Gómez-Tabares et al., 2023). These dimensions represent interpersonal mechanisms through which intrapersonal competencies, such as emotional intelligence and emotional self-efficacy, may facilitate understanding of others' emotional states

and promote prosocial responses aimed at others' well-being (Durán Palacio et al., 2026; Wang et al., 2021; Yang & Wang, 2024). Consistent with this, previous research has shown that individuals with stronger prosocial tendencies tend to express their emotions more spontaneously and are better able to recognize others' negative emotions, thereby fostering greater reciprocity in social interactions (Lee & Johnson, 2025; Van Kleef & Lelieveld, 2022).

Various contextual factors, particularly family upbringing and socialization, have been associated with the development of socioemotional and moral competencies, prosocial behavior, and better social adaptation in adulthood (Fang & Huang, 2023; Gómez-Tabares et al., 2023; Martí-Vilar et al., 2022). In this regard, Song et al. (2025) analyzed the relationships between family adjustment, cohesion, empathy, moral sensitivity, and prosocial tendencies in college students. It revealed that family adjustment and cohesion were positively associated with moral identity, empathy, and prosocial tendencies (public, anonymous, altruistic, compliance-based, emotional, and emergency-based). Furthermore, moral elevation, defined as the positive emotional response to observing ethical behaviors, was associated with greater willingness to act for others, especially when combined with a well-established moral identity and perceived social support (Fang & Huang, 2023; Song et al., 2025).

Evidence suggests that socio-emotional factors, such as emotional intelligence and empathy, contribute to prosocial behavior (Čikeš & Humer, 2023) by facilitating socialization, regulating social interactions, and fostering behaviors that promote others' well-being. Therefore, analyzing socio-emotional processes is essential for understanding the psychological mechanisms underlying prosociality in early adulthood. However, research has primarily focused on children and adolescents (Cao & Chen, 2025), leaving a gap in the literature that examines the interrelationships between intra- and interpersonal socioemotional factors and various prosocial behaviors in young adults, who, unlike children and adolescents, have established models of social behavior based on their relational experiences, thereby limiting the comparability of evidence and explanatory frameworks derived from child and adolescent populations.

The present study

Although emotional intelligence and empathy have been independently linked to prosocial behavior, it remains unclear how these socioemotional processes are jointly associated with different prosocial tendencies. Evidence remains limited on whether the cognitive and affective dimensions of empathy differentially mediate the associations between emotional intelligence and distinct prosocial tendencies during early adulthood. Clarifying these associations—both in general and within each dimension—can contribute to a more comprehensive understanding of how intrapersonal emotional competencies relate to different expressions of prosocial behavior during early adulthood.

Based on the evidence reviewed, young adults who better perceive, understand, and regulate their own emotions are also

expected to better interpret others' emotional states, respond with greater empathic concern, and adopt others' perspectives. This expectation is grounded on the premise that emotional intelligence provides intrapersonal emotional resources that may be associated with understanding others' emotions and with empathic response and prosocial behavior.

The present study examined the direct and indirect associations between the dimensions of emotional intelligence and prosocial tendencies, as well as the mediating role of the cognitive and affective dimensions of empathy, in a sample of young adults. We hypothesized that the dimensions of emotional intelligence would be positively associated with the different prosocial tendencies and that the cognitive and affective dimensions of empathy would partially mediate these associations.

Method

Participants

An observational, cross-sectional, analytical study was conducted using a non-probabilistic convenience sampling strategy. Young adults aged 18 to 35 were recruited through a private university in Medellín, Colombia, whose student body includes individuals from diverse geographic areas and socioeconomic backgrounds. An electronic invitation was sent to approximately 8,000 students across all academic semesters, and 514 participants completed the survey, forming the final sample ($M = 21.13$, $SD = 3.72$) (Table 1).

Table 1

Sociodemographic characteristics of the participants

	n	%
Gender		
Female	373	72.6
Male	141	27.4
Marital status		
Single	323	62.8
In a relationship	158	30.7
Cohabiting	23	4.5
Married	9	1.8
Separated	1	0.2
Socioeconomic status (SES)*		
Stratum 1 (lowest)	20	3.9
Stratum 2	144	28
Stratum 3	238	46.3
Stratum 4	89	17.3
Stratum 5	21	4.1
Stratum 6 (highest)	2	0.4
Employment status		
Employed	173	33.7
Unemployed	341	66.3
Faculty		
Business, Economics, and Accounting	48	9.3
Social Sciences, Health, and Well-being	225	43.8
Communication, Advertising, and Design	124	24.1
Law and Political Science	17	3.3
Education and Humanities	75	14.6
Engineering and Architecture	22	4.3
Missing data	3	0.6

Note. Socioeconomic status (SES) was measured using Colombia's official residential stratification system, which classifies dwellings into one of six strata based on housing and neighborhood characteristics. The strata range from 1 = *Low-low* to 6 = *High*. Strata 1-3 generally represent lower socioeconomic contexts, stratum 4 represents a middle socioeconomic context, and strata 5-6 represent higher socioeconomic contexts.

Instruments

A sociodemographic questionnaire, designed by researchers, was administered to collect information on age, gender, marital status, socioeconomic status, current employment status, college enrollment, and academic semester; three instruments were administered:

The *Prosocial Tendencies Measure-Revised* (PTM-R, Carlo & Randall, 2002; Carlo et al., 2003), which examines motivational dispositions toward different forms of prosocial behavior in adolescents and young adults; it consists of six factors: public (“I can help others best when people are watching me”), anonymous (“I prefer to donate money anonymously”), emotional (“It is most fulfilling to me when I can comfort someone who is very distressed”), compliance (“When people ask me to help them, I do not hesitate”), dire (“I tend to help people who are in a real crisis or need”), and altruistic (“I believe that donating goods or money works best when it is tax-deductible [reverse]”). Responses are rated on a five-point Likert scale ranging from 1 = *Does not describe me well* to 5 = *Describes me very well*. The PTM-R was validated in samples of Latin American adolescents and young adults (Caetano et al., 2023; Mestre et al., 2015). In previous studies with Colombian youth, the PTM-R demonstrated adequate internal consistency for the total score ($\alpha = .73$) (Gómez Tabares et al., 2024). In this study, the PTM-R showed good overall internal consistency and across subdimensions (McDonald’s ω_{ord} Total = .87; Public = .81; Anonymous = .86; Emotional = .82; Compliance = .79; Dire = .73; Altruistic = .75).

The *Trait Meta-Mood Scale* (TMMS-24, Salovey et al., 1995) measures self-reported emotional intelligence across three dimensions: emotional attention (“I pay attention to my feelings”), emotional clarity (“I am aware of my feelings”), and emotional repair (“I try to stay positive despite being in an emotionally compromised state”), using a five-point Likert scale ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*. The 24-item Spanish version, adapted by Fernández-Berrocal et al. (2004), was used. This version confirmed the three-factor structure (Attention, Clarity, and Repair), gender invariance, and excellent test-retest reliability and internal consistency for each dimension ($\alpha > .8$), which this study corroborated by reporting excellent internal consistency for the total scale and by subdimensions (McDonald’s ω_{ord} Total = .94; Attention = .92; Clarity = .94; Repair = .9).

The *Interpersonal Reactivity Index* (IRI, Davis, 1983) is a 28-item Likert-scale instrument with five response options ranging from 1 = *Does not describe me at all* to 5 = *Describes me very well*. It assesses empathy across four dimensions: perspective-taking (“When I am upset with someone, I usually try to put myself in their shoes for a moment”), fantasy (“I really identify with the feelings of the characters in a novel”) (cognitive empathy), empathic concern (“I often feel compassion and concern for people who are less fortunate than I am”), and personal distress (“In emergencies, I feel anxious and uncomfortable”) (affective empathy). The original version exhibited acceptable internal consistency (.68-.79) (Davis, 1983). However, studies

that linguistically adapted it into Spanish confirmed the structure of the four factors mentioned above and demonstrated adequate internal consistency (Arenas et al., 2021; Mestre et al., 2004). The study also found good overall reliability and moderate-to-good reliability across subdimensions (McDonald’s ω_{ord} Total = .85; Perspective-taking = .67; Fantasy = .79; Empathic concern = .68; Personal distress = .76).

Procedure and ethical considerations

The study followed established ethical guidelines for research involving human participants, received approval from the funding institution’s ethics committee, and was classified as a low-risk study under Colombian Resolution 8430 of 1993. Before participating, participants were informed about the study’s objectives, the voluntary nature of their participation, and data confidentiality, and all provided informed consent.

Data analysis

The software programs SPSS, Jamovi (version 2.7.38), and Python were used. The study described the participants’ socio-demographic characteristics and the study variables. The study reported mean and standard deviation values for the quantitative variables. The Shapiro-Wilk test assessed the normality of the study variables, which indicated that total emotional intelligence ($p = .11$), total empathy ($p = .08$), and total prosocial tendencies ($p = .14$) were normally distributed. However, the dimensions did not follow a normal distribution.

A stepwise analysis strategy was conducted using a sequence of analyses with increasing levels of specificity. First, the correlation between emotional intelligence (TMMS), empathy (IRI), and prosocial tendencies (PTM) was assessed using Pearson’s correlation coefficient for the total scores and, subsequently, Spearman’s correlation coefficient for the subdimensions due to the non-normal distribution of these variables. Second, associations between total TMMS, total IRI, and total PTM were estimated using multiple linear regression models, followed by additional models examining the associations between the TMMS and IRI subdimensions and total PTM. Model validity was assessed using the variance inflation factor (VIF), with values below 5 indicating no multicollinearity, and the assumptions of residual independence and normality were evaluated using the Durbin-Watson and Shapiro-Wilk tests, respectively. Third, after identifying associations between the TMMS and IRI subdimensions and total PTM, the total TMMS and IRI scores, together with their respective dimensions, were modeled against each PTM dimension to determine which specific prosocial tendencies were statistically associated with emotional intelligence and empathy. Unstandardized regression coefficients and their corresponding 95% confidence intervals (95% CI) are reported, and intervals that did not include zero were considered statistically significant. Lastly, since the regression analyses revealed consistent associations between total TMMS, the IRI dimensions, and total PTM, a generalized linear model (GLM)-based mediation analysis was estimated using the jAMM package in

Jamovi to test three hypotheses: (1) emotional intelligence is positively associated with empathy; (2) empathy is positively associated with prosocial tendencies; and (3) the association between emotional intelligence and prosocial tendencies is statistically mediated by empathy.

Given the multidimensional nature of emotional intelligence, empathy, and prosocial tendencies, separate mediation models were estimated for each prosocial tendency dimension, including all dimensions of emotional intelligence as covariates and the dimensions of empathy as mediators, to examine differentiated pathways and specific indirect effects. Indirect effects were estimated using a bias-corrected nonparametric bootstrap procedure with 5,000 resamples to obtain robust confidence intervals. The results of the indirect effects were presented in forest plots to illustrate the significant pathways.

Because multiple models were estimated at the subdimension level, increasing the risk of Type I errors, the Benjamini-Hochberg (*q*BH) false discovery rate procedure was applied to adjust *p*-values for the subdimension-specific regression models and the direct and indirect mediation effects to control for multiplicity. Finally, sensitivity analyses evaluated the potential influence of correlated variables with opposite regression coefficients using communalities analysis and 10,000 bootstrap resamples.

Results

Prosocial tendencies were positively and significantly correlated with empathy ($\rho = 0.248, p < .001$) and emotional intelligence ($\rho = 0.295, p < .001$) (Table 2). At the dimensional level, public prosocial tendencies were positively associated with emotional repair and personal distress and negatively associated with perspective-taking and fantasy. Emotional prosocial tendencies were positively correlated with all dimensions of

emotional intelligence and with empathy. Anonymous prosocial tendencies were positively associated with attentiveness, clarity, emotional repair, and perspective-taking. Altruistic prosocial tendencies correlated negatively with personal distress and emotional repair, and positively with perspective-taking and empathic concern. Finally, the prosocial tendencies of compliance and emergency showed positive correlations with all dimensions of emotional intelligence and empathy, except for personal distress (Table 2).

Regression analyses showed that total emotional intelligence and total empathy together accounted for 14% of the variance in prosocial tendencies (Table 3). Higher emotional intelligence and empathy scores were associated with 0.16 and 0.22 points higher prosocial tendency scores, respectively, in prosocial tendencies, with a larger standardized effect size for emotional intelligence ($\beta = 0.28$). Furthermore, the dimensions of emotional intelligence and empathy together explained 20% of the variance in prosocial tendencies. In this model, emotional repair, perspective-taking, and empathic concern showed statistically significant associations with prosocial tendencies (Table 3).

When analyzing prosocial tendencies specifically, total emotional intelligence was positively associated with public, anonymous, compliant, and dire prosocial tendencies, and negatively associated with altruistic prosocial tendencies. In contrast, total empathy was positively associated with emotional, altruistic, compliant, and dire prosocial tendencies, and negatively associated with public and anonymous prosocial tendencies (Table 4).

In public prosocial behavior, emotional intelligence and empathy—which are opposites—showed a small, negative shared component with confidence intervals that included zero ($R^2_{\text{common}} = -.002, 95\% \text{ CI } [-0.005, 0.001]$), so no evidence of statistical suppression was found.

Table 2

Correlations between total scores and subdimensions of emotional intelligence, empathy, and prosocial tendencies

	<i>M</i>	<i>SD</i>	Public	Emotional	Anony- mous	Altruistic	Compliant	Dire	PTM (total)
Attention	3.34	0.91	.06	.27**	.09*	-.08	.2**	.18**	.24**
Clarity	2.99	0.94	.05	.16**	.14**	-.05	.15**	.18**	.2**
Repair	3.15	0.9	.14**	.16**	.16**	-.11*	.25**	.26**	.29**
TMMS (total)	3.16	0.74	.1*	.25**	.15**	-.1*	.24**	.26**	.3**
TP	3.56	0.61	-.18**	.19**	.1*	.15**	.26**	.26**	.24**
FS	3.33	0.82	-.01	.19**	-.02	-.06	.09*	.1*	.09
EC	3.72	0.63	-.19**	.36**	.04	.16**	.31**	.27**	.31**
PD	2.68	0.71	.21**	.16**	.01	-.24**	0	.02	.06
IRI (total)	3.32	0.46	-.05	.34**	.03	-.01	.23**	.23**	.25**
<i>M</i>			1.8	3.46	2.8	4.05	3.96	3.6	3.28
<i>SD</i>			0.81	0.84	0.89	0.73	0.88	0.77	0.43

Note. TMMS = total emotional intelligence score; Attention, Clarity, and Repair = TMMS subdimensions; IRI = total empathy score; TP = perspective taking, FS = fantasy, EC = empathic concern, and PD = personal distress, corresponding to the IRI subdimensions; PTM = total prosocial tendencies score; Public, Emotional, Anonymous, Altruistic, Compliant, and Dire = PTM-R subdimensions; *M* = mean; *SD* = standard deviation.

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

Table 3*Association between emotional intelligence and empathy on prosocial tendencies (dependent variable)*

Predictor	<i>B</i>	CI 95%		<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>q</i> BH	VIF
		Lower	Upper						
Emotional intelligence	0.16	0.11	0.21	0.02	0.28	6.73	< .001	< .001	1.01
Empathy	0.22	0.14	0.29	0.04	0.23	5.6	< .001	< .001	1.01
$R^2 = .14$, $F = 42.94$, $p < .001$, $SW = 0.39$, $DW = 2.08$, $p = 0.37$									
Emotional intelligence dimensions									
Emotional attention	0.02	-0.03	0.07	0.03	0.04	0.8	.42	.49	1.8
Emotional clarity	0.02	-0.04	0.07	0.03	0.03	0.59	.56	.56	2.09
Emotional repair	0.11	0.07	0.16	0.02	0.24	5.01	< .001	< .001	1.44
Empathy dimensions									
Perspective taking	0.08	0.02	0.14	0.03	0.11	2.43	.015	.036	1.30
Fantasy	-0.03	-0.07	0.02	0.02	-0.05	-1.12	.26	.37	1.31
Empathic concern	0.17	0.11	0.23	0.03	0.25	5.19	<.01	<.001	1.46
Personal distress	0.05	-0.01	0.1	0.03	0.08	1.71	.088	.154	1.24
$R^2 = .2$, $F = 17.66$, $p < 0.001$, $SW = 0.91$, $DW = 2.11$, $p = 0.22$									

Note. *B* = unstandardized regression coefficient; *SE* = standard error; β = standardized regression coefficient; CI = confidence interval; VIF = variance inflation factor; R^2 = coefficient of determination; *F* = model *F* statistic; *SW* = Shapiro-Wilk test of normality; *DW* = Durbin-Watson statistic; *p* = significance level; *q*BH = Benjamin-Hochberg.

Table 4*Association of emotional intelligence and empathy on prosocial tendencies*

Predictor	Statistic	Prosocial tendencies					
		Public	Emocional	Anonymous	Altruistic	Compliant	Dire
Emotional attention	β	0.03	0.09	-0.01	-0.06	0.06	0
	IC 95%	(-0.07, 0.14)	(-0.01, 0.12)	(-0.12, 0.10)	(-0.16, 0.05)	(-0.04, 0.17)	(-0.11, 0.11)
Emotional clarity	β	0.006	0.06	0.07	-0.04	-0.05	0.05
	IC 95%	(-0.11, 0.12)	(-0.05, 0.18)	(-0.05, 0.18)	(-0.15, 0.08)	(-0.17, 0.06)	(-0.07, 0.16)
Emotional repair	β	0.24***	0.12*	0.14*	-0.20***	0.2***	0.21***
	IC 95%	(0.14, 0.33)	(0.03, 0.22)	(0.04, 0.25)	(-0.3, -0.11)	(0.11, 0.3)	(0.12, 0.31)
Emotional intelligence	β	0.14**	0.27***	0.17***	-0.15**	0.21***	0.24***
	IC 95%	(0.05, 0.22)	(0.15, 0.3)	(0.09, 0.26)	(-0.23, -0.06)	(0.13, 0.29)	(0.16, 0.32)
Perspective taking	β	-0.11*	0.05	0.05	0.11*	0.13*	0.12*
	IC 95%	(-0.20, -0.02)	(-0.04, 0.14)	(-0.04, 0.15)	(0.02, 0.21)	(0.04, 0.22)	(0.03, 0.21)
Fantasy	β	0.03	0.03	-0.02	-0.11*	-0.08	-0.02
	IC 95%	(-0.06, 0.12)	(-0.06, 0.12)	(-0.12, 0.08)	(-0.20, -0.02)	(-0.17, 0.01)	(-0.11, 0.08)
Empathic concern	β	-0.22***	0.26***	0.01	0.26***	0.27***	0.21***
	IC 95%	(-0.32, -0.13)	(0.17, 0.36)	(-0.09, 0.11)	(0.16, 0.36)	(0.18, 0.37)	(0.12, 0.31)
Personal distress	β	0.258***	0.15**	0.06	-0.27***	-0.02	0.03
	IC 95%	(0.168, 0.347)	(0.06, 0.23)	(-0.03, 0.16)	(-0.36, -0.18)	(-0.11, 0.07)	(-0.06, 0.12)
Empathy	β	-0.06	0.33***	0.03	0.01	0.20***	0.2***
	IC 95%	(-0.15, 0.03)	(0.25, 0.41)	(-0.05, 0.12)	(-0.07, 0.1)	(0.12, 0.29)	(0.12, 0.28)

Note. β = standardized coefficient; CI 95% = 95% confidence interval.

* *q*BH < .05; ** *q*BH < .01; *** *q*BH < .001.

Figure 1

Statistical mediation model of the association between emotional intelligence on prosocial tendencies through empathy



Note. Solid arrows represent the estimated paths, dashed arrows represent covariances among the empathy dimensions, and the shaded rectangle only highlights the mediation component of the model.

In the dimensional analysis, only emotional repair showed a positive and significant association with public, emotional, anonymous, compliant, and dire prosocial tendencies, and a negative association with the altruistic tendency. Regarding the dimensions of empathy, perspective-taking was positively associated with emotional, altruistic, compliant, and dire prosocial tendencies, and negatively associated with the public tendency. Fantasy was negatively associated exclusively with the altruistic tendency. Empathic concern was positively associated with emotional, altruistic, compliant, and dire prosocial tendencies and negatively associated with public prosocial tendency. Finally, personal distress was positively associated with public and emotional prosocial tendencies and negatively associated with the altruistic tendency (Table 4).

Because empathy dimensions showed stronger associations with prosocial tendencies than emotional intelligence dimensions, the mediating role of empathy in the relationship between the two was evaluated. The results showed that emotional intelligence was positively and significantly associated with empathy. Similarly, empathy was positively and significantly associated with prosocial tendencies. Although the effect size was

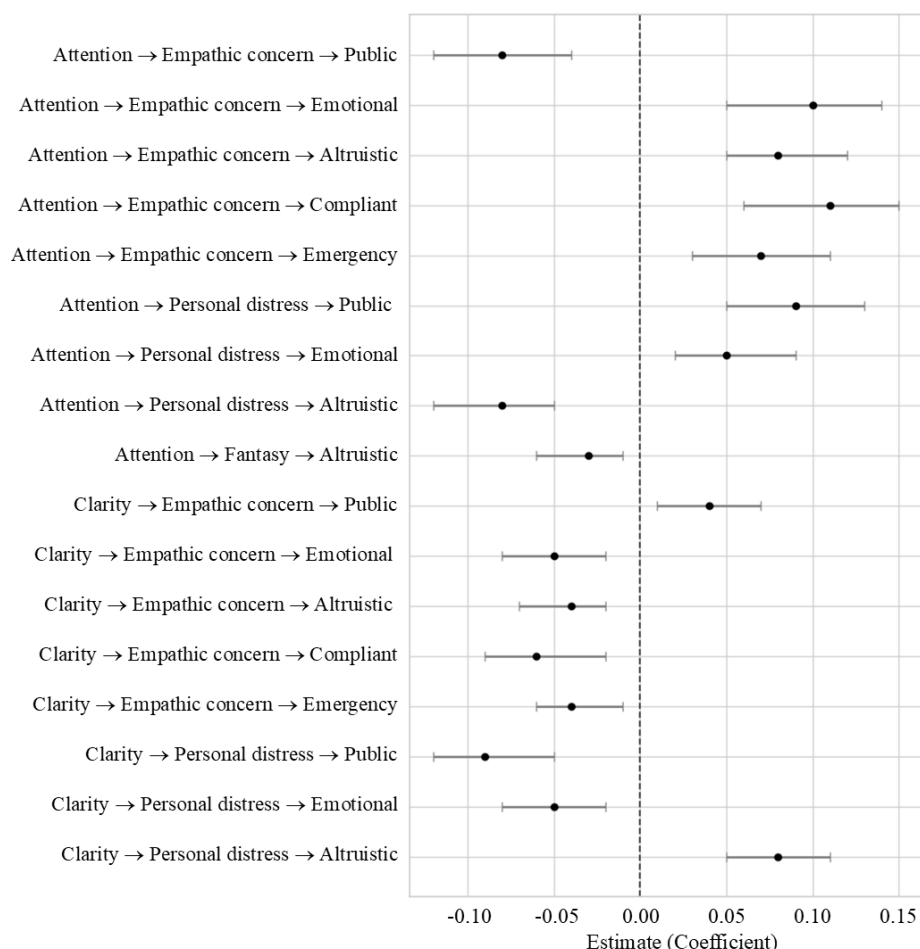
small, the model indicated partial statistical mediation through empathy, involving empathy mediating the relationship between emotional intelligence and prosocial tendencies. This mediation was explained in terms of the dimensions of empathic concern and perspective-taking (see Figure 1).

Given the small effect sizes and the partial mediation observed, specific indirect associations between emotional intelligence, empathy, and prosocial tendencies were examined.

Indirect associations showed distinct patterns between attention and emotional clarity. Attention primarily exhibited positive indirect associations with emotional, altruistic, compliant, and dire tendencies through empathic concern, while its indirect association with the public tendency was negative. Through personal distress, attention showed positive associations with public and emotional tendencies, but negative associations with the altruistic tendency. In contrast, emotional clarity exhibited a predominantly negative pattern in empathic concern for emotional, altruistic, complaint, and dire tendencies, although the indirect association with the public tendency was positive. Through personal distress, clarity showed negative indirect associations with public and emotional tendencies, and positive

Figure 2

Forest plot showing the indirect effects of emotional intelligence dimensions on prosocial tendencies, as mediated by empathy components



ones with the altruistic tendency. Taken together, these results indicate that indirect effects do not follow a uniform direction but vary depending on the dimension of emotional intelligence, the component of empathy, and the specific form of prosociality considered (Figure 2).

Discussion

Emotional intelligence, empathy, and prosocial tendencies were significantly associated, confirming the role of these constructs in regulating behavior aimed at the well-being of others; as these socio-emotional skills increase, greater prosocial tendencies become evident, which is consistent with previous research on young adults (Čikeš & Humer, 2023; Liu et al., 2024).

This is because it views emotional intelligence as a cognitive-affective system of emotional processing that involves the ability to perceive, assimilate, understand, and regulate one's own emotions and those of others (Fernández-Berrocal et al., 2025; Mayer et al., 2016, 2024), which has been associated with a greater willingness to pay attention to and understand the mental states of others, as well as with a greater capacity to experience emotional responses of concern and a desire to help (Martí-Vilar et al., 2022). The results suggest that higher levels of perceived emotional intelligence are associated with greater empathic capacity, expressed through understanding of emotional states, adopting others' perspectives, and greater concern for their well-being, and, in turn, are linked to greater prosocial disposition (Xiao et al., 2021). Therefore, both emotional intelligence and empathy were associated with prosocial tendencies in young adults, consistent with previous studies reporting associations between the propensity to help and care for others and greater awareness of one's own emotional state, the capacity for emotional self-regulation, and the understanding of others' emotions (Yang & Wang, 2024).

Differential patterns of emotional intelligence were also observed: the ability to regulate negative emotions and maintain positive states showed the strongest associations with various prosocial tendencies. This association was more pronounced when helping others involved third parties, as well as in emergency or submissive situations, suggesting that young people with greater emotional self-regulation may be more willing to help in situations involving high social pressure or emotional stress. One possible explanation is that this ability allows them to mitigate the intensity of emotional distress (e.g., anxiety, fear, and anger), maintain positive emotions, and use them as psychological resources to understand others' emotional states and offer help.

While emotional repair was positively associated with public, urgent, and conformist prosocial tendencies, it was negatively associated with altruistic tendencies. From a motivational perspective on emotion regulation (Tamir, 2016), people regulate their emotions to achieve specific goals oriented toward their own well-being or others' well-being. In contexts where emotional repair focuses on restoring personal emotional balance, willingness to engage in altruistic behaviors that entail a

high emotional cost may be reduced (Zaki, 2020). This differential pattern of emotional intelligence in relation to prosocial tendencies underscores the importance of analyzing the mediating mechanisms involved, including empathy.

In this regard, an association was found with various types of prosocial behavior, which is consistent with the psychological literature indicating that empathy is a stable longitudinal predictor of prosocial behavior throughout the lifespan (Eisenberg et al., 2015; Gómez-Tabares et al., 2019). The results also support the idea that empathy modulates moral transgressions (Ouvrein et al., 2018; Zych & Llorent, 2019) and is associated with altruistic helping in situations of emotional connection (Gómez-Tabares et al., 2019).

Specifically, the ability to put oneself in another's shoes and empathic concern were positively associated with altruistic, emotional, conformity, and emergency prosocial tendencies. Conversely, the ability to put oneself in another's shoes and empathic concern were negatively associated with public prosocial tendencies. In this regard, Čikeš and Humer (2023) analyzed the associations between emotional intelligence, empathy, and prosocial behavior in college students, noting that emotional intelligence ($\beta = 0.24$), cognitive empathy ($\beta = 0.13$), and emotional reactivity ($\beta = 0.3$) contributed to direct and statistically significant associations ($p < .05$) that explained 26% of prosocial behavior ($R^2 = .26$). Furthermore, path analyses showed that cognitive empathy and emotional reactivity partially mediated the association between emotional intelligence and prosocial behavior.

For its part, the study by Mesurado et al. (2022), which involved young adults aged 18 to 25, analyzed the interactions between empathy and various measures of prosocial behavior, finding that perspective-taking and empathic concern were positively associated with altruistic and responsive prosocial tendencies, as well as with prosocial behaviors toward strangers, friends, and family; conversely, perspective-taking and empathic concern were negatively associated with prosocial tendencies in public settings.

These differential associations suggest that the cognitive and affective components of empathy, such as perspective-taking and empathic concern, may be important correlates of helping behaviors motivated by requests for help or emotionally evocative circumstances offering no personal benefits. These findings are consistent with the empathy-altruism hypothesis proposed by Batson et al. (2015), which states that empathic concern involves a genuinely selfless emotional response oriented toward helping people in need, thereby generating altruistic motivation. Accordingly, empathic concern has been identified as a main precursor of altruistic behavior (Carlo et al., 2003, 2022, 2024).

Evidence has shown that prosocial behavior in public is motivated by the desire to project a favorable social image to gain approval and recognition, whereas helping behavior is driven by individualistic intentions (Carlo et al., 2022, 2024). In this case, public prosocial behavior involves a greater perception of personal benefit, leading the individual to offer help without a genuine understanding of or concern for the other

person's psychological state or well-being (Batson et al., 2015; Carlo et al., 2003, 2024).

In contrast, personal distress was positively associated with public and emotional tendencies and negatively associated with altruistic tendencies, consistent with Davis's (1983) conceptualization of personal distress as a self-oriented affective reaction of discomfort and anxiety in response to the suffering of others. Unlike empathic concern, which is other-oriented, personal distress involves an emotional activation centered on one's own distress. In this sense, young adults who focus excessively on their own emotional states exhibit a lower propensity for genuinely altruistic behaviors. When the empathic response takes the form of personal distress or dysregulated imaginative involvement, helping behavior appears to stem more from processes of affective self-regulation than from concern for the other's well-being (Zaki, 2020).

Consistent with the path analyses, general empathy and the specific dimensions of perspective-taking and empathic concern both statistically mediated the association between emotional intelligence and prosocial tendencies. These results support the theoretical proposition that emotional intelligence is a socioemotional competence associated with affective and cognitive empathic processes, which, in turn, are related to prosocial behaviors motivated by others' well-being. These results suggest that emotional intelligence is associated with empathic cognitive and emotional responses which are, in turn, associated with altruistic, compliant, dire, and emotional prosocial behaviors.

Although the indirect associations in the path analyses were modest, their statistical consistency and theoretical coherence support interpreting empathic processes as statistically significant mediators of the association between emotional intelligence and prosocial tendencies. Thus, the findings align with a motivational and multidimensional interpretation of prosociality (Carlo et al., 2022, 2024), suggesting that emotional intelligence is associated with prosocial tendencies in models including empathic processes oriented toward others' well-being.

Limitations and future directions

Interpret the results of this study considering the following methodological limitations. First, the cross-sectional design limits the ability to draw causal inferences among the analyzed variables. Although the theoretical model and statistical analyses follow a theoretically coherent explanatory sequence, interpret the mediation analyses as statistical models of association rather than as evidence of causal mechanisms. Longitudinal studies are needed to validate this sequence and establish the temporal precedence of emotional intelligence and empathy with respect to prosocial tendencies.

Second, using self-report measures may introduce biases related to social desirability and subjective evaluations of one's socioemotional competencies and prosocial responses. Incorporating behavioral, observational, or experimental indicators would enhance the internal and ecological validity of the findings.

Third, participants were recruited using a non-probabilistic convenience sampling strategy from a single university. The low response rate, the overrepresentation of women, and the predominance of students from Social Sciences and Humanities may limit the generalizability of the findings to other young adult populations.

Finally, while the proposed models supported the hypothesized associations, prosocial behavior is multidetermined, so future research should consider additional individual, interpersonal, and contextual factors. Given these findings, future research should systematically examine the conditions under which emotional repair facilitates or inhibits altruistic prosociality. This examination should particularly consider the perceived emotional costs and predominant regulatory goals across contexts. Furthermore, it is recommended that the hypotheses examined in this study be tested using more complex analyses, such as structural equation modeling (SEM).

Practical implications

The results suggest that interventions aimed at promoting prosocial behavior in young adults may benefit from considering emotional intelligence and empathy as multidimensional constructs. In particular, educational, psychological, and social intervention strategies could emphasize perspective-taking and empathic concern while recognizing the differential associations of emotional repair across distinct prosocial tendencies. Furthermore, the heterogeneous pattern observed across altruistic, public, emotional, compliant, and dire prosocial tendencies suggests that psychosocial programs may tailor their objectives to the specific type of helping behavior they seek to promote, rather than assuming the same socioemotional competencies are equally relevant to all forms of prosociality.

Conclusions

This study found positive associations between emotional intelligence, empathy, and prosocial tendencies in young adults. Furthermore, empathy—particularly perspective-taking and empathic concern—statistically mediated the association between emotional intelligence and prosocial tendencies. Although the proposed models had modest explanatory power, the findings support a multidimensional conception of prosociality. Specifically, the findings showed that specific dimensions of emotional intelligence and empathy were differentially associated with distinct forms of prosocial behavior. These findings underscore the importance of considering the multidimensional nature of these socioemotional competencies when examining and promoting prosocial behavior among young adults.

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Declaration of interests

The authors declare that there is no conflict of interests.

Data availability statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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