

# Empathy in Adversity: The Relationship between Posttraumatic Growth and Empathy in Indian Young Adults Who Experienced a Potentially Traumatic Experience

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## Abstract

Understanding the relationship between Posttraumatic Growth and Empathy is essential as it can shed light on how the young adults of India navigate adversity and develop prosocial attitudes which can lead to culturally sensitive interventions and support services. This study seeks to unearth the complex dynamics between the five dimensions of Posttraumatic Growth: Personal Strength, New Possibilities, Improved Relationships, Spiritual Growth and Appreciation for Life; with the two dimensions of Empathy: Cognitive and Affective. The sample under study consists of 180 participants between the ages of 18 to 25 who had experienced a Potentially Traumatic Event 1 month ago. Pearson's Correlations Analysis was used to measure the relationship between Posttraumatic Growth and Empathy. Results showed a significant correlation at the 0.01 level of significance between Empathy and Post-traumatic Growth, Appreciation of Life and, New Possibilities and Empathy, Personal Strength and empathy, Spiritual growth and Empathy, Improved relationships and empathy, Posttraumatic Growth and Affective Empathy and Posttraumatic growth and Cognitive empathy.

**Keywords:** Posttraumatic Growth, Empathy, Young adults

## 1. Introduction

The American Psychological Association (2018) defines Trauma as 'any disturbing experience that results in significant fear, helplessness, dissociation, confusion, or other disruptive feelings intense enough to have a long-lasting negative effect on a person's attitudes, behaviour, and other aspects of functioning. Traumatic events include those caused by human behavior (e.g., rape, war, industrial accidents) as well as by nature (e.g. earthquakes) and often challenge an individual's view of the world as a just, safe, and predictable place.' According to Knipscheer et al., (2020), most people say that they have experienced one or more potentially traumatic events (PTEs) throughout their lifetime.

Trauma experienced by young adults, including physical abuse and neglect, has been found to have lasting detrimental effects on emotional and physical health, sleep quality, and stress reactivity in young adults (Beilharz, 2020). Interestingly however, just a small percentage go on to acquire PTSD, or posttraumatic stress disorder.

'Posttraumatic growth' (PTG) refers to 'positive psychological changes experienced as a result of the struggle with trauma or highly challenging situations' (Tedeschi & Calhoun, 2004). PTG tends to be reported in five major domains: improved interpersonal relationships, a greater sense of personal strength, new opportunities, greater appreciation for life, and spiritual growth (Tedeschi & Calhoun, 1996).

Empathy is probably a part of posttraumatic growth, according to research on the subject (Tedeschi et al., 1998; Ogińska-Bulik, 2022). According to the American Psychological Association (2014), Empathy is 'understanding a person from his or her frame of reference rather than one's own, or vicariously experiencing that person's feelings, perceptions, and thoughts'. Perspective-taking, a cognitive component of empathy, is the inclination to spontaneously take on the psychological viewpoints of others. Gaining a thorough grasp of this skill is particularly crucial as interacting with others in social settings necessitates being aware of their thoughts and feelings, and adopting a social perspective is linked to positive results like solving conflicts (Gehlbach, 2004). Empathic concern, which is another facet of empathy, is defined as other-focused feelings of concern for someone who is in need (Davis, 1983). These two aspects of empathy evolve toward higher levels of maturity during adolescence and emerging adulthood (Hoffman, 1984).

Tedeschi and Calhoun (1996) reported a significant positive relationship between PTG and empathy. Greenberg et al. (2018) discovered that childhood trauma has a lasting impact on an individual's ability to understand and empathise with others' psychological and emotional states. However, some studies found that PTG and empathy have only a marginally positive connection (Freedle & Oliveira, 2023), or no relationship (Elam & Taku, 2022).

There is currently a gap in research studying PTG in young adults across a wide range of trauma. Most studies on PTG and empathy have been conducted in Western cultures and above the age range of 25. Most studies on PTG pertain to a specific traumatic incident. There is a need for more research in other cultures and a range of trauma types to see if the findings are generalizable. Some studies have found that empathy is associated with posttraumatic growth, while others have found no association, therefore, there is a need for further research to clarify this relationship. Findings from this research could inform the development of culturally sensitive interventions and support systems. Understanding the role of empathy in fostering posttraumatic growth may guide the design of programs to enhance emotional support for those who have experienced trauma.

## 2. Review of Literature

### 2.1 Posttraumatic growth and Empathy

According to Freedle & Oliveira (2023), their study looked at the association between prosocial behaviour, empathy, and psychologically healthy changes in women who had lost pregnancies, posttraumatic growth and empathy was found to have a marginally positive connection. Through social media, women who had lost a pregnancy or given birth to a stillborn child ( $n = 291$ ) were attracted, and they responded to an online questionnaire to rate their prosocial behaviour, empathy, and posttraumatic growth (PTG).

Similarly, research findings have suggested that enduring childhood trauma improves an individual's ability to understand and empathize with the mental and emotional states of others Greenberg et al. (2018). This study used self-report measures, non-clinical samples, and numerous studies to investigate the link childhood trauma to a rise in trait empathy in adulthood based on the supposition that trauma enhances a person's fear of future threats and increases their sensitivity to the suffering of others. Since no scientific study had been able to demonstrate how adversities can foster posttraumatic growth, such as increased

prosocial behaviour and compassion, this potential relationship was investigated. Results from various samples and evaluations showed that adults who said they had experienced a traumatic event as children frequently showed higher levels of empathy than adults who had not experienced a traumatic event. Moreover, there was a positive correlation found between the degree of the trauma and several characteristics connected to empathy.

Research has also studied the link between adverse life experiences and empathy, compassion, and prosocial behaviour (Lim & DeSteno, 2016). Adversity in the past has historically been associated with undesirable life results. However, the authors of this work provide two studies that aim to investigate if a person's lifetime predisposition for empathy-mediated compassion is correlated with the intensity of their past adversity, and if so, whether such compassion is directly linked to actions intended to lessen the suffering of others. The results show that previous adversity of increasing severity predicts increased empathy, which is connected to experiencing compassion for others in need. Furthermore, they show how the ensuing differences in compassion across individuals seem to stimulate actions intended to benefit others (e.g., volunteering, assisting a stranger).

### **2.2 Posttraumatic growth and Empathy in adolescents and young adults**

Wenchao and Xinchun (2020) studied the mediating effects of thankfulness, social support, and posttraumatic development (PTG) on empathy and prosocial behaviour. The findings demonstrated a favourable correlation between empathy and prosocial behaviour, thankfulness, social support, and posttraumatic growth. The relationship between empathy and prosocial behaviour was mediated by gratitude and social support, whereas posttraumatic growth mediated the relationship in a sequential manner. In other words, empathy was linked to higher levels of gratification and social support, which were then linked to higher levels of prosocial behaviour. posttraumatic growth was linked to increased levels of prosocial behaviour as well, but gratitude played a mediating role in this link.

However, in a study by Elam & Taku (2022) on 420 college students, posttraumatic growth was found to be substantially associated with improved emotion identification skills but not with empathy. The study looked at the connections between posttraumatic development (PTG), resiliency, empathy, and the capacity to recognize emotions. Resilience, on the other hand, was inversely related to empathy but not significantly related to the capacity to recognize emotions that go beyond individual characteristics like personality or post-traumatic life experiences.

### **2.3 Posttraumatic growth and Empathy among working professionals**

Research from across the world has identified a relationship between Posttraumatic Growth and Empathy in adults working in varied professions. During the COVID-19 pandemic, Dou et al. (2022) studied the roles of Self-Disclosure and Social Support in Empathy and Posttraumatic Growth among Chinese Community Workers. The findings revealed that posttraumatic growth, self-disclosure, and social support were all positively connected with empathy. Both simultaneously and sequentially, self-disclosure and social support served as a mediating variable in the relationship between empathy and posttraumatic growth. This indicates that empathy was linked to higher levels of social support and self-disclosure, which were then linked to higher levels of posttraumatic growth. According to the study's findings, empathy had a significant role in Chinese community workers' posttraumatic growth during the COVID-19 pandemic. Self-disclosure and social support may also be crucial in helping this set of workers adopt posttraumatic growth. For the prevention and treatment of mental health issues in Chinese community workers, the study has a number of ramifications. First, it suggests that supporting these workers' posttraumatic growth may

benefit from treatments that encourage empathy. Second, the study makes the case for the potential value of interventions that promote social support and self-disclosure.

#### **2.4 Vicarious Posttraumatic growth and Empathy**

In India, Dar's (2021) paper explores the relationship between empathy, rumination, and secondary traumatic stress (STS) and vicarious posttraumatic growth (VPTG) among healthcare professionals. It builds on previous research that has identified the potential for both negative and positive psychological consequences of vicarious traumatic exposure, such as secondary traumatic stress and Vicarious posttraumatic growth. The paper also considers the role of coping strategies in mitigating secondary traumatic stress and fostering Vicarious posttraumatic growth (Tedeschi, 1996). The current study found that 57% of surgeons, 53% of physicians and 52% of nurses faced increased levels of secondary traumatic stress and Vicarious posttraumatic growth. Interestingly, 58% of nurses and 64% of doctors experienced posttraumatic growth. The study determined that the experience of Vicarious posttraumatic growth is not correlated with gender. The results even found support for both a linear and a curvilinear relation, with a curvilinear mode dominantly defending the association between secondary traumatic stress and Vicarious posttraumatic growth. The indirect effect of Secondary Exposure to Conflict-Related Violence (SECRV) on secondary traumatic stress through Perspective Taking (PT) was found to be negatively significant, propounding that Secondary Exposure to Conflict-Related Violence could improve cognitive empathy, which lead to being a protective factor against secondary traumatic stress. However, Empathetic Concern (EC) was found to be positively significant through the indirect effect of Secondary Exposure to Conflict-Related Violence on secondary traumatic stress, proposing that Secondary Exposure to Conflict-Related Violence initiates emotional empathy, which may unfortunately make clinical professionals experience secondary traumatic stress. Interestingly, it was found that perspective-taking does not result in empathic concern and that these forms of empathy affect secondary traumatic stress separately as the indirect effect of Secondary Exposure to Conflict-Related Violence on secondary traumatic stress via perspective taking and empathetic concern in serial, was not statistically significant. The indirect effect of Secondary Exposure to Conflict-Related Violence on Vicarious posttraumatic growth independently and serially through perspective taking and empathetic concern were found not to be significant; however, the direct effect of Secondary Exposure to Conflict-Related Violence on Vicarious posttraumatic growth was significant, proposing that the association between Secondary Exposure to Conflict-Related Violence and Vicarious posttraumatic growth is independent of the effects of perspective taking and empathetic concern and that increasing amount of Secondary Exposure to Conflict-Related Violence were associated with increasing Vicarious posttraumatic growth levels of secondary traumatic stress.

Research has also found a favourable link between cognitive coping strategies, empathy, and vicarious posttraumatic growth (Ogińska-Bulik & Michalska, 2022). The study attempted to ascertain whether, in addition to any detrimental effects, experts who help victims of violent trauma may also go through beneficial changes known as vicarious posttraumatic growth (VPTG). Vicarious posttraumatic growth appears to be significantly influenced by both empathy and cognitive trauma processing. The aim of the study was to determine the relationship between cognitive trauma processing, empathy, and vicarious posttraumatic growth in female professionals who support victims of violence. The study included 154 women from three professional groups: social workers, probation officers, and therapists. The patients ranged in age from 26 to 67 years ( $M + SD = 43.98 + 10.83$ ). The Empathic Sensitiveness Scale, which assesses empathy concern, personal distress, and perspective taking, the Secondary Posttraumatic Growth Inventory, the Cognitive Processing of Trauma Scale, which evaluates five remedial strategies—denial,

regret, resolution/acceptance, positive cognitive restructuring—and a survey created especially for the study were the three standard measurement instruments used in the research. The findings demonstrated that the results show a favourable link between cognitive coping strategies, empathy, and vicarious posttraumatic growth. It was found that the relationship between Vicarious posttraumatic growth and empathy was mediated by resolution/acceptance approaches and positive cognitive restructuring. Consequently, it was found that providing support to trauma survivors could have positive effects including vicarious posttraumatic growth. Consequently, among female professionals, the use of healthy coping strategies and empathy raises the prevalence of vicarious posttraumatic growth.

### 3. Method

#### Statement of the problem

The present study aims to investigate if Indian young adults experience Posttraumatic growth, and if so, is a relationship between Posttraumatic growth and Empathy in the Young Adult population of India. The research will explore the presence of the five domains of Posttraumatic growth in the sample to understand their association with Affective and Cognitive empathy. These findings will allow for a clearer understanding of the nature of the relationship between posttraumatic growth and empathy.

#### Objectives of the study

- To understand if Indian Young Adults experience Potentially Traumatic Events.
- To understand if posttraumatic growth occurs in Indian Young Adults.
- To know if empathy occurs in Indian Young Adults.
- To know the relationship between empathy and posttraumatic growth.
- To know if there is a relationship between the different dimensions of posttraumatic growth (new possibilities, relating to others, personal strength, appreciation of life, and spiritual change) and cognitive and affective empathy.

#### Hypothesis

- H<sub>01</sub>- There is no significant relationship between posttraumatic growth and empathy in Indian Young Adults.
- H<sub>02</sub>- There is no significant relationship between Appreciation of Life (1 PTG dimension) and empathy.
- H<sub>03</sub>- There is no significant relationship between New Possibilities (1 PTG dimension) and empathy.
- H<sub>04</sub>- There is no significant relationship between greater sense of Personal Strength (1 PTG dimension) and empathy.
- H<sub>05</sub>- There is no significant relationship between greater Spiritual Growth (1 PTG dimension) and empathy.
- H<sub>06</sub>- There is no significant relationship between Improved Relationships (1 PTG dimension) and empathy.
- H<sub>07</sub>- There is no significant relationship between Posttraumatic Growth and Cognitive Empathy.
- H<sub>08</sub>- There is no significant relationship between Posttraumatic Growth and Affective Empathy.

#### Variables

- **Posttraumatic growth-** Positive psychological changes manifested through personal growth in the areas of finding meaning even in mundane or difficult situations, spiritual growth, stronger interpersonal connections, identifying personal strengths, recognition of and gratitude towards the



value of life and discovering new opportunities, experienced as a result of the struggle with trauma or highly challenging situations.

- **Empathy-** - Understanding someone from their perspective instead of one's own or going through their feelings and mindset vicariously are two examples of empathy. Cognitive empathy is the ability to comprehend the ideas and reasoning of others. Empathy that is affective is the ability to comprehend the emotions of another person.

### Sample distribution

Sample size is N= 180 of Indian Young adults aged between 18-25 years who have faced trauma or a major life stress within the last 1 month, with internet access were chosen as the research participants for this study.

#### Inclusion criteria

- Age - 18-25 years (Young Adults)
- Educational qualification - Minimum high school (XII standard) level education with fluency in English at a reading and comprehension level.
- Residing in India.

#### Exclusion criteria

- Participants having any diagnosed mental health condition (whether or not undergoing treatment).

### Research Design

The study follows a Quantitative and Correlational research design to analyse the relationship between Posttraumatic Growth and Empathy in Indian Young Adults who experienced a Potentially Traumatic Event.

### Tools for the study

#### 1. Demographic details and Informed Consent form:

A detailed information schedule aimed at deriving socio-demographic details of participants following inclusion/exclusion criteria was included. The ethical guidelines followed were mentioned with a form to take written consent.

#### 2. Screening tool:

**Trauma Screening Questionnaire (TSQ):** The Trauma Screening Questionnaire is a 10-item symptom screen that was created specifically for use with people who have experienced a Potentially Traumatic Event (Brewin, Rose, Andrews, Green, Tata, McEvedy, Turner, and Foa, 2002). Items from the Self-Report version of the PTSD Symptom Scale (PSS-SR; Foa et al., 1993) are used to develop the TSQ. A screen was considered "positive" by Brewin et al. (2002) if at least six items were supported. With sensitivity scores of 0.86, specificity of 0.93, positive predictive power of 0.86, and negative predictive power of 0.93, the total efficiency of the TSQ is 0.90.

#### Questionnaires regarding the study variables:

**3. Posttraumatic Growth Inventory (PTGI):** Positive changes were evaluated using the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996). In five categories, the posttraumatic growth Inventory subscale yields subscale scores in addition to a total score. Six-point Likert-type ratings were used for each item, ranging from "did not experience this change" to "experienced this change to a very great degree." Several research including cancer patients have shown indications of good construct validity and internal consistency with this measure (e.g., Bishop et al., 2007; Cordova, Cunningham, Carlson, & Andrykowski, 2001). In an Indian investigation, the coefficient alpha was .96 (Thombre, Sherman & Simonton, 2010).

**4. Basic Empathy Scale (BES):** The 20 items that make up the BES (Jolliffe & Farrington, 2006) are divided into two categories: emotional empathy (11 items) and cognitive empathy (9 items). For each subject, there are five possible ordinal responses: 1 indicates no agreement, and 5 indicates full agreement. There are twenty items in all, eight of which have a negative score. Furthermore, according to Jolliffe and Farrington (2004) and 2006, the overall empathy score can be produced by adding the values of each item, with the total value ranging from 20 (poor empathy) to 100 (excellent empathy). When the scale was first being developed, the cognitive and affective empathy subscales had Cronbach's  $\alpha$  values of 0.79 and 0.85, respectively, indicating excellent construct validity and internal consistency.

**Procedure**

A quantitative study was conducted on the community of young adults, aged between 18-25 years (N=245). Purposive sampling was used to locate the research participants. Written consent was taken from each participant before proceeding to the research questionnaires and confidentiality clauses were clearly mentioned. Three self-administered questionnaires were used in the research work via online platforms of data collection. The questionnaires were sent out on various social media platforms in the form of a google form. The data was filtered based on the inclusion criteria. After screening, data analysis was conducted on the scores of 180 participants who had experienced a Potentially Traumatic Event. The data was then scored following the normative procedure of the instruments used and analysed using descriptive correlational and inferential statistics using relevant statistical software.

**Ethical Considerations**

- **Written informed consent:** Participants will be given all the information they need to make an informed decision about whether or not to participate in this study.
- **Confidentiality:** Participants' data will be kept strictly confidential.
- **Withdrawal:** Participants will have the right to withdraw from the study at any time without penalty.

**4. Results**

This study aimed to address if there is a relationship between Posttraumatic growth and Empathy in the Young Adult population of India. The Trauma Screening Questionnaire (Brewin et al., 2002) was used to screen the participants to identify those who had experienced a Potentially Traumatic Event (PTE). Data was collected from 245 Indian participants who were between the ages of 18-25. Out of 245 people, 180 people were found to have experienced a PTE.

**Table 1: Descriptive Statistics**

		App_Li TL	New_Pos sT	Per_Str T	Spri_Gr oT	Imp_Re IT	PTGI_ T	Affec_ T	Cog_ T	E_TOT AL
N	Valid	180	180	180	180	180	180	180	180	180
	Missing	0	0	0	0	0	0	0	0	0
Mean		8.66	14.47	12.53	5.32	18.58	59.56	39.41	34.01	73.32
Median		9.00	15.00	13.00	6.00	20.00	62.50	40.00	34.00	74.00
Mode		10	15	16	6	19	85	39	33	73
Std. Deviation		3.854	6.004	4.852	3.213	8.491	22.742	6.101	5.159	9.647

Variance	14.851	36.049	23.547	10.320	72.100	517.18	37.221	26.61	93.058
Skewness	-.408	-.474	-.620	-.236	-.504	-.625	-.522	-.646	-.585
Kurtosis	-.546	-.531	-.232	-1.037	-.477	-.173	.509	2.300	1.955
Range	15	25	20	10	34	100	34	36	68

**Table 1 displays the descriptive statistics of the present sample.**

### Relations among the Variables

Pearson’s correlation coefficient was used to determine the relationship between the variables- Post-traumatic growth including the factors: Personal Strength, New Possibilities, Improved Relationships, Spiritual Growth and Appreciation for Life; and Empathy, including its factors: Cognitive and Affective empathy.

Table 2: Descriptive Statistics and Correlations for Study Variables

Variable	n	M	SD	1	2	3	4	5	6	7	8	9
1.App_Li	180	8.66	3.854	1	-	-	-	-	-	-	-	-
2.New_Poss	180	14.47	6.004	.795**	1	-	-	-	-	-	-	-
3.Per_StrT	180	12.53	4.852	.825**	.793**	1	-	-	-	-	-	-
4.Spri_Gro T	180	5.32	3.213	.542**	.537**	.499**	1	-	-	-	-	-
5.Imp_RelT	180	18.58	8.491	.661**	.726**	.611**	.533**	1	-	-	-	-
6.PTGI_T	180	59.56	22.742	.879**	.915**	.861**	.680**	.883**	1	-	-	-
7.Affec_T	180	39.31	6.101	.200**	.212**	.114	.246**	.280**	.254**	1	-	-
8.Cog_T	180	34.01	5.159	.382**	.296**	.352**	.324**	.189*	.334**	.464**	1	-
9.Empathy_ Total	180	73.32	9.647	.331**	.293**	.261**	.329**	.278**	.339**	.881**	.828**	1

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

According to Bivariate correlation analysis, a significant correlation was found between Empathy and Post-traumatic Growth (PTG) at the 0.01 level of significance (0.339), thus  $H_{01}$ - ‘There is no significant relationship between posttraumatic growth and empathy in Indian Young Adults’ was rejected. A significant correlation was also found between Appreciation of Life and Empathy ( $r = .331$ ,  $p < 0.01$ ) thus  $H_{02}$  was also rejected. A correlation was found between New Possibilities and Empathy ( $r = .293$ ,  $p < 0.01$ ) thus rejecting  $H_{03}$ .  $H_{04}$  was rejected as Personal strength and Empathy was found to be significantly correlated ( $r = .261$ ,  $p < 0.01$ ). Spiritual growth and Empathy were found to be correlated at 0.01 level of



significance ( $r = .329$ ) therefore rejecting  $H_{05}$ . At the 0.01 level of significance Improved relationships and empathy was found to be correlated with  $r = .278$ , rejecting  $H_{06}$ .  $H_{07}$  was rejected as Affective empathy was found to be significantly correlated with PTG ( $r = .254$ ,  $p < 0.01$ ). PTG and Cognitive empathy was found to be significantly correlated as well ( $r = .334$ ,  $p < 0.01$ ).

## 5. Discussion

According to The Hindu, in a survey from Sapien Labs Centre for the Human Brain and Mind, it was found that over 50% of Indian young adults (18–24 years old) have poor mental health (Pradeep, 2023). A range of studies have highlighted the significant impact of trauma on the mental health of young adults. McKay (2021) and Loewy et al. (2019) both found a strong association between childhood trauma and the development of affective and psychotic mental disorders in adulthood, particularly in those at risk for serious mental illness. This study aims to measure if Indian young adults have experienced Posttraumatic growth (PTG) and the relationship with empathy. The results of this study aims to add to the conflicting body of evidence regarding the relationship between empathy and posttraumatic growth while shedding light on the experiences of the young adults belonging to the Indian subcontinent.

Results showed that out of the participants who experienced trauma, the majority of the participants experienced PTG. The mean score of the sample was 59.56 with a standard deviation of 22.74. Interestingly, a larger majority was found to experience empathy with a mean score of 72.42 and a standard deviation of 9.14.

### 5.1 Positive relationship between Empathy and PTG

Pearson's correlation analysis suggested a significant correlation of 0.339 ( $p < 0.01$ ) between Empathy and Post-traumatic Growth (PTG) thus successfully rejecting  $H_{01}$ - 'There is no significant relationship between posttraumatic growth and empathy in Indian Young Adults'. This is an important finding as it proclaims that there is a significant relationship between PTG and empathy in the Indian population. This finding is supported by previous research by Tedeschi and Calhoun (1996), who have found that individuals who have experienced trauma report more positive change when they have higher levels of empathy. Greenberg (2018) also found that adults who experienced childhood trauma had elevated levels of empathy, potentially contributing to their posttraumatic growth. However, Elam (2022) further explored this relationship, finding that perceived posttraumatic growth was not associated with empathy.

### 5.2 Correlation between the five factors of PTG and Empathy

Pearson's correlation shows that there is a significant relationship at the 0.01 level of significance between Empathy and the five factors of PTG: Appreciation of Life, New Possibilities, Personal Strengths, Spiritual growth and Improved Relationships. The strongest correlation of empathy is with Appreciation of life ( $r = 0.331$ ,  $p < 0.01$ ). This result is consistent with earlier research by Lasota et al. (2020), who discovered a positive correlation between empathy (cognitive and affective) and gratitude, and Witvliet et al. (2018), study which discovered that mentalizing abilities like perspective-taking and empathic concern are critical to experiencing gratitude. Interestingly, in this study, Appreciation of Life was found to be more strongly correlated with Cognitive empathy ( $r = 0.382$ ) than affective empathy (0.200). However, studies by Hogan (1969) and Singer (2014) both highlight the importance of empathy in social interactions and moral development. This suggests that individuals with higher cognitive empathy may have a greater appreciation of life, as they are more attuned to the experiences and emotions of others.

Additionally, a strong association ( $r = 0.329$ ,  $p < 0.01$ ) was discovered between spiritual growth and empathy. Previous studies in Telangana, India, on medical students found a positive relationship between spiritual health and empathy (Dhedhi, 2022). Particularly, affective empathy has been demonstrated to have a strong correlation with spirituality (Johnstone, 2018). Nonetheless, as compared to affective empathy ( $r = 0.246$ ), cognitive empathy ( $r = 0.324$ ) showed a stronger correlation with spiritual development in the current sample under study. This finding is consistent with Markstrom's 2010 article, which found that care and volunteerism mediate the relationship between spirituality and empathy and that spiritual beliefs are an important factor associated with empathetic concern and perspective-taking. At the 0.01 level of significance, there was a high correlation between empathy and new possibilities ( $r = 0.293$ ). Evidence shows that empathy has been linked to new possibilities, such as in the fields of health psychology and developmental psychology as Rāban-Motounu (2020) discovered that empathic care may be used for pain treatment in close interpersonal interactions and can help mobilise the organism's resource in problem-solving. Empathy has even been found to have a positive relationship with imagination (Rabinowitz & Heinhorn, 1985). This corresponds with the current findings as Cognitive empathy was found to be more strongly correlated with new possibilities with  $r = 0.296$ , than affective empathy ( $r = 0.212$ ).

The results of the current study demonstrated a substantial correlation ( $r = 0.278$ ) between empathy and improved relationships at the 0.01 level of significance. Empathy and improved relationships have been found to be consistently positively correlated, according to past research. According to Andreychik (2019), empathy for both positive and negative emotions has a better correlation with empathy for positive emotions having a stronger correlation. Ulloa (2017) discovered that in cohabiting couples, greater empathy in both men and women was linked to higher-quality relationships. Stephan (1999) emphasised the importance of empathy in fostering better intergroup connections and suggested that it can lessen prejudice and encourage prosocial behaviour. It comes at no surprise thus in the present sample that affective empathy was found to be more positively associated with improved relationships with  $r = 0.280$  ( $p < 0.01$ ), than cognitive empathy was correlated with improved relationships ( $0.189$ ,  $p < 0.01$ ). de Wied et al. (2006) experienced similar results, finding that higher levels of dispositional affective empathy was found to be associated with more successful conflict management among adolescent boys and girls.

Lastly, this study shows that personal strength has been found to be correlated with empathy at the 0.01 significance level ( $r = 0.261$ ). However, research suggests a complex relationship between empathy and personal strength. Tone (2014) posits that while empathy is a crucial skill, excessive levels can lead to internalising disorders such as depression and anxiety, however, Morelli (2015) highlights the positive impact of "positive empathy" on well-being and social outcomes. Barrio (2004) found a strong correlation between empathy and friendliness, and some correlation with conscientiousness, energy, and openness; positive traits which share a strong relationship with empathy. Interestingly, cognitive empathy was found to have a statistically significant relationship with personal strength with  $r = 0.352$  ( $p < 0.01$ ), unlike affective empathy ( $r = 0.114$ ) in the current sample under study. This finding is supported by a study by Verhofstadt et al. (2016) determined that higher scores on cognitive empathy (i.e., situational perspective taking) was associated with more instrumental support provision in spousal relationships.

### **5.3 Correlation between the two factors of Empathy (Cognitive and Affective) and PTG**

Affective empathy was found to have a significant correlation with PTG with  $r = 0.254$  at the 0.01 level of significance. Among the five factors of PTG, affective empathy shows the strongest relationship with improved relationships ( $0.280$ ), then spiritual growth ( $0.246$ ), new possibilities ( $r = 0.212$ ) and appre-

ciation of life ( $r = 0.200$ ).

A strong correlation of  $r = 0.334$  ( $p < 0.01$ ) was revealed upon bivariate analysis between Cognitive empathy and PTG. Appreciation of Life was most strongly correlated with Cognitive empathy ( $r = 0.382$ ,  $p < 0.01$ ), followed by personal strength ( $r = 0.352$ ,  $p < 0.01$ ), spiritual growth ( $r = 0.324$ ,  $p < 0.01$ ), new possibilities ( $r = 0.296$ ,  $p < 0.01$ ) and improved relationships ( $r = 0.189$ ,  $p < 0.05$ ).

## 6. Limitation and Suggestion

The limitations faced in the paper are that as convenience sampling was used, the sample is not representative of the entire population of Indian Young Adults. Another limitation regarding the sample is that as most of the responses are by females, the skewness in gender may be an extraneous variable, further studies could focus on studying the gender variable in PTG and Empathy. A major limitation faced was regarding finding the appropriate screening tool as the paper seeks to measure the incidence of a traumatic event and not PTSD, however, most tools were found to measure PTSD instead. The development of tools to measure potentially traumatic events or trauma would lead to great advancements in the field.

## 7. Conclusion

This study aimed to measure if Indian young adults experience Posttraumatic Growth (PTG), and the relationship between Posttraumatic Growth and Empathy. Findings prove that most Indian Young Adults not only experience PTG, but that there is a strong correlation between Posttraumatic Growth and Empathy at the 0.01 level of significance. Cognitive Empathy was found to be more strongly correlated with PTG than Affective empathy. The PTG factor, Appreciation of Life was found to be most strongly associated with Empathy, followed by Spiritual Growth, New Possibilities, Improved Relationships and Personal Strength.

## 8. Acknowledgment

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