

Relationship Between Empathy and Prosocial Behavior

**Simra Ishtiyag¹, Sonia Tyagi², Abha Shree Pandey³, Janki Kumari⁴,
Himanshu Kumar Srivastava⁵, Riya Chauhan⁶**

¹Student, Amity University Greater Noida Campus

^{2,3,4,5,6}Assistant Professor, Amity University Greater Noida Campus

Abstract

This study focused on the relationship between empathy and prosocial behavior among individuals aged between 18 to 30 years old. The sample consisted of 90 individuals, including both students and working professionals. The study used the Toronto Empathy Questionnaire (TEQ) to assess empathy and the Prosocialness Scale for Adults (PSA) was used to measure behavior with the aim of establishing if there exists a notable correlation, between these distinct factors. The study found a significant positive correlation ($r = 0.847$, $p < .001$) between empathy and prosocial behavior, suggesting that individuals with higher empathy are more likely to engage in prosocial acts. These results offer supporting evidence for establishing theories like the Empathy-Altruism Hypothesis and the Emotional Contagion Theory, which propose that empathy plays a crucial role in motivating altruistic behavior. According to the study, developing empathy in young people may improve prosocial behavior, resulting in more compassionate and socially responsible communities.

Keywords: Empathy, Prosocial behavior, Empathy-Altruism Hypothesis, Social Role Theory, Emotional Contagion Theory, Young adults, Interpersonal interactions, Social psychology, Helping behaviors, Empathy development

Relationship Between Empathy and Prosocial Behavior in Females

The capacity to comprehend, analyze, and relate to the emotions of others is known as empathy. A common definition exists for the complex concept of empathy. Batson (2009) states that empathy is affective (feeling other people's emotions) as well as cognitive (aware of others' points of view). Empathy is a dual quality that enhances social interactions and strengthens relationships by enabling people to connect on both an intellectual and emotional level.

Prosocial behavior, on the other hand, refers to actions that are intended to benefit others. According to Eisenberg and Miller (1987), these activities might range from supporting friends and coworkers to volunteering and helping those in need. Prosocial actions are motivated by a variety of factors, including moral beliefs and social norms.

Empathy and prosocial behavior plays an important role in the field of social psychology, impacting both interpersonal relationships and society dynamics. Empathy, is defined as the ability to comprehend and share the sentiments of others, plays an important role for inspiring prosocial behavior, which includes intentional efforts to benefit others. This research paper explores the relationship between empathy and

prosocial behavior within individuals aged 18-30 years, a period of substantial personal development and social participation.

Several prominent psychological theories serve as the foundation for understanding the relationship between empathy and prosocial behavior. Altruism and Empathy A crucial framework was presented by Watson et al. (1981). This perspective holds that empathy promotes altruism by showing sincere concern for the welfare of others. According to this theory, those who have a high degree of empathy are more likely to act prosocially to make other people's lives better. Similarly, Social Role Theory (Eagly & Wood, 1999), suggests that societal norms and roles promote prosocial behavior through empathy. According to this theory, social expectations regarding gender and age can influence empathy and prosocial behavior. For instance, young adults may feel societal pressure to express empathy and support others, aligning their activities with social responsibility norms.

Recent studies demonstrate the connection between prosocial behavior and empathy. Higher empathy renders people more inclined to take part in prosocial activities like volunteering as well as charitable giving, based on a study by Cuddy et al. (2020). This study demonstrates how empathy improves interactions and fosters prosocial behavior, which in turn fosters stronger and longer-lasting relationships. In order to comprehend the correlation between prosocial activity and empathy in the 18–30 age range, it is critical to investigate social and developmental factors. People develop their identities, social roles, and interpersonal relationships as emerging adults (Arnett, 2000). This developmental period may influence empathy perception and expression. For example, studies by Steinberg and Monahan (2007) found that young people have heightened sensitivity to social input, which can lead to more empathic reactions and consequently their tendency for prosocial behavior.

Recent research highlights the significance of this age group in comprehending empathy and prosocial behavior. A longitudinal study by Dapretto et al. (2023) investigated the impact of empathy on prosocial behavior and found that young adults with higher empathy were more likely to engage in community service and peer support. This study highlights that fostering empathy throughout this important developmental phase can significantly increase individuals' prosocial behavior.

Additionally, research by Kira et al. (2021) investigated how situational factors, like social influence and perceived social norms, interact with empathy to determine prosocial behavior in young people. The study indicated that empathy substantially predicts prosocial behavior, but situational cues and peer expectations might temper the relationship. This suggests that both individual and contextual factors influence in shaping prosocial tendencies.

In summary, the relationship between empathy and prosocial conduct is complex and affected by various theories, including the Empathy-Altruism Hypothesis, Social Role Theory, and Emotional Contagion Theory. For individuals aged 18-30 years, this relationship is further influenced by developmental and social factors. Current studies highlight the significance of considering contextual factors as well as individual characteristics when examining the connection between prosocial behavior and empathy. Communities that are more sympathetic and socially conscious can emerge from initiatives that support empathy and prosocial behavior. These interventions can be guided by an understanding of these processes.

Literature Review

Fernandes et al. (2024) investigated the connection between social behaviors and empathy in kids between the ages of 10 and 15. The study discovered that although girls displayed higher degrees of

internalizing difficulties than boys, they were also more prosocial and empathic. While cognitive empathy was connected to prosocial behavior, affective empathy was linked to internalizing problems. No significant relationship was found between empathy and externalizing behaviors.

He et al.(2024) argue that while classical theories suggest empathy promotes prosocial behavior, recent findings reveal complexities. Their research proposes that empathy's influence on prosocial behavior is conditional, shaped by factors like resource scarcity, relational dynamics, and personal attributes. Notably, empathy doesn't always increase prosocial actions but rather stabilizes them, making empathic individuals more reliable in variable contexts. Additionally, empathy may counteract anxiety's impact, reducing self-serving choices during social decision-making. Future studies are encouraged to test these ideas across various forms of prosocial behavior, including interactions with AI agents.

Shafique et al. (2024) conducted a quantitative study examining the relationship between empathy and prosocial behavior among 220 undergraduate students from 11 universities in Punjab, Pakistan. The results showed a significant positive correlation ($r = .453^{**}$) between empathy and prosocial behavior, with higher empathy leading to increased prosocial actions. Female students exhibited higher empathy levels than males, though no gender difference was found in prosocial behavior. Additionally, urban students displayed higher prosocial behavior than rural students, but there was no significant difference in empathy between the two groups. These findings aim to foster empathy and prosocial behaviors for a more sustainable society.

Sinaga et al. (2023) studied the influence of mood and empathy on prosocial behavior among Muslim adolescents in Padang City. Using a sample of 80 students from Dharmabakti Nusantara Health Vocational School, the research found a significant positive relationship between mood, empathy, and prosocial behavior. The study concluded that both mood and empathy together accounted for 31.1% of the variance in prosocial behavior, highlighting their meaningful impact on students' prosocial actions.

Bharti et al. (2022) explored the psycho-social factors influencing prosocial behavior, defined as voluntary actions intended to benefit others, such as kindness, sharing, and helping. The study highlights that empathy underpins prosocial development and influences behavior. Prosocial behavior can be driven by various motives, including egoistic concerns, practical needs, other-oriented sympathy, or moral values. Altruism, a subset of prosocial behavior, is motivated by other-oriented or moral concerns rather than personal gain. The study also reviews key historical works on prosocial behavior, noting contributions from researchers like Gouldner, Berkowitz and Daniels, Campbell, and Latane and Darley.

Fadli and Widyastuti (2022) examined the link between empathy and prosocial behavior among 241 students at SMK Antarctica 1 Sidoarjo. Using Pearson's correlation, they found a positive relationship, indicating that higher empathy levels correlate with increased prosocial behavior ($r = 0.236, p < 0.005$) (Fadli & Widyastuti, 2022).

Aina, Olurinola et al (2022) explored how spirituality predicts prosocial behavior among Nigerian undergraduates, beyond the influence of prosocial media, empathy, gender, and age. They found that spirituality significantly impacts prosocial behavior, with empathy acting as a mediator. The study highlights the importance of spirituality and empathy in fostering prosocial actions and suggests directions for future research.

Rathje et al. (2021) investigated whether attending live theatre enhances empathy and prosocial behavior. Across three studies with 1,622 participants, they found that after watching plays, people reported increased empathy for groups depicted, held attitudes aligning with the shows' socio-political themes, and donated more to related and unrelated charities. The findings suggest that theatre can lead to meaningful

increases in empathy and prosocial behavior, beyond just entertainment.

Sassentrath et al. (2021) highlights how empathy promotes solidarity and can directly foster health-related behaviors, such as hand hygiene or adherence to COVID-19 measures, as well as pro-environmental actions. However, they also discuss the limitations of empathy, suggesting there are circumstances where its influence on prosocial behavior may be less effective.

Stevens et al. (2021) highlight that empathy consists of multiple dimensions, and defining it as a single concept may be misleading. While empathy is often seen as a way to boost prosocial behavior, some evidence suggests it can also reduce such behavior. The paper explores recent advances in affective neuroscience, showing that responses to empathy can lead to either personal distress or empathic concern, influencing prosocial motivation. The research suggests that combining compassion interventions with both affective and cognitive empathy offers the best chance of promoting prosocial behavior.

Cao et al. (2020) studied how the coronavirus outbreak affected empathy and prosocial behavior. Analyzing responses from 1,190 participants before and after the outbreak, the study found that prosocial willingness decreased post-outbreak, likely due to reduced empathy levels, consistent with compassion fatigue theory. The study also noted that news exposure and proximity to the outbreak influenced changes in empathy. The findings suggest that excessive information during health emergencies can negatively impact mental health and prosocial behavior.

Bedwell (2020) explored how having siblings with autism affects neurotypical individuals' empathy and pro-social behavior. Involving 123 adults with either neurotypical (71) or autistic (52) siblings, the study used the Empathy Quotient and Helping Attitude Scale. Results indicated that participants with autistic siblings displayed higher levels of empathy and pro-social behavior towards others.

Hidayah et al. (2020) examined how student organizations influence pro-social behavior. Using qualitative methods, including observation, interviews, and documentation, the study found that students in these organizations exhibited behaviors such as empathy, social responsibility, and low egocentrism. Factors affecting pro-social attitudes include the environment, knowledge, and personality. The study suggests that intensive coaching and encouragement within student organizations can foster pro-social traits and develop well-rounded, responsible individuals.

Roth et al. (2019) explores how avatars, as digital alter egos, enable anonymous self-disclosure, potentially fostering authentic interactions. Through an online study, the research found that avatars can be perceived as authentic and elicit empathy at levels similar to human interactions. Authenticity was shown to promote emotional empathy, which in turn fostered prosocial intentions. The study suggests that avatars may be valuable for human-computer interaction (HCI) applications related to mental well-being and support.

Fontes-Dutra et al. (2019) investigated empathy-like pro-social behavior in a rat model of autism induced by Valproic Acid (VPA). They tested the rats' ability to release a trapped companion, finding that VPA delayed the onset of this behavior but did not affect its persistence once it began. The study also explored Resveratrol as a potential intervention but found no protective effects. These findings highlight the need for further research into empathy-like behaviors in autism models to better understand the underlying mechanisms.

Silke et al. (2018) conducted a systematic review of factors affecting the development of empathy and prosocial behavior in adolescents. Analyzing 168 studies on adolescents aged 13-18, the review found that various social and psychological factors significantly influence these traits. However, depending on how prosocial behavior and empathy are defined, these factors' effects may differ. The results emphasize the necessity of more study and the formulation of relevant policies in this field.

Kaviani et al. (2016) studied how mindfulness affects personality traits like openness, empathy, theory of mind, pro-social behavior, and suggestibility. After examining 275 volunteers' data, they discovered that those with high mindfulness scores also exhibited lower suggestibility and more theory of mind, pro-social behavior, and openness.

Girard et al. (2014) investigated how empathy and pro-social behavior relate to behavior disorders (BD) in children. The study, involving 51 boys aged 7 to 12 and their parents, found that empathy is crucial for healthy psychosocial development. The research also suggests that pro-social behavior may mediate the relationship between empathy and BD.

Vasconcelos et al. (2012) explored the distinction between empathy and pro-sociality. While empathy involves sharing and recognizing others' feelings, pro-sociality refers to actions that benefit others. Vasconcelos critically compared studies of rescuing behavior in rats and ants, noting that rats' behavior was interpreted as evidence of empathy, while ants' was not. He argued that to prove empathy, evidence must show that individuals represent others emotional states and act to improve their wellbeing. Current studies, he contends, have not sufficiently demonstrated this, suggesting that empathy remains unproven outside humans.

Mestre et al. (2002) reviewed how cognitive and emotional processes predict pro-social behavior and aggression in adolescents, focusing on empathy. Analyzing data from 1,285 adolescents (ages 13-18), the study found that emotional factors are strongly linked to both aggression and pro-social behavior. Emotional instability was the main predictor of aggression, while non-impulsive, positive emotionality and empathy were key predictors of pro-social behavior. Prosocial reasoning was less relevant in predicting these behaviors.

Method

Aim

To study the relationship between empathy and pro social behavior

Objective

To understand whether there is any significant relationship between empathy and pro social behavior.

Hypothesis

There is a significant relationship between empathy and pro social behavior

Sample/Participants

The sample of participants in this study includes 90 individuals of 18-30 years students and working professionals.

Test And Tools Used

The Toronto Empathy Questionnaire (TEQ) (Spreng et al., 2009) is a 16-item self-report questionnaire used to assess emotional empathy. The scale has a strong internal consistency (Cronbach's alpha = 0.85–0.87) and good test-retest reliability ($r = 0.81$). It has good convergent validity with empathy-related measures like the Interpersonal Reactivity Index ($r = 0.76$) and low correlations with other constructs, indicating its specificity (Spreng et al., 2009).

The Prosocialness Scale for Adults (PSA) (Caprara et al., 2005) is a 16-item scale that assesses

prosocial behaviors in adults, such as helping, sharing, and empathetic care. The scale has a good internal consistency (Cronbach's alpha = 0.91) and excellent test-retest reliability ($r = 0.84$). It also has high convergent validity with related measures (e.g., Interpersonal Reactivity Index, $r = 0.60-0.70$) but low correlations with unrelated constructs (Caprara et al., 2005).

Procedure:

This study looks at the connection between prosocial behavior in adults and empathy. A convenience sample of one hundred participants, ranging in age from eighteen to thirty, was used for recruitment. A Google Forms-managed online survey was used to gather data. The prosocial behavior was measured with the Prosocialness Scale for Adults (2005) and empathy levels were measured with the Toronto Empathy Questionnaire (2009). The Toronto Empathy Questionnaire scale (16 items, five-point likertscale) and The pro socialness Scale For Adults (16 items, five-point likert scale) were used for assessments. The data were pooled for 90 participants and correlation was used for analysis.

Results

Table 1: Mean And Standard Deviation Of Empathy And Prosocial Behavior

	Mean	Std. deviation
Empathy	43.81	8.241
Prosocial behavior	21.67	5.456

This table summarizes statistics for the two variables studied: empathy (measured by the TEQ) and prosocial behavior (measured by the PSA), based on a sample of 90 females.

Toronto Empathy Questionnaire (TEQ Total Score): The mean score is 43.81, indicating the individuals' average empathy level. The minimum score is 16; the maximum score is 60. This demonstrates the range of empathy levels in the sample, with 16 being the lowest and 60 being the greatest. The standard deviation (SD) is 8.241, indicating that empathy ratings vary by around 8.24 points from the mean. This provides a sense of the dispersion or variety in empathy levels across participants.

Prosocialness Scale for Adults (PSA Total Scores): The mean score is 21.67, which represents the sample's average level of prosocial behavior. The minimum score is 3; the maximum score is 32. This implies that some participants demonstrated very low levels of prosocial behavior, whilst others exhibited significantly higher levels.

The standard deviation (SD) is 5.456, indicating that PSA scores normally differ by 5.46 points from the mean. This demonstrates moderate heterogeneity in prosocial behavior among subjects.

These statistics provide a general idea of the distribution of empathy and prosocial behavior among the 90 females in the sample.

Table 2: Correlation Between Empathy and Prosocial Behavior

		Empathy	Prosocial behavior
Empathy	Pearson correlation	1	.847**
	Sig. (2-tailed)		.000

	N	90	90
Prosocial behavior	Pearson correlation	.847**	1
	Sig. (2-tailed)	.000	
	N	90	90

Note: **.Correlation is significant at the 0.01 level (2-tailed).

This table displays the Pearson correlation coefficient between Empathy and Prosocial behavior, which indicates the degree and direction of the association between these two variables. Correlation of TEQ Total Score and PSA Total Score:

The correlation coefficient (r) is .847, indicating a significant positive association between empathy and prosocial behavior. This suggests that when empathy increases, so does prosocial behavior, and vice versa. The p-value is .000, indicating a statistically significant connection at the 0.01 level ($p < .01$). This indicates that the observed correlation is highly unlikely to have occurred by chance and represents a true relationship in the population.

**Graph
Figure 1**

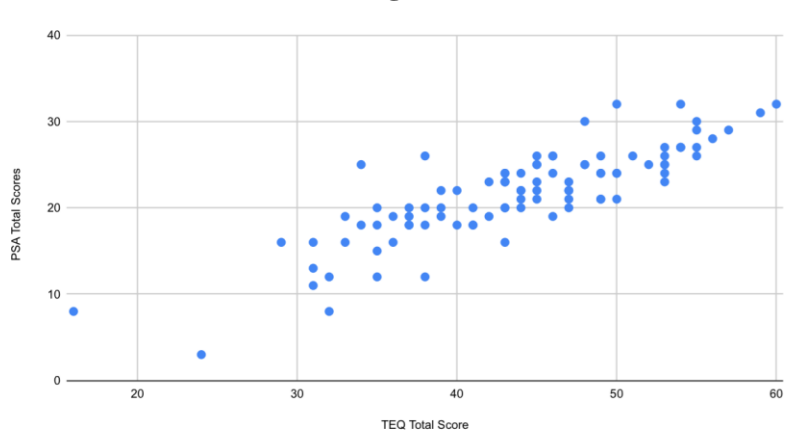


Figure 1. This Scatter plot represents the relationship between Empathy and Prosocial Behavior of females.

Discussion

The study's findings provide compelling evidence in favor of the theory that young adults' prosocial behavior and empathy are significantly correlated. The substantial positive correlation ($r = .847, p < .001$) found between these two variables is in line with a number of social psychology studies that have looked at how empathy is a key factor in driving helpful behaviors. Numerous studies support these conclusions. For instance, (Shafique et al. 2024) found a strong link between prosocial behavior and empathy in undergraduate students, supporting the notion that higher empathy levels are linked to more involvement in deeds that benefit others. Similarly, Fernandes et al. (2024) discovered that prosocial behaviors were significantly predicted by cognitive empathy, or the ability to understand the emotional states of others, among younger populations, although they also acknowledged the impact of gender differences on these

outcomes. According to the findings of this study, prosocial behavior among young adults—regardless of gender—was strongly correlated with their capacity for empathy, indicating that in older age groups, gender may not have as great of an impact as it does now.

The Empathy-Altruism Hypothesis was formulated by Watson et al. (1981) and provides a useful framework for understanding these results. This theory holds that people who have higher levels of empathy are more likely to act kindly because empathy instills an innate desire to lessen the suffering of others. The results of the current study further suggest that empathy is the main driving force behind acts of kindness, which is consistent with this hypothesis. Participants with higher empathy scores also showed greater engagement in prosocial behaviors. The idea that developing empathy could directly increase altruistic and prosocial behaviors in young adults is supported by the study's significant correlation.

Moreover, Social Role Theory (Eagly & Wood, 1999) also offers a useful lens through which to interpret these results. This theory suggests that societal norms and roles influence how empathy is expressed and how it translates into prosocial behaviors. For young adults, social expectations to exhibit helping behaviors and social responsibility might interact with their empathic tendencies, further promoting prosocial actions. The current study's findings resonate with this, particularly in the context of emerging adulthood, a period characterized by heightened sensitivity to social feedback and expectations (Steinberg & Monahan, 2007). The participants, being within this developmental stage, might experience both internal empathy and external social pressures to conform to prosocial norms, thus enhancing the likelihood of acting in a prosocial manner.

Together with these hypotheses, the Emotional Contagion Theory (Hatfield, Cacioppo, & Rapson, 1994) asserts that seeing another person's emotional experience can set off an empathic reaction, which in turn inspires others to do actions that lessen the suffering they see. (Decety and Cowell, 2014) provided empirical evidence supporting this phenomena by showing that those who are emotionally attuned to others are more likely to take prosocial acts. This argument is further supported by the study's findings, which show a substantial association between empathy and prosocial behavior. The prosocial activities exhibited by the participants can be explained as a direct consequence of their emotional resonance with the needs of others. This implies that interventions that target the development of emotional empathy may have a substantial positive impact on prosocial behavior.

It's interesting to note that the study also emphasizes how crucial situational and contextual elements are in influencing how empathy and prosocial behavior interact. (Kira et al., 2021) looked studied how empathy interacts with peer expectations and social norms to shape prosocial behavior. According to their findings, situational cues and perceived social norms can either strengthen or weaken the link between empathy and prosocial behavior. While situational elements were not explicitly investigated in this study, it does provide a direction for future research. It would be interesting to investigate, for instance, how social settings, cultural norms, and peer pressure impact the empathy-prosocial behavior dynamic in young people.

Furthermore, (Bharti et al. 2022) provide a thorough examination of the motivations underlying prosocial behavior, emphasizing that these actions might be motivated by a range of elements such as practical necessities, moral principles, and egoistic considerations. Their findings support the findings of the current study, indicating that prosocial behavior is multifaceted and impacted by a variety of internal and external influences, but that empathy is also a significant component in prosocial development. This realisation is essential to comprehending the complexities involved in prosocial behavior. It implies that although empathy is a crucial component, an individual's prosocial behavior may also be influenced by other

motivational variables. When creating treatments meant to encourage prosocial behavior in young people, it is crucial to take this complexity into account.

Longitudinal research adds to the theoretical foundations supporting the significance of empathy in encouraging prosocial behavior. A study by (Dapretto et al. 2023) looked into the long-term effects of empathy on young people's prosocial engagement. The results highlight the fact that empathy not only predicts immediate prosocial behaviors but also supports persistent prosocial engagement, as people with greater empathy scores were found to be more likely to engage in community service and peer support over time. This is consistent with the results of the present study and implies that empathy is an important quality to develop in early adulthood because it can have long-term advantages for the person as well as for society.

Further emphasizing the impact of empathy on prosocial behaviors, (Aziz Sinaga et al. 2023) explored how mood and empathy together influence prosocial actions among adolescents. They found that both variables significantly predicted prosocial behaviors, accounting for 31.1% of the variance. While this study focused on a younger population, its findings suggest that emotional states, when combined with empathy, could provide additional insight into understanding prosocial actions in young adults as well. Future studies could build on this by investigating the role of emotional states or mood in modulating the empathy-prosocial behavior relationship within different age groups.

But prosocial behavior isn't often fostered by empathy alone. According to (Leroy Stevens et al. 2021), empathy has several dimensions. When its emotive component isn't counterbalanced by cognitive empathy or compassion, it might occasionally result in self-distress instead of constructive actions. This duality implies that in order to prevent empathetic discomfort from hindering prosocial acts, therapies meant to promote prosocial behavior should concentrate on improving affective and cognitive empathy in addition to include compassion-based training. This is especially important for young adults, as they could go through a period of increased emotional sensitivity.

The results of this study are consistent with those of (Rathje et al., 2021), who showed that prosocial behavior can be encouraged by exposure to specific social situations, such as going to a live theatre, by increasing empathy. This highlights the importance of experiential learning in the development of empathy and implies that one effective way to improve empathy and prosocial behavior in young adults may be to create environments in which they can encounter events that elicit empathy.

Lastly, studies on the COVID-19 pandemic's effects have brought attention to the significance of empathy in the context of international disasters. For instance, (Cao et al. 2020) discovered that, in line with the compassion fatigue idea, there was a decline in prosocial behaviors following the pandemic's onset due to a decrease in empathy. This emphasises how important it is to keep up and cultivate empathy because it is a key component of prosocial behavior and must be maintained during trying circumstances. The findings imply that prosocial behaviors are more common among females who have higher empathy levels. This result is in line with the body of evidence indicating that prosocial behavior—which is defined as aiding or supporting others—is largely driven by empathy. The results also demonstrate how important it is to include both situational and individual factors when trying to understand the complex ties that prosocial activity and empathy have. In order to gain a greater understanding of how external factors, such as social norms, emotional states, and cultural settings, impact the relationship between empathy and prosocial behavior, future research should keep examining this topic. This will help designers of treatments aimed at promoting empathy and prosociality in young adult populations.

Conclusion

The purpose of this study was to test the relationship between empathy and prosocial behavior among younger adults aged from 18 to 30 years of age. The results showed that there is a strong positive relationship between empathy and prosocial behavior demonstrated by the fact that the high levels of empathy score were shown by respondents who positively engaged in with helping behaviors. This outcome is in line with the Empathy-Altruism Hypothesis (Batson et al., 1981) which suggests that empathic individuals will act out of altruism and engage in positive or prosocial acts and also supports the Emotional Contagion Theory (Hatfield et al., 1994) which postulates that emotion can be transferred from one person to another and leads to prosocial behavior. The significant correlation observed is in agreement with the other findings such as those reported by (Shafique et al. 2024) and (Cuddy et al. 2020), who also indicated a relationship between empathy and prosocial behavioral patterns. This brings into the light the illustration that regardless of the various populations and cultures, empathy is overwhelmingly seen as a key motivator for the performance of prosocial behavior. The results of the study also show that programs that seek to increase the levels of empathy among people may also result in increases in the behaviors that are prosocial. The age range of young adults who are aged between 18 and 30 is an important one in the social development stage and one that seeks to promote empathy anchoring as a trait that is desirable in the society.

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