

The Interconnected Role of Empathy, Prosocial Behaviour, and Altruism among University Students

Qurat Ul Ain Hamid, *National University of Modern Languages (NUML), Rawalpindi, Pakistan*

Muhammad Umar Ayub, *National University of Modern Languages (NUML), Rawalpindi, Pakistan*

Keywords	Abstract
Altruism, Empathy, Empathetic Environment, Prosocial Behaviors, Prosocialness.	<i>The current study examines the relationship between empathy, prosocial behavior, and altruism in a cohort of university students. The first objective of the study is to examine the association between empathy and prosocial behaviour, second, to investigate the association between prosocial behaviour and altruism, and third, to evaluate the association between altruism and empathy. As part of a cross-sectional study, 400 university students completed a questionnaire on empathy, prosocial behaviour, and altruistic tendencies. Pearson correlations were used along with multiple regression techniques to examine relationships and the predictive role of prosocialness and empathy on altruism. The current study determined a significant positive association between prosocialness and empathy ($r=.36$). Altruism was found to have a significant positive relationship with prosocial behaviour ($r=.51$), while the positive relationship between empathy and altruism reached ($r=.38$). The findings of the study are useful in establishing educational strategies to promote empathy and prosocial behaviours in different settings. The findings suggested that the students with greater empathy appear to be more helpful or prosocial in behaviour, which in turn created an empathetic environment. It has practical applications in educational and community settings by focusing on encouraging prosocial and altruistic behaviours in students.</i>

1. INTRODUCTION

The studies on empathy, prosocial behaviour, and altruism are pivotal in understanding the social perspectives of students. The study variables played a fostering role in establishing the interpersonal relationship, social engagement, and social bonding. Empathy is defined as the capacity to share and understand the emotions of others. Prosocial behavior encompasses a wide range of activities that are aimed at benefiting others, including helping, sharing, and comforting. Altruism, on the other hand, refers to the real concern toward others, often at the expense of oneself (Batson et al., 1981; Grueneisen & Warneken, 2022).

Research on the association between empathy, prosocial behaviour, and altruism is important in educational settings where students constantly engage in social activities, group projects, and community-related services. The positive and engaging environment is essential for providing suitable support and development of prosocialness. Empathy and altruism are related in certain ways (Peng et al., 2024). The empathy-altruism hypothesis indicated that

the genuine concern for others induces a desire to help people outside the personal benefits and selfish acts (Batson, 2011; Li et al., 2024).

According to Caprara et al. (2014), it has been found that students who showed prosocial behaviours got higher scores and developed significant cognitive growth, especially in educational setups. The study conducted in monitoring early adolescent students showed that the benefits of prosocial behavior lasted and helped them achieve academic success at later stages. Prosocial behaviour strengthens social bonds and promotes harmonious relationships. Kindness and cooperative behaviour build trust and reciprocity. A meta-analysis's findings indicated that empathy plays a significant mediating role: positive peer influence enhances empathy, which in turn increases prosocial behaviours such as helping, sharing, and cooperating (Li et al., 2024).

Altruism, characterised by selfless care for the benefit of others, is an essential component of human social behaviour. Altruistic behaviour enhances life satisfaction, happiness, and a sense of real purpose (Khan & Imran, 2023). A study by Martela and Ryan (2016) found that helping others fulfils fundamental psychological needs such as relatedness and competence, which in turn enhances overall well-being. Altruism promotes social bonds and community ties. Altruistic acts create the trust and reciprocity necessary for cohesive and supportive social networks.

Different definitions describe empathy. Scholars explain this phenomenon by describing it as the mental process for comprehending the emotional or cognitive states of others. Developmental researchers and social psychologists, along with certain psychoanalysts, now define empathy through emotional terms. The definition of empathy as the emotional response to another person includes two primary interpretations (Larionow, 2025). These two interpretations include cognitive empathy, which is linked to understanding others' emotions, and affective empathy, which is associated with vicarious experience in other people's emotions. According to Batson (2009) and other theorists, empathy represents a process in which people indirectly relate to others' emotional experiences.

The development of empathy facilitates stronger relationships between individuals who are strangers. Empathetic feelings enable people to develop supportive attitudes and actions towards groups that society treats negatively, according to historical research about people with disabilities and living on the streets. Empathy serves as an important tool for reducing prejudicial behaviour as well as racial discrimination in fundamental systems. While empathy holds potential benefits for the public good, it does not assure automatic access to beneficial outcomes. The development of helpful empathetic abilities requires formalised approaches. You need to build coherent, empathetic connections both inside and outside yourself to build functional empathy (Surma-Aho & Holta-Otto, 2022).

In educational settings, when students demonstrate empathy, they attain improved academic achievements and experience better cognitive growth. The study highlighted that the students who showed more empathy are more likely to enjoy team-based learning practices. They feel more motivated and interested in learning and often come up with creative and novel ideas (Van Ryzin & Roseth, 2019). Empathy enhances students' ability to collaborate while respecting multiple points of view. Empathy is increasingly recognized as a critical skill in professional settings. It enhances the effectiveness of leadership, which in turn improves customer relationships and builds a positive corporate culture. One of the studies by Goleman and Boyatzis (2017) found that leaders, who have high emotional intelligence, including empathy, are found more successful at motivating and inspiring their teams. This study

highlights the importance of empathy for professional success and organizational growth. People with greater empathy are more likely to engage in civic engagement, volunteering, and other forms of social involvement. So, the current study focuses on finding out the inter-relationship and impact of empathy, prosocial behavior and altruism.

1.1. Research Objectives

The different research objectives are developed to see the aims of the current study.

1. To examine the relationship between empathy and prosocial behaviour.
2. To investigate the association between prosocial behaviour and altruism.
3. To evaluate the relationship between altruism and empathy.

2. LITERATURE REVIEW

Research has thoroughly examined empathy, and at the same time, it investigates behaviours that facilitate positive effects on others. Research by Bohns and Flynn (2021) highlights the important role of empathy in promoting prosocial behaviours such as helping, sharing, and volunteering. Empathy is often described as a key predictor of prosocial behaviour. The American Psychological Association (2021) asserts that empathy motivates a variety of positive behaviours that benefit society, individuals, and relationships. For example, empathy is associated with increased forgiveness, volunteering, and helping. This means that empathy not only promotes prosocial behaviour but also reduces antisocial behaviour. Empathy and prosocial behaviour are closely related concepts that have received considerable attention in psychological research. Empathy allows people to understand and match the emotional experiences of others before they can make beneficial choices for others (Bohns & Flynn, 2021).

Psychological research has for many years prioritized studies on empathy alongside altruism. Psychologists view empathy as the central element for fostering altruistic activities because it allows individuals to interact with other people's sentiments. This review examines recent literature on the relationship between empathy and altruism in college students (Post, 2002) and examines how empathy influences altruistic behaviour, its underlying mechanisms, and its impact on the educational environment. Altruism is considered essential for building a cohesive and supportive community, especially in college settings where cooperative and prosocial behaviour can enhance the educational experience and overall well-being (Khetani & Shah, 2024).

Four years of longitudinal research evaluated changes in prosocial behaviour and altruism trends with college student groups. Students who volunteered through community service showed persistently rising altruistic tendencies (Streit et al., 2023). Different kinds and helpful actions make up prosocial behaviors. These kind and helpful actions include helping others in need, sharing what you have with others, or giving comfort to someone who is feeling upset or sad. Multiple factors influence the prosocial behavior of college students, including their traits, social group expectations, and environmental conditions. The research in a college setting demonstrated emotional intelligence as a predictor for socially beneficial behaviours in students (Babic & Tomasic, 2023).

Past research has looked at how male and female college students differ, showing that women tend to score higher in empathy and are more involved in volunteering and peer support (Shafique et al., 2024). The study also highlights how socialization plays a role in these

differences—from a young age, girls are often encouraged to be nurturing and compassionate. By understanding these patterns, educators can create more effective programs that foster empathy and altruism in every student, no matter their gender (Kamas & Preston, 2021).

Altruism is the desire to selflessly care for others and make a meaningful difference in their lives. In a 2024 study by Wang and colleagues, researchers used surveys to measure altruism in students and found that those with higher altruism scores were more likely to volunteer. The results also showed that the stronger a person's altruistic tendencies, the more willing they were to help others. Interestingly, mindfulness practices played a significant role in motivating college students to participate in charitable acts and volunteer work. The study also highlighted that student with greater empathy tended to respond more positively in different situations.

A recent meta-analysis pooled data from earlier studies and confirmed a strong link between empathy and altruism (Smith et al., 2022). The results showed that people with higher empathy levels were far more likely to engage in volunteering, community programs, and other supportive activities. Another large-scale review of 25 studies echoed these findings, consistently revealing a positive connection between empathy and altruistic behavior (Yin & Wang, 2022). This strong relationship suggests that fostering empathy in schools could lead to more students getting involved in helping others. Interestingly, the research also found that students sometimes engaged in behaviors that weren't purely altruistic, like seeking peer approval, but these still led to increased prosocial actions (Peng et al., 2024).

While research continues to highlight empathy's role in promoting altruistic and prosocial behavior, significant gaps in our understanding remain. One major limitation is that most studies focus on Western or generalized global populations, making it unclear whether these findings apply to culturally distinct regions. As Yin and Wang (2022) pointed out, we particularly lack insight into how empathy and altruism operate in South Asian communities. Another key gap is the tendency to study these concepts in isolation. Current literature often examines either empathy and prosocial behavior or empathy and altruism separately, but rarely explores how all three interact within a single framework. Bohns and Flynn (2021) have criticized this approach, noting that by analyzing variables independently, we might be missing important connections between them.

Previous studies on student altruism have typically used basic correlational approaches or longitudinal observations, missing opportunities to apply predictive modeling that could reveal the core factors driving altruistic behavior (Streit et al., 2023). Another limitation is the lack of large-scale, real-time data capturing how university students demonstrate altruism while balancing academic and community commitments. While Khetani and Shah (2024) highlighted altruism's importance in educational settings, their findings were constrained by small, geographically limited samples. The present study addresses these gaps by combining robust statistical analysis with a sufficiently large and diverse sample.

2.1. Hypotheses

1. There is a significant positive relationship between students' empathy and prosocial behavior.
2. There is a significant positive association between students' empathy and altruism.
3. It is more likely that students' empathy and prosocial behavior have a positive relationship with altruism.

3. MATERIAL AND METHODS

This study employs a quantitative approach and utilise a cross-sectional survey research designed to collect fresh and up-to-date data. The present study is based on a descriptive and correlational research design. University students are selected as the target population because recent research indicates that young adults are increasingly engaging in prosocial behaviours, such as helping and volunteering—key expressions of altruism (Soudi & Aman, 2023). The study population has included students enrolled at universities located in Rawalpindi and Islamabad. Given the large size of the population, a simple random sampling method has been employed to select a representative sample. The final sample consisted of 400 students, including 176 males and 224 females, proportionally distributed by gender. The questionnaire was personally distributed and collected from students at a single time, ensuring the consistency of data collection.

3.1. Instrumentation

Most of the variables of this study are measured through scales adapted from previous studies.

i. Student Profile: It was designed by the researcher and asked participants to provide personal information and some demographic information.

ii. Prosocial Scale: Prosocialness Scale for Adults (PSA) developed by Luengo et al. (2021). This scale includes sixteen items that measure prosocial behaviour in adults, reflecting behaviours such as sharing, helping, caring for others, and empathy. The scale emphasised the importance of empathy in prosocial behaviour among adults. The response options are from 1 (never/rarely true) to 5 (almost always/always true). The scale has two subscales, including prosocial behaviour and prosocial feelings.

iii. Empathy Scale: The scale was developed at Istanbul University by Malakcioglu (2022) with the support of the Medicine Faculty. The Empathy Assessment scale consisted of thirteen items with a response range from 1 (never) to 5 (always). There are no negative items for this scale. It has two subscales that include charity and helping people. The scales measure the level of empathy in students.

iv. Self-Report Altruism Scale: The scale was developed by Manzur and Olavarrieta (2021). The scale consisted of a total of nine items with no reverse-scoring items. The scale contain three subscales, including social interaction, emotional identification, and cognitive behaviour. The participants respond to each item on a Likert scale ranging from 1 (not at all) to 5 (always). The self-report altruism (SRA) scale indicates good reliability, and the Cronbach's alpha coefficient shows strong internal consistency.

4. RESULTS

All data were analyzed using the statistical package (SPSS). Moreover, descriptive analysis, correlation analysis, and regression analysis were used to evaluate the study objectives.

Table 1: Demographics of the Sample of Students

Variables	f	%
-----------	---	---

Gender		
Male	176	44
Female	224	56
Age	16-32	
Socio-economic status		
Poor class	18	4.5
Middle class	333	83.3
Upper class	49	12.3
Employed	287	71.8
Un-Employed	113	28.3
Level of Education		
Bachelor's Degree	366	91.5
MS/MPhil	29	7.3
PHD	5	1.3
Family Type		
Nuclear	232	58
Joint	168	42

Table 1 shows the demographic characteristics of the respondents. The respondents' ages range from 16 to 32 years. 4.5% of respondents identify as belonging to the lower class, 83.3% are from the middle class, while 12.3% belong to the upper class. Regarding employment status, 71.8% of respondents are employed, while 28.3% are unemployed. In terms of education, 91.5% of respondents are pursuing a bachelor's degree, and 8.6% are enrolled in MS/MPhil/PhD programmes. Finally, 58% of respondents come from nuclear families, and 42% belong to joint family systems.

Table 2: Reliability and Descriptive Statistics of Prosocial Behaviour, Empathy, and Altruistic Behaviours of the University Students

	k	α	M	SD	Range	Skewness
Prosocialness Scale	16	.88	57.60	11.44	16-80	-.27
Prosocial Actions	12	.85	43.63	8.10	12-60	-.36
Prosocial Feelings	4	.56	10.74	2.62	4-20	-.39
Empathy Assessment Scale	13	.76	45.35	8.28	13-75	-.314
Social Interaction (SI)	4	.57	14.02	3.21	4-20	-.43
Cognitive Behaviour (CB)	5	.55	17.10	3.57	5-25	-.47
Emotional Identification (EI)	4	.51	13.34	3.49	4-20	-.10
Altruism Scale	9	.80	29.275	7.09	9-45	.19
Charity	3	.71	9.75	2.10	3-15	-.09
Helping Behaviour	6	.75	21.52	4.78	6-30	-.024

Note: n=400, K=no. of item, M=mean, SD=standard deviation

Table 2 shows the means, standard deviations, and alpha coefficients of the study variables, including the role of prosocial behaviour, empathy, and altruism in university students. The alpha reliability of the scale and subscale was also computed. The reliability analysis indicates that the alpha score of the prosocialness scale questionnaire is .88; that is good. The

alpha coefficient of the empathy assessment questionnaire is .76; that is quite good for the scale. For the Altruistic scale, among university students, reliability is .80, which is good. It also shows the mean and standard deviation of the scales. The lower alpha values for prosocial feelings (.56), social interaction (.57), cognitive behaviour (.55), and emotional identification (.51) could be due to several factors, including insufficient item variance, conceptual overlap, the complexity of the constructs, and sample-specific issues.

Table 3: Correlation Matrix for Study Variables

Variables	1	2	3	4	5	6	7	8	9	10
1 Prosocialness	-	.98**	.80**	.36**	.49**	.53**	.22**	.51**	.41**	.90**
2 Prosocial Actions		-	.68**	.34**	.48**	.52**	.19**	.49**	.41**	.88**
3 Prosocial Feelings			-	.29**	.39**	.41**	.22**	.42**	.30**	.78**
4 Empathy				-	.33**	.38**	.22**	.38**	.79**	.34**
5 Social Interaction					-	.58**	.45**	.83**	.33**	.41**
6 Cognitive Behaviour						-	.39**	.82**	.37**	.46**
7 Emotional Identification							-	.76**	.20**	.18**
8 Altruism								-	.37**	.44**
9 Charity									-	.40**
10 Helping Behaviour										-

Note: n=400, * $p < .05$, ** $p < .01$

Table 3 displays the correlation matrix for prosocialness, empathy, and altruism. Results revealed that prosocialness is significantly positively related to empathy ($r=.36$). Altruism shows a significantly positive correlation with prosocial behaviour ($r=.51$). Empathy is significantly positively related to altruism ($r=.38$). This means that when prosocial behaviour is increased, empathy and altruism also show increased values. On the other hand, when there is a greater tendency towards empathy, then altruism also increases among university students.

Table 4: Regression Coefficient of Prosocial Behaviour and Empathy on Altruism.

Variables	Model 1			Model 2		
	B	β	SE	B	β	SE
Constant	16.41		1.70	10.76		1.98
Prosocial Behaviour	.22	.36***	.03	.14	.22***	.03
Empathy				.23	.27***	.05
R ²	.13			.19		
ΔR^2	.128			.181		

Note: n=400, Dependent variable =Altruism, *** $p < .001$

Multiple linear regression analysis was used to predict altruism based on different predictors such as prosocialness and empathy. Predictors include independent variables; prosocialness and empathy are used to predict the dependent variable, altruism. The dependent variable, altruism, was regressed on the predicting variables, prosocial behaviour and empathy. In Model 1, prosocial behaviour significantly predicted altruism, $F(1, 59.40)$, which indicates that prosocial behaviour plays a significant role in shaping altruism. The result shows the positive effect of prosocial behaviour. Moreover, $R^2=.13$ depicts that the model explains 13%

of the variance in altruism. In Model 2, prosocial behaviour and empathy significantly predict altruism, $F(2, 45.10)$, which indicates that prosocial behavior and empathy play a significant role in shaping altruism. The result shows the positive effect of the independent variables. Moreover, $R^2=.19$ depicts that the model explains 19% of the variance in altruism.

5. DISCUSSION

The current study examines the relationship between empathy, prosocial behavior, and altruism in a cohort of university students. The first hypothesis suggested that students' empathy and prosocial behavior would be strongly linked—and the results backed this up. The data revealed that university students with higher empathy levels were much more likely to help others, whether through volunteering or other kind acts. This makes sense, given what recent studies have found: empathy really does drive altruistic behavior. Similarly, Karniol et al. 's (2020) finding supported the current study and stated that young adults who were more sensitive to others' emotions and needs tended to help more often—whether by volunteering, donating, or stepping in to assist directly. Along the same lines, Vivek et al. (2021) claimed that empathy is a powerful predictor of prosocial behavior in college students. Those with greater empathic concern didn't just feel for others—they acted, getting more involved in volunteer work and other supportive behaviours. The second hypothesis suggested that students with higher empathy would also show greater altruism—and our findings strongly supported this link. This matches what we see in other research, including Qiu et al. (2024) work showing just how closely empathy and altruism are connected. Past studies have consistently found that altruistic actions often grow out of empathic feelings like compassion, which are linked to personal fulfillment. This connection seems especially strong in fields centered around care. For instance, Khan et al. (2022) discovered that emotional empathy was a key driver of altruism in healthcare workers. Their research showed that the more empathy professionals felt toward others, the more likely they were to help—something particularly evident in hands-on clinical work. This really highlights how central empathy is to fostering altruism, especially in jobs where understanding and engaging with people is at the heart of the work. The third hypothesis of the study suggested that both empathy and prosocial behavior together would predict students' altruistic tendencies. To test this, we used multiple regression analysis to see how these factors shape altruism. The results clearly showed that prosocial behavior plays a significant role in driving altruistic actions - a finding that echoes what Williams et al. (2014) discovered in their work with children. Their research revealed something interesting: certain types of empathy, especially empathic concern, don't just encourage helpful behaviours - they decrease negative or indifferent responses. In other words, when people feel genuine concern for others, they're more likely to help and less likely to ignore or harm others. This dual effect shows just how powerful empathy can be in shaping how we treat those around us.

These findings add to what we already know about how empathic concern drives people to help others. Like Jolliffe and Farrington (2020) showed, this kind of empathy doesn't just inspire one type of good deed - it motivates everything from stepping in during emergencies to committing to long-term volunteer work. It is found the same pattern in this study: college students who scored higher in empathic concern were much more likely to get involved in helping others. Whether it's in emergency situations or everyday community service, empathy seems to be that universal spark that makes people want to help others. The current research with university students just adds another piece to this well-established picture. These insights carry important practical implications. By intentionally cultivating empathic concern in university settings - through curriculum design, community engagement programs, or peer

mentoring initiatives - institutions could meaningfully increase student participation in volunteering, charitable work, and support networks. Such efforts would not only benefit communities but likely enhance students' socioemotional development as well.

6. CONCLUSION

This study provides robust support for our central hypothesis, demonstrating that empathic capacities serve as key drivers of prosocial and altruistic behaviors among university students. Our analysis revealed three important patterns: (1) strong positive correlations between prosocial behavior and both empathy and altruism, (2) a moderate but significant empathy-altruism correlation, and (3) through multiple regression, the combined predictive power of empathy and prosocial behavior on altruistic outcomes. These results not only confirm our initial hypotheses but also align with and extend previous research in this domain.

The findings carry important theoretical and practical implications. First, they underscore empathy's dual role - both directly fostering altruism and indirectly through its influence on prosocial tendencies. Second, they suggest concrete pathways for universities to cultivate student altruism through empathy-building programs and prosocial opportunity structures. By implementing targeted interventions that develop empathic skills and create avenues for helping behaviors, institutions could significantly enhance students' community engagement and civic responsibility. These conclusions advance our understanding of the psychological mechanisms underlying altruistic development during emerging adulthood, while providing evidence-based guidance for educational practice. Future research could build on these findings by examining how specific institutional interventions might optimize this empathy-prosocial-altruism pathway.

6.1. Recommendations

The present research helps us better understand how empathy leads to helping behaviors. By studying university students specifically, we've found new ways schools might help students develop empathy and care for others. Since the study only looked at college students, the results might be different for other groups of people. Future studies should include people of different ages and backgrounds. Another target was that the study looked at one moment in time, it can't say for sure that empathy causes altruism. Future research could follow students over several years to see how these qualities develop. The study asked students to report on themselves, which isn't always perfect. Watching actual behavior or asking friends to report might give clearer results. The study didn't study how culture might affect these findings. Different cultures might show empathy and helping in different ways.

Even with these limitations, our findings are important. Present study confirms that empathy and helping are strongly connected in university settings. It shows how universities might help students become more caring. The study also points to new research directions, like studying different cultures or using multiple research methods

Acknowledgement: Author sincerely thanks research team for their hard work and valuable contributions to this study. Their expertise and dedication were essential to this project's success.

Contribution by Authors: The first author conducted the research and analyzed the results. The second author wrote the paper. Both authors have reviewed and approved the final

manuscript.

Conflict of Interest: The authors declare no conflicts of interest regarding the publication of this study.

Support/Funding: This research received no specific grant from any funding agency.

REFERENCES

- Babic, C. A., & Tomasic H. J. (2023). Ability and Trait Emotional Intelligence: Do They Contribute to the Explanation of Prosocial Behaviour?. *European journal of investigation in health, psychology and education*, 13(6), 964–974. <https://doi.org/10.3390/ejihpe13060073>
- Batson, C. D. (2009). These Things Called Empathy: Eight Related but Distinct Phenomena. In J. Decety & W. Ickes (Eds.), *the Social Neuroscience of Empathy* (pp. 3–15). Boston Review. <https://doi.org/10.7551/mitpress/9780262012973.003.0002>
- Batson, C. D. (2011). *Altruism in Humans*. Oxford University Press.
- Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is Empathic Emotion a Source of Altruistic Motivation? *Journal of Personality and Social Psychology*, 40(2), 290–302. <https://doi.org/10.1037/0022-3514.40.2.290>
- Bohns, V. K., & Flynn, F. J. (2021). Empathy and Expectations of Others' Willingness to Help. *Personality and Individual Differences*, 168, Article 110368. <https://doi.org/10.1016/j.paid.2020.110368>
- Caprara, G. V., Steca, P., Zelli, A., & Capanna C. (2005). A New Scale for Measuring Adults' Prosocialness. *Eur. J. Psychol. Assess.* 21, 77–89. [10.1027/1015-5759.21.2.77](https://doi.org/10.1027/1015-5759.21.2.77)
- Caprara, G. V., Kanacri, B. P. L., Gerbino, M., Zuffiano, A., Alessandri, G., Vecchio, G., & Bridglall, B. (2014). Positive Effects of Promoting Prosocial Behaviour in Early Adolescence: Evidence from a School-Based Intervention. *International Journal of Behavioural Development*, 38(4), 386–396.
- Goleman, D., & Boyatzis, R. (2017). Emotional Intelligence has 12 Elements. Which do you need to Work on? *Harvard Business Review*, 84(2), 1–5.
- Grueneisen, S., & Warneken, F. (2022). The Development of Prosocial Behaviour: From Sympathy to Strategy. *Current Opinion in Psychology*, 43, 323–328. <https://doi.org/10.1016/j.copsyc.2021.08.005>
- Jolliffe, D., & Farrington, D. P. (2020). The Role of Empathy in Antisocial Behavior and Prosocial Behavior. *Psychology, Crime & Law*, 26(4), 319–336.
- Kamas, L., & Preston, A. (2021). Empathy, Gender, and Prosocial Behaviour. *Journal of Behavioural and Experimental Economics*, 92, 101654. [doi:10.1016/j.socec.2020.101654](https://doi.org/10.1016/j.socec.2020.101654)
- Karniol, R., Grosz, E., & Schorr, I. (2020). Empathy and Prosocial Behaviour in Young Adults: The Role of Emotional Awareness. *Journal of Applied Social Psychology*,

50(5), 335-345.

- Khan, R., & Imran, M. (2023). Effect of Altruism on Happiness and Meaning in Life. *International Journal of Indian Psychology*, 11(3), 977–1000. <https://doi.org/10.25215/1103.093>
- Khan, S., Ihsan, M., Farooq, S., & Iqbal, M. M. (2022). Emotional Empathy and Altruism among Health Professionals. *ASEAN Journal of Psychiatry*, 23(2).
- Khetani, S., & Shah, P. S. (2024). Altruism and Psychological Well-being of College Students of Ahmedabad. *International Journal of Indian Psychology*, 12(3), 198–202. <https://doi.org/10.25215/1203.018>
- Larionow, P. (2025). The Dark and Light Sides of Empathy: The Clinical Relevance of the Assessment of Cognitive and Affective Empathy across Negative and Positive Emotions. *European Journal of Investigation in Health, Psychology and Education*, 15(3), 38. <https://doi.org/10.3390/ejihpe15030038>
- Li, T., Feng, W., & Zhang, H. (2024). The Relationship between the Interpersonal Relationship and Altruistic Behavior of College Students Majoring in Physical Education: The Mediating Effect of Empathy and the Moderating Effect of Responsibility. *Behavioral Sciences*, 14(12), 1240. <https://doi.org/10.3390/bs14121240>
- Li, W., He, Q. F., Lan, J. Z., Ge, M. W., Shen, L. T., Hu, F. H., ... & Chen, H. L. (2024). Empathy as a Mediator of the Relation between Peer Influence and Prosocial Behavior in Adolescence: A Meta-Analysis. *Journal of Youth and Adolescence*, 1-22.. <https://doi.org/10.1007/s10964-024-02079-3>
- Luengo, K. B. P., Eisenberg, N., Tramontano, C., Zuffiano, A., Caprara, M. G., Regner, E., Zhu, L., Pastorelli, C., & Caprara, G. V. (2021). Measuring Prosocial Behaviours: Psychometric Properties and Cross-National Validation of the Prosociality Scale in Five Countries. *Frontiers in Psychology*, 12, 693174. <https://doi.org/10.3389/fpsyg.2021.693174>
- Malakcioglu, C. (2022). Empathy Assessment Scale. *Northern Clinics of Istanbul*, 9(4), 358–366.
- Manzur, E., & Olavarrieta, S. (2021). The 9-SRA Scale: A Simplified 9-Item Version of the SRA Scale to Assess Altruism. *Sustainability*, 13(13), 6999. <https://doi.org/10.3390/su13136999>
- Martela, F., & Ryan, R. M. (2016). The Benefits of Benevolence: Basic Psychological Needs, Beneficence, and the Enhancement of Wellbeing. *Journal of Personality*, 84(6), 750–764. <https://doi.org/10.1111/jopy.12215>
- Peng, L., Jiang, Y., Ye, J., & Xiong, Z. (2024). The Impact of Empathy on Prosocial Behavior among College Students: The Mediating Role of Moral Identity and the Moderating Role of Sense of Security. *Behavioral Sciences*, 14(11), 1024. <https://doi.org/10.3390/bs14111024>
- Post, S. G. (2002). The Tradition of Agape. In S. G. Post, L. G. Underwood, J. P. Schloss, & W. B. Hurlbut (Eds.), *Altruism & Altruistic Love: Science, Philosophy, & Religion in*

Dialogue (pp. 51–64). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195143584.003.0006>

- Qiu, X., Gao, M., Zhu, H., Li, W., & Jiang, R. (2024). Theory of Mind, Empathy, and Prosocial Behaviour in Children and Adolescents: A Meta-Analysis. *Current Psychology*, 43(22), 19690-19707.
- Shafique, M., Firdos, S. S., & Imtiaz, M. (2024). Interplay between Empathy and Pro-Social Behavior among Undergraduate University Students. *Pakistan Journal of Humanities and Social Sciences*, 12(2), 1129–1135. <https://doi.org/10.52131/pjhss.2024.v12i2.2142>
- Smith, J. M., Powell, J., & Webb, J. (2022). The Importance of Empathy Education in Fostering Altruistic Behavior in Young Adults. *Journal of Educational Psychology*, 114(6), 1012-1025.
- Soudi, S. & Aman, A. (2023). Online Altruism and Prosocial Behavior in Youth. *International Journal of Indian Psychology*, 11(4), 111-118. DIP:18.01.012. 20231104, DOI:10.25215/1104.012
- Streit, C., McGinley, M., & Carlo, G. (2023). A Systemic, Multiple Socialization Approach to the Study of Prosocial Development. *Journal of Social and Personal Relationships*, 40(9), 2731-2739.
- Surma-Aho, A., & Holtta-Otto, K. (2022). Conceptualization and Operationalization of Empathy in Design Research. *Design Studies*, 78, 101075.
- Van Ryzin, M. J., & Roeth, C. J. (2019). Effects of Cooperative Learning on Peer Relations, Empathy, and Bullying in Middle School. *Aggressive Behaviour*, 45(6), 643–651. <https://doi.org/10.1002/ab.21858>
- Vivek, M. S., Kallio, L., & Dutta, S. (2021). "Empathy and its relationship to Prosocial Behavior in University Students." *Personality and Individual Differences*, 177, 110781.
- Wang, X., Zhu, H., Zhao, Q., & Wang, Y. (2024). The Influence of Social Comparison on Third-Party Altruistic Behaviour. *Current Psychology*, 1-27
- Williams, A., O'Driscoll, K., & Moore, C. (2014). The Influence of Empathic Concern on Prosocial Behaviour in Children. *Frontiers in Psychology*, 5, 425. <https://doi.org/10.3389/fpsyg.2014.00425>
- Yin, Y., & Wang, Y. (2022). Is Empathy Associated with More Prosocial Behaviour? A Meta Analysis. *Asian Journal of Social Psychology*, 25(2), 123–134. <https://doi.org/10.1111/ajsp.12537>