




## Interplay between Empathy and Pro-Social Behavior among Undergraduate University Students

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### ABSTRACT

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This quantitative study examined the interplay between empathy and prosocial behavior among undergraduate university students. A sample of (N=220) undergraduates from 11 public and private universities of Punjab, Pakistan participated through the online survey. These undergraduate students (ages between 18 to 25 years), were chosen from diverse academic disciplines of selected universities. Prosocial behavior was measured using the Prosocial Behavior Scale (Caprara et al., 2005), and Toronto Empathy Questionnaire (Sprenge et al., 2009) was utilized to measure empathy. The study employed convenience sampling technique and utilized SPSS (version 25) for data analysis. Results indicated a significant positive correlation ( $r = .453^{**}$ ) between prosocial behavior and empathy among undergraduate university students, which means that higher empathy will aid escalation in prosocial behavior. Furthermore, significant gender difference ( $p = .002^{**}$ ) was found in the level of empathy, female students exhibited higher level of empathy as compared to male students. Conversely, no gender difference was found in the level of pro-social behaviors. Moreover, students belonging to the urban areas showed significantly greater level ( $p = .001^{**}$ ) of pro-social behavior as compared to rural student, while the insignificant difference was seen regarding level of empathy among urban and rural students. These findings will contribute to induce the empathy and pro-social behaviors to create a sustainable society.

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## 1. Introduction

Prosocial behavior is defined as voluntary actions aimed to promote the well-being of others, holds a fundamental significance in the social dynamics among youth. This constructive behavior incorporates a wide array of elements including aid, involvement, collaboration, and contribution (Fabes & Eisenberg, 1998). Nevertheless, young people have a tendency to reside within an egocentric setting in which they strive for individual achievements while neglecting the needs of others (Finkelstein, 2010). In recent years, psychologists have investigated the factors contributing to prosocial behavior and the variables impacting it (Grant & Mayer, 2009). Prosocial behavior presents a complex subject for investigation due to the challenge of comprehending the underlying motivations motivating individuals towards actions that tend to benefit others. Furthermore, exploring the potential outcomes faced by an individual engaging in altruistic actions is crucial, particularly considering scenarios where individuals may endanger their own lives to support others (Penner, Dovidio, Piliavin, & Schroeder, 2005). When prosocial behavior decreases, the social interactions among people become inconsistent (McDonald, Wang, Menzer, Rubin, & Booth-LaForce, 2011). The deterioration in prosocial behavior among

youth can intensify the tendency of hostility and violence (McMahon et al., 2013). Empathy is often described as the ability to indirectly experiencing the emotions along with the sufferings of others, it plays a vital role in person's adaptive functioning within a social situation. The literature often finds a link among empathy and prosocial behavior (Qiu, Gao, Zhu, Li, & Jiang, 2024). Empathy can be a preventive approach for aggressive behavior, it shows a positive correlation with prosocial and moral acts (Björkqvist, Österman, & Kaukiainen, 2000). Numerous studies highlight parenting as a fundamental aspect influencing the development of empathy and its relevant socioemotional consequences. Specifically, adverse parental impact, including expressions of rejection or unavailability, has been shown to diminish a child's empathic capacities (Hyde, Shaw, & Moilanen, 2010). It was discovered through research, that adolescents raised by parents who impose high levels of discipline and low levels of power assertion, exhibited greater tendencies towards sympathy and empathic anger, particularly in situations of victimization. (Laible, Eye, & Carlo, 2008). Through the investigation of a cohort of university students, a negative association was found between permissive parenting and empathic responsiveness. Interestingly, this association did not extend to authoritarian parenting, underscoring the distinct impact of negative disciplinary approaches on facets of children's emotional growth (Schaffer, Clark, & Jeglic, 2009).

## **2. Literature Review**

Empathy is an essential factor closely associated with prosocial behavior (Telle & Pfister, 2016). Studies have shown that empathy plays a major role in shaping prosocial behavior through various channels like moral engagement and social support. An investigation discovered that individuals with elevated levels of agreeableness tend to engage more in prosocial activities and exhibit greater helpfulness towards others (Hilbig, Glöckner, & Zettler, 2014). Empathy stands out as the primary catalyst for prosocial behavior, as posited by (Taylor, Eisenberg, Spinrad, Eggum, & Sulik, 2013). Individuals with heightened empathy levels are more likely to engage in prosocial acts in the future. Two studies were conducted simultaneously, with the first indicating that exposure to fairy tales enhances participant's empathy. Subsequently, participants from the initial study displayed greater prosocial behavior compared to those who did not take part in the study (Johnson, 2012). Empathy serves as mental and emotional gauge that significantly heightens the prevalence of prosocial behavior (Lockwood, Seara-Cardoso, & Viding, 2014). Over time, extensive exploration and modeling of the interplay between prosocial behavior and empathy have positioned the latter as a potent motivator and influential factor in fostering prosocial behaviors (Gordon, 2014). Existing literature emphasizes the interconnectedness of empathy and prosocial behavior, yet the precise nature of their relationship remains inadequately interpreted.

### **2.1. Significance of the Study**

It is important from both academic and social perspective to investigate the link between pro-social behavior and empathy among undergraduate university students. This investigation shows the intricate relationship between altruistic tendencies and empathy, providing valuable information about the fundamental processes guiding human behavior. Understanding how empathy influences pro-social behavior allows teachers to adapt their pedagogical strategies to foster empathy and a culture of altruism in their students, so enhancing their personal and social growth. In addition, this study has implications for mental health interventions, social policies, and community involvement initiatives, which will ultimately improve the well-being of society through empathy and prosocial behavior to encourage productive changes in society.

### **2.2. Objectives**

The objectives of this study are listed below:

1. To examine the interplay between empathy and pro-social behavior among undergraduate university students.
2. To analyze the demographic factors that influence empathy and pro-social behavior among undergraduate university students.

### **2.3. Hypotheses**

1. Pro-social behavior will have a significant positive correlation with empathy among undergraduate university students.

2. There will be a significant gender difference among the level of empathy and pro-social behavior among undergraduate university students.
3. Undergraduate university students who belong to urban areas will exhibit higher level of empathy and prosocial behavior as compare to the students who belong to the rural areas.

### **3. Methodology**

The objective of the study was to determine if there is a relationship between empathy and prosocial behavior among undergraduate university students. The following methodology was employed to achieve the objectives of the study.

#### **3.1. Research Design and Sampling Technique**

The research design of this study was quantitative and the study was cross-sectional in nature. For this study, convenience sampling technique was used and the data was collected through the online survey.

#### **3.2. Participants**

The sample in this study were university students enrolled in various undergraduate programs. Data was collected from a sample of N=220 undergraduates from 11 universities, The Women's University Multan, Bahauddin Zakariya University Multan, Institute of Southern Punjab, GC University of Lahore, Punjab University Lahore, NCBA&E Multan, UMT University of Lahore, NFC Multan, University of Southern, Education Multan, & Emerson University Multan in the month of April 2023. The sample was consisted of 114 (51%) male and 106 (49%) female students (ages between 18 to 25 years). The post graduate students were excluded from the study. The demographic characteristics of the sample of study is being presented below:

**Table 1: Demographic Characteristics of Undergraduate University Students (N=220)**

<b>Demographics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>		
Male	114	51%
Female	106	49%
<b>Area of Residence</b>		
Urban	128	58%
Rural	92	42%
<b>Discipline</b>		
Agriculture	8	4%
Art & Design	9	4%
Biological & life Sciences	42	19%
Commerce / Finance Accounting	9	4%
Computer Science & IT	23	11%
Media Studies	3	2%
Social Sciences	76	34%
Others	50	22%

### **3.3. Operational Definitions**

#### **3.3.1. Prosocial Behavior**

Prosocial behavior covers a wide range of behaviors meant to help one or more persons besides oneself (Learning, 2003). It can also be defined as "Anything that helps someone else"(Schroeder & Graziano, 2015).

#### **3.3.2. Empathy**

Empathy involves many different processes, some of which include observing another person's feelings, assuming another person's mental state, and responding appropriately to that person's mental state. It is the ability to take on another person's point of view and ability to share an experience from another person's emotional point of view (Amiruddin, Fueggle, Nguyen, Gignac, Clunies-Ross, & Fox, 2017).

### **3.4. Measurement Tools**

#### **3.4.1. Prosocial Behavior Scale**

An individual's social behaviour was measured using the Prosocial Behaviour Scale (Caprara, Steca, Zelli, & Capanna, 2005). This 16-item scale that examines a person's overall tendency to act altruistically. Items are designed to gauge the tendencies towards prosocial

actions such as helping others and cooperating with others. This five-point Likert scale is scored through the sum of total score, which reflects the person's involvement in prosocial activities. Higher scores indicate higher level of prosocial behavior. The scale was highly reliable ( $\alpha=.93$ ) as reported by the author.

### 3.4.2. The Toronto Empathy Questionnaire

The level of empathy was measured using Toronto Empathy Scale (Spreng, McKinnon, Mar, & Levine, 2009). The total 16 items on this scale are all positive statements. These items are scored straight 1, 3, 5, 6, 8, 9, 13, and 16. while the items, which are items 2, 4, 7, 10, 11, 12, 14, and 15 are reverse scored. This is a 5-point Likert scale item format, containing the categories like never = 0, rare = 1, sometimes = 2, often = 3, and always = 4. The empathy questionnaire exhibits a high level of reliability ( $\alpha=.91$ ), reported by the author.

### 3.4.3. Ethical Consideration

The study fulfils the APA guidelines for using human beings in research. The research subjects received information concerning the study's goal and were guaranteed privacy and confidentiality during the process of research. Their consent was taken before participating in the study.

## 4. Results

Table 2 displays the relationship between undergraduate university student's prosocial behaviour and empathy. A significant positive relationship has been witnessed between prosocial behaviour and empathy ( $r = 0.453^{**}$ ,  $p < 0.01$ ), showing that prosocial behaviour among undergraduate university students tends to grow as empathy levels rise.

**Table 2: Correlation between prosocial behavior and empathy among undergraduate university students (N=220)**

Variable	M	SD	Prosocial behavior	Empathy
Prosocial behavior	60.91	11.386	1	.453**
Empathy	40.36	7.720	-	1

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

**Table 3: Independent Samples t-test for Comparing Gender difference regarding empathy and prosocial behavior among undergraduate university students (N=220)**

Variables	Males (n=114)	Females (n=106)	df	t	p	95 % CI		Cohen's d
	M (SD)	M(SD)				LL	UL	
Empathy	38.79(7.62)	42.06(7.4)	218	-3.20	.002	-5.27	-1.2	0.432
Prosocial Behavior	59.61(12.0)	62.31(10.)	218	-1.77	.078	-5.719	.307	0.238

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

Table 3 displays the findings of an independent samples t-test comparing gender disparities in undergraduate university student's prosocial behaviour and empathy levels. In comparison to male students, female students scored considerably higher ( $p=.002^{**}$ ) on the empathy scale, with a medium effect size (Cohen's  $d=0.43$ ). However, no significant distinction was found between the genders regarding prosocial behaviour ( $p=.078$ ).

**Table 4: Independent Samples t-test for Comparing area of residence regarding empathy and prosocial behavior among undergraduate university students (N=220)**

Variables	Urban (n=128)	Rural (n=92)	df	t	p	95 % CI		Cohen'd
	M (SD)	M(SD)				LL	UL	
Empathy	40.8(7.7)	39.7(7.7)	218	-1.03	.302	-3.17	.987	
Prosocial Behavior	63.0(9.24)	57.9(13.0)	218	-3.40	.001	-8.16	-2.1	0.451

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

Result of table 4 demonstrate that urban undergraduate university students compacted rural university students in terms of prosocial behaviour, with a considerably higher score

( $p=.001^{**}$ ), having medium effect size (Cohen's  $d = 0.45$ ). while no significant difference was found between urban and rural area students regarding empathy ( $p=.302$ ).

## **5. Discussion**

The study's objective was to investigate the interplay of empathy and pro-social behavior among undergraduate university students. It was hypothesized that empathy and prosocial behaviour are related among the university 220 undergraduate students. Prosocial behaviour and empathy have a positive association, as indicated by the statistically significant correlation coefficient between the two measures. It can be suggested that a higher probability of acting in a prosocial manner correlates to a higher level of empathy, and vice versa. Overall, our findings indicate that prosocial behaviour and empathy are positively correlated among undergraduate students, implying that those who have greater levels of empathy are more likely to take up activities that help other people. These findings are consistent with previous research emphasizing the role empathy plays in fostering altruistic behaviour and the potential for empathy-focused interventions to increase altruistic behaviour among university students. Studies have, meanwhile, also revealed a favorable correlation between these two constructs (Davis, 1983). The second hypothesis of the study found significant gender differences in empathy within the undergraduate sample of university students. In contrast to their male counterparts, female students showed greater higher levels of empathy. The same hypothesis also found that, there was no significant gender difference in the level of prosocial behaviour among both genders of undergraduate university students. These findings recommend that women have higher tendencies regarding empathetic behaviors, which may have an influence on their societal connections and relations. On the other hand, insignificant difference in prosocial behaviour point out that males and females involve in parallel extents regarding prosocial activities, despite of females have exhibited greater levels of empathy.

These results demonstrate that how vital it is to identify gender differences in prosocial behaviour and empathy among students in universities, because most of the universities of Pakistan have coeducation system, where male and female students have regular social and academic interactions (Afridi & Maqsood, 2017). This disparity may offer direction for agendas to improve student's academic, social and emotional competencies. It is however crucial to identify the contradictory researches that has underlined discrepancies in empathy between genders (Baron-Cohen & Wheelwright, 2004). The results of third hypothesis of the study for comparing empathy and pro-social behaviour among undergraduate university students belonging to rural and urban areas. Overall, the findings showed that prosocial behaviour is more common among urban students as compared to rural students. While insignificant difference was found regarding empathy among urban and rural students. The results of a previous study conducted on 95 students, contradicts the results of currents study, they found the greater impact of empathy on prosocial behavior among rural students, as compared to urban students (Nikmah, 2019). Another study also have the differing results, conducted on the sample of 240 urban and rural students, found higher level of empathy and altruistic tendencies among rural students, as compared to urban students (Kaushik, Chawla, & Vig, 2020). It could be wise for further studies to look more closely at the potential causes of this inconsistency in results.

## **6. Conclusion**

This study highlights the value of prosocial behaviour and empathy among undergraduate university students. First, a significant positive association was found between prosocial behaviour and empathy, suggesting that higher empathy is associated with a higher tendency for undergraduate university students to engage in prosocial behaviour. According to this study, there was a clear gender difference in the empathy levels among students, with females showing significantly more empathetic tendencies than males, but there was no significant difference in prosocial behaviour between the both genders. In the context of this study, students who lived in urban areas showed greater levels of prosocial behaviour than students who lived in rural areas, but insignificantly different in case of empathy. Finally, the findings highlighted the importance of empathy for university students engaging in prosocial behaviour and the strong correlation between prosocial behaviour and empathy. Gender and urban/rural background also play a significant role in influencing these behaviours. To improve the effectiveness of programs aimed at fostering empathy and prosocial behaviour, certain demographic factors should be taken into account.

## 6.1. Suggestions and Implications of the Study

The study has the following practical implications:

1. Based on the findings of study, higher educational institutes must develop and implement educational programs with the goal of fostering empathy in students. These initiatives may include workshops, courses, and extracurricular activities concentrating on empathy and prosocial behaviours.
2. Due to the discovery of gender difference in empathy levels, customized interventions should be designed to nurture empathy according to the specific needs of male and female students to effectively address their diverse requirements and inclinations. Universities should also need to design the tailored initiatives to address the unique social dynamics and challenges faced by the rural students, for the enhancement of pro-sociality among them.
3. This research can guide policymakers in framing more inclusive and proficient policies that sustain the diverse student's body in nurturing empathy and prosocial behavior. Encouraging student involvement in community service and social outreach initiatives can serve as a rational approach to boost empathy and prosocial behavior.

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