

## Exploring the Relationship Between Intelligence Quotient, Emotional Intelligence, and Prosocial Behavior

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### ABSTRACT

IQ has long been used to gauge human intellect by assessing analytical, problem-solving, and logical thinking abilities. Recent research, however, highlights the part that emotional intelligence (EI) plays in moral behavior, social connections, and emotional regulation. Helping, sharing, and cooperating are examples of prosocial behavior that is influenced by both cognitive and emotional qualities. This research aims to explore the extent to which IQ and EI contribute to prosocial tendencies and whether one plays a more dominant role than the other. Sample that was taken in the study are adolescents between 18-30 age group. The scale used for IQ (intelligent quotient) is advance progressive matrices (APM) for EI (emotional intelligence) emotional intelligence scale (EIS) and for prosocial behavior (PSA) prosocialness scale for adults. Correlation analysis was performed to first seek the relationships between the variables. It was found that only prosocial behaviour and emotional intelligence were significantly correlated. Next through independent sample t-test it was found that there was a significant difference in prosocial behaviour between those with high EI and those with high IQ. Lastly, through regression analysis it was found that emotional intelligence had a significant positive effect on prosocial behaviour accounting for most of the change in prosocial behaviour.

**Keywords:** *Intelligent Quotient, Emotional Intelligence, and Prosocial Behavior*

In the realm of human behavior and personal development, the relationship between Intelligence Quotient (IQ), Emotional Intelligence (EQ), and prosocial behavior has long been a subject of both academic inquiry and practical interest. IQ, typically defined as a measure of cognitive abilities, such as problem-solving, reasoning, and logic, has traditionally been regarded as a predictor of academic and professional success. However, in recent years, there has been increasing recognition of the importance of Emotional Intelligence (EQ), which involves the ability to understand, manage, and utilize emotions effectively in both oneself and others. While IQ can guide cognitive tasks, EQ is thought to be crucial for interpersonal interactions and social well-being. Prosocial behavior, which refers to actions that benefit others and promote social harmony, represents another essential aspect of human functioning. This includes acts such as cooperation, empathy, altruism, and helping behaviors that are critical for the smooth functioning of societies. Understanding the

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factors that influence prosocial behavior is vital not only in psychology and sociology but also in fields like education, organizational behavior, and public health.

### **Intelligent Quotient**

The term Intelligence quotient or IQ was given by psychologist William Stern as a measure of a person's general intelligence. "The capacity to adjust, mold, and choose environments in order to achieve one's own objectives as well as those of one's society and culture is intelligence." (Sternberg & Kaufman, 1998).

Intelligent Quotient is a score derived from a sequence of standardized tests designed to measure human intellect, mainly cognitive abilities such as reasoning, problem-solving, memory, and thinking speed (Braaten et al., 2006).

A genuine IQ test is a standardized, scientifically-backed evaluation that requires expert administration and psychological guidance from a certified professional. Studies have revealed that IQ scores are shaped by a complex interplay of both genetic predisposition and external environmental influences (Plomin, 1999). Also, IQ scores are linked to various life outcomes, including academic achievement, career success, and health (Gottfredson, 1997).

### **Emotional Intelligence**

The Theory of Emotional Intelligence (EQ), popularized by Daniel Goleman, emphasizes the role of emotions in human intelligence and posits that emotional understanding and regulation are crucial for personal and professional success. Emotional intelligence plays an important role in one's life. It can be learned, enlightened and can be increased in adulthood. Emotional intelligence is a subset of social intelligence that focuses on the capacity to recognize and manage one's own emotions as well as those of others. Emotional Intelligence refers to the ability to recognize and regulate emotions in ourselves and others as well (Goleman, 2001).

Emotional intelligence is a form of intelligence that involves the ability to monitor one's own and others' feelings and emotions, and to discriminate among them and to use this information to guide one's thinking and actions. (Salovey & Mayer, 1990).

The ability to use emotions and emotional knowledge to improve thinking, as well as the capacity to do appropriate reasoning about emotions, are the definitions of emotional intelligence provided by the same authors (Mayer J.D. et al., 2008). This definition implies that Emotional Intelligence (EI) is a complex and multifaceted concept that cannot be captured by a single dimension. Instead, a multidimensional approach to operationalizing EI would be more theoretically sound and consistent with its underlying nature.

### **Prosocial Behavior**

The American Psychological Association (APA) describes pro-social behavior as actions that help one or more individuals. In essence, it refers to a deliberate action or conduct by a person that aids another individual or society as a whole. Nonetheless, this behavior does not yield any immediate advantage to the person providing help.

It is a behavior in which the intentions are to benefit other people or group (Dunfield, 2014). Both emotional and cognitive intelligence have an impact on prosocial conduct, which includes selfless deeds meant to serve others, like sharing, cooperating, and helping (Batson,

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1991). High EI people are more likely to act prosocially spontaneously and with empathy, while high IQ people may strategically act prosocially when it is advantageous, according to some research (Carlo et al., 2010).

People are more likely to act prosocially themselves when they witness others doing so, according to research. Additionally, it appears that prosocial behavior is inherently preferred by people. In one study, for instance, even infants preferred to play with a doll that was acting helpfully over one that was acting selfishly.

### REVIEW OF LITERATURE

#### Intelligence Quotient (IQ) and Prosocial Behavior

IQ is often linked to academic success and problem-solving capabilities (Neisser et al., 1996). Some researchers argue that individuals with high IQs can strategize their prosocial actions based on long-term benefits rather than spontaneous altruism (Carlo et al., 2010). However, others contend that IQ alone is insufficient in fostering genuine prosocial behavior, as it lacks the emotional components necessary for empathy-driven acts (Silvia & Nusbaum, 2011).

#### Emotional Intelligence (EI) and Prosocial Behavior

EI, defined as the ability to perceive, understand, and manage emotions (Salovey & Mayer, 1990), is crucial for developing empathy and social bonds. Studies indicate that high-EI individuals exhibit greater kindness, cooperative behavior, and emotional responsiveness (Goleman, 1995; Schutte et al., 2001). Furthermore, emotional intelligence is linked to moral reasoning and ethical behavior, making it a significant predictor of prosocial tendencies (Zeidner et al., 2004).

### METHODOLOGY

#### Objectives

- To assess the relationship between Intelligence quotient and pro social behavior.
- To assess the relationship between emotional intelligence and pro social behavior.
- To assess if there is a difference in pro social behaviour between high intelligence quotient and high emotional intelligence.
- To assess the effect of effect of emotional intelligence on pro social behaviour.

#### Hypothesis

- There is no correlation between intelligence quotient and pro social behavior.
- There is positive correlation between emotional intelligence and pro social behavior.
- There is a significant difference in prosocial behavior on the basis of high intelligent quotient and high emotional intelligence.
- There is significant effect of emotional intelligence on pro social behavior.

#### Sample

The sample consist of 50 (N=50) adolescents age group of 18-30 year from different cities of India. The method used for collecting samples is snowball sampling. The data was collected through online google form.

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### Variables

The variables of this study are (IQ) intelligent quotient, (EI) Emotional intelligence and prosocial behavior.

- Independent variable - (EI) emotional intelligence
- Dependent variable - Prosocial behavior

### Tools Used in Data Collection

Tools that are used for the study are Advance Progressive Matrices by J.C. Raven, J.H. Court, and J. Raven for (IQ) intelligent quotient, Emotional Intelligence Scale by Dr. Arun Kumar Singh and Dr. Shruti Narain for (EI) emotional intelligence and (PSA) prosocialness scale for adults by Gian Vittorio Caprara, Patrizia Steca, Arnaldo Zelli, and Cristina Capannafor for prosocial behavior.

## RESULTS

Initially descriptive statistics were implemented to find the mean and standard deviation. Moderate variation in responses was indicated by the prosocial behavior Scores, which ranged from 34 to 80 with an average of 60.8 and a standard deviation of 10.83. There were notable variations in the participants' emotional intelligence levels, as evidenced by the EI scores, which ranged from 95 to 194 with a comparatively high average of 151.7 and a standard deviation of 23.84. On the other hand, IQ scores, which ranged from 75 to 125 and had a mean of 103.6 and a standard deviation of 14.83, were more closely clustered. This implies that although participants' emotional intelligence varied more, their cognitive abilities were more or less constant and within the expected range.

*Table 1: Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
PB Score	50	34	80	60.80	10.827
EI Score	50	95	194	151.70	23.835
IQ Score	50	75	125	103.62	14.832
Valid N (listwise)	50				

According to correlation analysis, higher emotional intelligence is closely associated with higher prosocial behavior scores, which revealed a strong, significant positive relationship between prosocial behavior score and EI score ( $r = .970$ ,  $p < .01$ ). On the other hand, there was no significant correlation between the IQ score and the PB score ( $r = -.007$ ,  $p = .959$ ) or the EI score ( $r = .028$ ,  $p = .844$ ), indicating that cognitive ability is not closely associated with these variables in this sample.

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**Table 2: correlation between prosocial behavior, emotional intelligence and intelligent quotient**

		PB Score	EI Score	IQ Score
PB Score	Pearson Correlation	1	.970**	-.007
	Sig. (2-tailed)		<.001	.959
	N	50	50	50
EI Score	Pearson Correlation	.970**	1	.028
	Sig. (2-tailed)	<.001		.844
	N	50	50	50
IQ Score	Pearson Correlation	-.007	.028	1
	Sig. (2-tailed)	.959	.844	
	N	50	50	50

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

According to the results, participants with high IQ and those with high EI were compared in terms of their prosocial behavior Scores. The average PB Score of those with high emotional intelligence (EI) was significantly higher than that of those with high IQ (M = 54.48, SD = 11.08).

**Table 3: group statistics for T test**

		N	Mean	Std. Deviation	Std. Error Mean
PB Score	High IQ	23	54.48	11.082	2.311
	High EI	27	66.19	7.179	1.382

The PB Scores of participants with high IQ and those with high EI were compared using an independent samples t-test. The assumption of equal variances was not broken, according to Levene's test ( $p = .076$ ). Individuals in the high EI group scored significantly higher on PB (mean difference = -11.707), and the t-test results indicated a significant difference between the two groups ( $t = -4.496$ ,  $p < .001$ ). These findings lend credence to the hypothesis that emotional intelligence, rather than IQ, may have a greater impact on prosocial behavior performance.

**Table 4: T test on prosocial behavior**

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
PB Score	Equal variances assumed	3.284	.076	-4.496	48	<.001	-11.707	2.604
	Equal variances not assumed			-4.348	36.586	<.001	-11.707	2.692

A simple linear regression was conducted to examine whether Emotional Intelligence (EI) could predict PB Score. The model showed a very strong relationship between EI and PB, with an R value of .970. The R Square value of .942 indicates that approximately 94.2% of the variance in prosocial score Scores can be explained by EI Scores alone.

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**Table 5: model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.970 <sup>a</sup>	.942	.941	2.640

a. Predictors: (Constant), EI Score

According to the regression analysis's ANOVA results, the model that predicts PB Score based on emotional intelligence (EI) is statistically significant ( $F = 775.89$ ,  $p < .001$ ). This suggests that prosocial behavior Score is significantly predicted by EI Score.

**Table 6: ANOVA Regression**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5409.353	1	5409.353	775.888	<.001 <sup>b</sup>
	Residual	334.647	48	6.972		
	Total	5744.000	49			

EI Score is a significant predictor of PB Score, according to the regression coefficients ( $B = 0.441$ ,  $p < .001$ ). This indicates that the PB Score rises by roughly 0.44 points for every point that the EI Score rises. A significant positive effect is indicated by the standardized beta coefficient ( $\beta = .970$ ). All things considered, the model demonstrates a robust, favorable, and statistically significant correlation between prosocial behavior performance and emotional intelligence.

**Table 7: Regression coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.073	2.430		-2.500	.016
	EI Score	.441	.016	.970	27.855	<.001

a. Dependent Variable: PB Score

## DISCUSSION

The findings of this study provide compelling evidence for the influential role of emotional intelligence (EI) in predicting prosocial behavior (PB). The strong, positive correlation between EI and PB suggests that individuals with higher emotional intelligence are more likely to engage in prosocial actions. This relationship was not only statistically significant but also practically meaningful, as nearly all of the variance in prosocial behavior scores could be explained by EI alone ( $r^2 = .942$ ). This highlights the extent to which emotional awareness, regulation, and empathy—core components of emotional intelligence—may underpin the motivation and capacity for socially positive behavior.

In contrast, IQ did not show any significant association with either EI or PB. The absence of correlation between IQ and prosocial behavior implies that cognitive ability, at least in the context of this sample, does not meaningfully influence individuals' likelihood to act in prosocial ways. This finding aligns with existing research suggesting that while intelligence

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may support analytical or academic performance, it is emotional and social competencies that often drive interpersonal behavior.

Further supporting this conclusion, group comparisons revealed that participants with high EI scored significantly higher on PB than those with high IQ. The t-test results confirmed that this difference was not only statistically significant but also substantial in size, with a mean difference of over 11 points. These outcomes reinforce the idea that emotional intelligence is a more important determinant of prosocial behavior than cognitive intelligence.

The regression analysis further validated these findings, showing that EI is a strong and significant predictor of PB. The model's high explanatory power and the significant coefficient for EI suggest that interventions aimed at enhancing emotional intelligence may be effective in promoting prosocial behavior.

Overall, the results support the hypothesis that emotional intelligence plays a central role in facilitating prosocial actions. These insights carry meaningful implications, particularly in educational, organizational, and community settings, where fostering emotional intelligence could lead to more compassionate, cooperative, and socially responsible behavior.

### *Limitations and Suggestions*

There were just 50 participants in the study, which would restrict how broadly the results can be applied to more diverse or sizable groups. Using self-report questionnaires only could result in bias due to social desirability or erroneous self-perception. The study's design precludes drawing inferences regarding the relationship between prosocial behavior and emotional intelligence. Only IQ and EI were investigated as prosocial behavior predictors; personality traits and environmental variables were not taken into account.

To improve the generalizability of findings, future research should involve people from a range of backgrounds. Behavioral tasks, peer assessments, and observational techniques may all be used to produce more impartial assessments of prosocial behavior and emotional intelligence. Future studies should examine the impact of interventions meant to enhance EI or monitor changes over time in order to gain a better understanding of causality. A more thorough understanding of the elements that influence prosocial conduct may be provided by taking into account elements such as empathy, personality, moral reasoning, or social context.

## **CONCLUSION**

This study explored the relationship between emotional intelligence, IQ, and prosocial behavior, with the aim of identifying which factor better predicts prosocial tendencies. The results consistently demonstrated that emotional intelligence is a strong and significant predictor of prosocial behavior, whereas IQ showed no meaningful association. In addition to scoring higher on measures of prosocial behavior, participants with higher EI also performed noticeably better than those with higher IQ. Emotional intelligence plays a critical role in influencing prosocial behavior, as evidenced by regression analysis, which found that it explains a significant amount of the variance in prosocial behavior. The significance of emotional competencies in fostering empathy, collaboration, and selflessness is highlighted by these findings. According to this research, emotional intelligence may be just as—if not more—important in promoting prosocial outcomes than cognitive ability,

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which is frequently stressed in educational and professional contexts. To create more empathetic and socially conscious communities, future studies and real-world initiatives should prioritize the development of emotional intelligence.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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