

# Unraveling the Interplay of Karuna and Jnana: Mapping Empathy's Hierarchical Associations with Schwartz's Human Values in Indian Context

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**Abstract:** *Amidst a contemporary landscape marked by materialism and hedonistic pursuits fueled by Avidya, there arises an imperative to embrace karuna, manifested through universal humanistic values such as compassion. This research endeavors to probe how an empathetic comprehension of the self and others, rooted in Jnana philosophy, shapes the development of karuna. The study engaged 580 participants from Indian colleges (N=580), who completed three questionnaires: the revised Portrait Values Questionnaire (PVQ-RR), the Interpersonal Reactivity Index (IRI), and the Big Five Inventory. In our sample a strong positive association was unveiled between empathy and altruism-based self-transcendence values quadrant emphasizing the inherent relationship amongst karuna and jnana-based empathetic understanding. Furthermore, a comprehensive examination was conducted to assess various hypotheses concerning the strength of connections between empathy and universal values as per Schwartz's refined value theory. The outcomes underscored a robust link between empathy and altruistic values that prioritize others' well-being over personal gain. Additionally, hierarchical multiple regression analysis demonstrated that empathy significantly contributes to elucidating variance in Schwartz's self-transcendence quadrant values, irrespective of personality traits. These findings offer significant insights into potential cultural variations in the Indian interpretation of the circular structure within the refined value model, underscoring the pivotal role of empathy within the Jnana framework and supporting the 'Empathy-Altruism Hypothesis'.*

**KEYWORDS:** empathy-altruism hypothesis, empathy, Schwartz's universal values, Jnana, Karuna.

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## INTRODUCTION

Embarking on a profound exploration at the intersection of Indian philosophical tradition and contemporary psychological paradigms, this research endeavor delves into the structural and functional relationships between trait empathy and Schwartz's universal human values within

the contextual framework of Jnana-Karuna. Rooted deeply in ancient indigenous systems, Jnana, characterized by an understanding of the unitary essence of the cosmic reality, alongside the discernment of impermanence in the apparent duality of existence (Viveka), catalyzes empathy development. This cognitive and emotional resonance with others sets the stage for Karuna, epitomizing compassion, empathy, and altruistic engagement toward the mitigation of suffering. Through an interdisciplinary lens, our study seeks to elucidate how a nuanced comprehension of self and others, anchored in Indian philosophical ethos, shapes the cultivation of compassion and altruism among individuals and communities.

### **Karuna in Indian Knowledge Systems**

The concept of Karuna, rooted in Indian knowledge systems, is characterized by a genuine desire to alleviate the suffering of others, as evident in practices such as emotional support, material assistance, and non-violent actions (Rangari & Mehta, 2017; Augustine & Wayne, 2019). Emphasized consistently in numerous treatises, Karuna stands out as a central and transformative concept, underlining the significance of compassion, empathy, and selfless contribution to oneself, others, and society at large (Singh, 2019; Paranjpe, 2011). Various schools of thought within the Indian philosophical framework offer diverse manifestations of Karuna, with the Vedantic tradition recognizing it as a natural expression of care and understanding (Narasimham, 1915; Gupta, 2013). It arises from recognizing the divine nature within oneself and others, emphasizing that all are part of the cosmic principle, Brahman (Paranjpe, 2011). This perspective not only fosters universalism but also underscores the interconnectedness of all beings (Radhakrishnan, 2014). Within Theravada Buddhism, as interpreted by Buddhaghosa, Karuna is described as a force that makes the hearts of good people tremble when others suffer. It is portrayed as actively demolishing, attacking, and banishing suffering or as being dispersed over suffering (Jenkins, 2003). The perspectives as mentioned earlier collectively illuminate the multifaceted nature of Karuna, emphasizing its role in fostering empathy, compassion, and interconnectedness as integral components of individual and societal well-being (Makransky, 2021; Singh et al., 2023).

### **Philosophical Foundations of Karuna: The Interconnected Dynamics of Jnana, Viveka and Karuna**

Within the Indian knowledge framework, our research intends to emphasize the pivotal roles of Jnana and Viveka, besides their consequential interplay as the driving factors of Karuna. Jnana is defined as the knowledge of the nature of reality and oneself, empowering individuals to recognize unity with the cosmos. This concept of Jnana finds rich exemplification in various pertinent Sutras and Mahavakyas within indigenous texts. For instance, the Chandogya Upanishad (3.14.1) declares, "sarvam khalv idam brahma - All of this is brahman," while the Yajurveda presents the notion, "Yatha pinde tatha brahmande - As is the microcosm, so is the macrocosm" (Rooney, 2020). These affirmations encapsulate the profound insights of Jnana philosophy, emphasizing its wisdom in affirming the universality of the self's essence (Paranjpe & Paranjpe, 1984) asserting a shared origin for all beings, thereby laying the groundwork for their interconnectedness and interdependence among oneself and others (Keshavan & Bhargav, 2024; Mane, 2023). The universal connection between oneself and others fosters the development of Viveka in individuals (Ashoka, 2018). This enables individuals to discern

between the temporary and eternal facets of reality, facilitating the transcendence of the illusion of separateness and fostering a sense of commonness and emotional connection with others (Mishra, 2015).

Consequently, Jnana, driven by Viveka, empowers individuals to cognitively and emotionally understand others (Atwal, 2010). This comprehension fosters the ability to connect with others, embrace diverse perspectives, and offer mutual support without reservation. Moreover, Jnana aligns with the Western psychological concept of empathy, defined as the capacity to comprehend and share the emotions and experiences of others (Cuff et al., 2016; Sridhar, 2015). Relevant studies, such as the research conducted by Smith and Trope (2006), suggest that embracing a broader perspective, as advocated by Jnana's philosophy, enhances individuals' empathy and understanding. Similarly, recognizing commonalities between oneself and others also leads to increased empathy and prosocial behavior (Decety and Jackson, 2004). Within our paradigm, Jnana paves the way for the emergence of Karuna, that is the sincere desire to curb the suffering of others stemming from the acknowledgment of the ubiquitous nature of the underlying reality, Brahman (Dasgupta & Dasgupta, 1996). Karuna is equivalent to Schwartz's self-transcending and altruistic values such as benevolence, universalism, and collectivism (Pedrotti et al., 2024) promoting prosocial behavior such that it drives selfless acts of assistance toward others (Post, 2003). The intricate interplay between Jnana and Karuna in Indian philosophy mirrors the insights of the empathy-altruism hypothesis in Western psychology (Gyaltsen, 1988). This hypothesis delves into the correlation between empathetic concern and altruistic actions, reflecting a shared exploration of fundamental aspects of human understanding and behavior across diverse cultural and philosophical frameworks.

### **Empathy's Role in Shaping Altruistic Values: Empathy-Altruism Hypothesis**

The Jnana-Viveka-Karuna paradigm aligns well with Western psychology's empathy-altruism hypothesis and emphasizes the need to delve into the intricate connection between empathy and value system in an individual (Batson et al., 1988; Melchers et al., 2016). Empirical studies consistently affirm that individuals with heightened empathy are predisposed to engage in prosocial behaviors, demonstrating altruistic tendencies (Eisenberg & Lennon, 1983; Batson et al., 1987; Carlo et al., 1991). Eisenberg and Lennon's (1983) research delves into the predictive nature of empathy regarding pro-social behavior, revealing that individuals more attuned to others' emotions are not only more likely to understand the needs of those around them but also exhibit a greater proclivity for altruistic actions. Similarly, Batson et al. (1987) emphasize the profound link between empathy and the inclination to help. This nexus between empathy and altruistic behavior is defined as the empathy-altruism hypothesis in Western literature (Batson et al., 1981; Batson et al., 2014) asserting that empathy can prompt altruistic motivation. In this context, altruistic motivation is denoted by a selfless and genuine concern for the well-being of others, diverging from egoistic motivation driven by self-interest (Batson et al., 2014). In the same row, the fundamental distinction between altruistic and egoistic motivations serves as the cornerstone of the empathy-altruism hypothesis, highlighting the essential role of empathy in promoting benevolent behaviors independent of immediate personal gains (Batson et al., 1981). This underscores the importance of investigating the significant correlation between empathy

and altruism in Western psychology, aligning with the indigenous framework of Jnana and Karuna, particularly within the Indian demographic.

### **Empathy-Altruism Hypothesis, Jnana-Karuna Framework, and its Implications**

Shedding light on the relevance of the Jnana-Karuna framework and the Empathy-altruism hypothesis, various research shows notable applications of the empathy-altruism hypothesis relevant in various domains such as healthcare and among medical professionals (Irani, 2018). A study by Moudatsou et al. (2020) elucidated that elevated levels of empathy in health professionals resulted in enhanced efficacy in fulfilling their roles, particularly in facilitating therapeutic changes as necessitated within clinical settings. Furthermore, in the realm of crisis and disaster management, a pertinent study by Beyerlein and Sikkink (2008) asserted that there was notable volunteerism among Americans during the 9/11 relief effort who had higher levels of identification with the victims of the tragedy. This identification, indicative of an empathic response, substantiates the hypothesis, suggesting that individuals driven by empathy are more inclined to contribute to altruistic endeavors during crises actively. Parallels can be discerned within the Indian knowledge traditions espousing the universality of empathy and altruism across different cultural contexts. Several foundational values, notably Ahimsa (non-violence) and Seva (service) find their origins in the profound concept of karuna, embodying compassion and selfless dedication toward oneself, others, and society as a collective endeavor to alleviate pain and suffering (Foot, 1999). The principle of Karuna, deeply ingrained in Jnana philosophy, asserts the interconnected nature of all beings. It cultivates empathy, thereby fostering heightened levels of altruistic behavior (Henrich et al., 2010). Through our study, we intend to explore the Jnana-Viveka-Karuna Framework as the structural and functional epistemology underlying the Empathy-Altruism Hypothesis within the Indian population.

### **Objectives of the Study**

The first objective of this study is to explore the hierarchical ranking of the strength of associations between trait empathy (Davis, 1980) and Schwartz's universal human values (Schwartz et al., 2012) from the purview of the research framework employing the Jnana-Karuna paradigm on the lines of empathy-altruism hypothesis for our Indian sample.

### **Hierarchical Positioning of Values Against Empathy**

The study simply examined herein the relationship between Schwartz's universal values and empathy (Davis, 1983), wherein empathy was expected to influence self-transcending values positively and antagonistically influence self-enhancing values. The anticipated correlation between Jnana and Karuna can be illustrated through the positive association observed between them, particularly evident in values such as Ahimsa, Seva, and Bhakti, which are manifested in acts of generosity and voluntary service (Narayanan, 2020). Conversely, a discernible negative correlation is observed between Jnana and Akaruna, suggesting that values arising from ignorance (Avidya), such as selfishness, intolerance, egoism, and competitiveness, are less prevalent in the presence of Jnana (Bhavanani, 2013). Furthermore, we examined a series of integrated hypotheses that proposed a 'rank ordering of strength of correlations' between empathy and the universal human values measured in the circular motivational continuum of refined value theory (Schwartz & Cieciuch, 2022). The following hypothesis and sub-

hypotheses were formulated at three levels: four higher-order values, ten fundamental values, and 19 more narrowly defined values.

### **Empathy-Values Associations Beyond Personality Traits**

The flow of the hypotheses (1 to 3) incorporates a systematic descent into Schwartz's refined value framework (Schwartz & Cieciuch, 2022), beginning at a more crude quadrant-level analysis to basic ten-values level onto the most refined values-level analysis. This allows us to study the association of trait empathy and universal human values at every structural level of Schwartz's framework.

#### **Hypothesis 1 (Higher Order Value Quadrant Based: Correlational)**

H1.1<sub>A</sub>: Trait empathy to have the strongest positive association with self-transcendence higher order quadrant values.

H1.2<sub>A</sub>: Trait empathy to have the strongest negative association with self-enhancement higher order quadrant values.

H1.3<sub>A</sub>: We predict the following rank ordering of the correlations between the higher-order value quadrants and trait empathy. (integrated hypothesis-a: progressing from the most substantial positive to the strongest negative relationships)

- (1) Self-Transcendence Quadrant, (2) Openness-to-Change Quadrant, (3) Conservation Quadrant, (4) Self-Enhancement Quadrant.

#### **Hypothesis 2 (10 Basic Values Based: Correlational)**

H2.1<sub>A</sub>: Trait empathy to have the strongest positive association with universalism basic human value.

H2.2<sub>A</sub>: Trait empathy has a strongest negative association with power basic human value.

H2.3<sub>A</sub>: We predict the following rank ordering of the correlations between the ten basic human values and trait empathy. (integrated hypothesis-b: progressing from the most substantial positive to the strongest negative relationships)

- (1) Universalism, (2) Benevolence, (3) Self-direction, (4) Conformity, (5) Security, (6) Tradition, (7) Stimulation, (8) Hedonism, (9) Achievement, (10) Power.

#### **Hypothesis 3 (19 Narrowly Defined Values Based: Correlational)**

H3.1<sub>A</sub>: Trait empathy to have the strongest positive association with universalism-concern and universalism-tolerance narrowly defined human values.

H3.2<sub>A</sub>: Trait empathy has the strongest negative association with power-dominance and power-resources narrowly defined human values.

H3.3<sub>A</sub>: We predict the following rank ordering of the correlations between the 19 narrowly defined human values and trait empathy. (integrated hypothesis-c: progressing from the most substantial positive to the strongest negative relationships)

- (1) Universalism-Concern, (2) Universalism-Tolerance, (3) Benevolence-Care, (4) Benevolence-Dependability, (5) Universalism-Nature, (6) Conformity-Interpersonal, (7) Self-Direction-Thought, (8) Self-Direction-Action, (9) Security-Societal, (10) Security-Personal,

(11) Face, (12) Humility, (13) Conformity-Rules, (14) Stimulation, (15) Tradition, (16) Achievement, (17) Hedonism, (18) Power-Resources, (19) Power-Dominance.

### **Karuna Values Quadrant: Hierarchical Regression**

The next objective involved controlling for the influence of the Big Five personality traits (Goldberg, 1993), to determine the variance attributed solely to emotional and cognitive empathy in predicting value quadrants. Building upon the empathy-altruism model (Batson et al., 2015), we anticipated that trait empathy would account for additional variance beyond the expected personality traits, thus reinforcing our proposed jnana-karuna framework.

### **Hypothesis 4 (Empathy and Schwartz's Self-Transcendence Values: Regression)**

H4<sub>A</sub>: Empathy will account for added variance in Schwartz's self-transcendence quadrant values, above and beyond personality traits, in a statistically significant manner.

## **METHODS**

### **Data Acquisition**

A sample of 580 participants (281 females, 299 males) was administered three self-report questionnaires assessing personal values, empathy, and personality, which included the Interpersonal Reactivity Index (IRI; Davis, 1983), the revised Portrait Values Questionnaire (PVQ-RR; Schwartz & Cieciuch, 2022) and the 'Big Five Inventory' (Goldberg, 1993; BFI). Participants were selected through purposive and snowball sampling, with data collection conducted using digital questionnaires. Stringent inclusion criteria mandated that respondents be affiliated with a university at various educational levels (bachelor, master's, doctoral, post-doctoral), aged between 18 to 42 years (mean = 22.517 years; stand. dev. = 4.45 years). Proficiency in English reading and comprehension was ensured to ensure sample relevance. Google Forms was chosen as the online platform for questionnaire administration to minimize potential participant bias and enhance response authenticity. The survey underwent meticulous design enhancements for improved clarity, instructions, and visual appeal, thereby reducing the likelihood of response bias. Data collection and handling adhered to strict privacy and confidentiality protocols to safeguard participants' personal information after obtaining informed consent from the participants. The research strictly adhered to ethical principles outlined for studies involving human participants by the Indian Council of Medical Research (ICMR) and received authorization from the Institute Ethics Committee of the Indian Institute of Technology, Delhi (IEC-IITD; Proposal No. P021/P0101).

### **Instruments**

The Revised Portrait Value Questionnaire, developed by Schwartz and colleagues in 2012, is a self-report instrument designed to assess universal values. Comprising 57 items, respondents rate their resemblance to brief vignettes using a 6-point Likert scale ranging from "Not like me at all" to "Very much like me." The resultant responses yield an individual's value profile, representing each category through related vignettes. The internal consistency of the PVQ 4's higher order values is notably robust across its distinct domains, affirming its reliability as supported by the computed Cronbach's Alpha and McDonald's  $\omega$  values for our study sample:

self-transcendence [0.859 & 0.864], self-enhancement [0.771 & 0.773], openness to change [0.857 & 0.862], and conservation [0.850 & 0.851]. The PVQ 10 exhibits strong internal consistency across its domains, as indicated by calculated Cronbach's Alpha and McDonald's  $\omega$  values within our sample: self-direction [.819 & .824], security [.743 & .750], stimulation [.684 & .694], conformity [.753 & .756], hedonism [.612 & .628], tradition [.705 & .731], achievement [.578 & .634], power [.750 & .752], universalism [.786 & .794], and benevolence [.784 & .794]. The PVQ 19 demonstrates robust internal consistency across its domains in our sample, as evidenced by the calculated Cronbach's Alpha and McDonald's  $\omega$  values: self-direction thought [.688 & .693], self-direction action [.688 & .708], stimulation [.684 & .694], hedonism [.612 & .628], achievement [.578 & .634], power dominance [.715 & .718], power resources [.668 & .711], face [.650 & .658], security personal [.601 & .613], security societal [.730 & .736], tradition [.832 & .834], conformity rules [.747 & .748], conformity interpersonal [.681 & .686], humility [.339 & .476], universalism nature [.788 & .789], universalism concern [.697 & .700], universalism tolerance [.470 & .485], benevolence care [0.709 & 0.716] and benevolence dependability [0.598 & 0.6]. The scale's psychometric properties, including internal reliability, circular structure, measurement invariance, and model, were also validated cross-culturally across 49 groups, including the Indian population (Schwartz & Cieciuch, 2022).

The assessment of empathy involves utilizing the Interpersonal Reactivity Index (IRI) developed by Davis in 1983, consisting of 28 items that measure both affective empathy (AE) and cognitive empathy (CE). The IRI is organized into four principal domains: Fantasy (FS), Perspective Taking (PT), Empathetic Concern (EC), and Personal Distress (PD). Respondents rate their agreement with statements on a scale ranging from 0 ("Does not describe me well") to 4 ("Describes me very well"), and a cumulative score is derived for each subscale. In our sample, the internal reliability of empathy was measured with a Cronbach's alpha coefficient of [.759] and a McDonald's  $\omega$  of [.770]. These scores affirm the instrument's internal solid consistency underscoring its reliability in capturing individual differences in empathy. Besides, prior research employing the IRI scale has demonstrated adequate convergent and discriminant validity and content validity, particularly in collectivistic cultural contexts such as China (Huang et al., 2012). Additionally, it has exhibited commendable internal consistency and test-retest reliability in studies conducted by Siu and Shek (2005). Furthermore, successful utilization of the IRI scale in Indian settings has been documented in studies conducted by Gupta et al. (2022) and Rajput et al. (2020). We selectively integrated items from the empathic concern (EC) and perspective-taking (PT) dimensions, consistent with recommendations from previous studies which propose that these dimensions alone are sufficient for achieving psychometrically accurate representations of emotional and cognitive empathy (Cliffordson, 2002; Hepper, Hart, Meek, Cisek, & Sedikides, 2014; Silfver et al., 2008; Persson & Kajonius, 2016).

The Big Five Inventory, developed by Goldberg in 1993, consists of 44 items rated on a five-point scale ranging from "Strongly Disagree" to "Strongly Agree." It aims to assess personality across five domains. Upon conducting reliability analysis in our sample, the following Cronbach alpha values were obtained: Openness to experiences ( $\alpha = 0.726$ ), Conscientiousness

( $\alpha = 0.699$ ), Extraversion ( $\alpha = 0.786$ ), Agreeableness ( $\alpha = 0.689$ ), and Neuroticism ( $\alpha = 0.815$ ). Hence, the scale demonstrates good internal reliability for our sample. Additionally, previous research has shown stable internal consistencies across diverse cultural samples (Migliore, 2011).

### Data Analysis

Following data collection, rigorous data cleaning and filtering procedures were implemented, resulting in a final dataset devoid of incomplete, erroneous, or invalid responses. This careful approach to data acquisition ensured the overall quality and integrity of the research findings. Responses that were error-laden, incomplete, invalid, or failed to meet predetermined inclusion criteria were excluded. The screening yielded a final dataset comprising 580 responses, ensuring an even distribution between male and female participants for meaningful comparative analyses during subsequent data examination. For data analysis, R-Jamovi was employed to perform descriptive and inferential analyses (The Jamovi Project, 2023; R Core Team, 2021). The analytical process commenced with a correlational examination utilizing Pearson's Product-Moment Correlation Coefficient test (Fox & Weisberg, 2020). Various statistical assumptions, including normality, multicollinearity, and homoscedasticity, were validated throughout the analysis. Additionally, a Spearman-Rho correlation was conducted to assess the predicted and actual rank order of correlations between empathy and Schwartz's universal values. Furthermore, hierarchical multiple regression analysis was conducted to assess how empathy, independent of personality traits, explains variance in Schwartz's self-transcendence quadrant values. Initial steps also involved minimizing response bias by subtracting mean responses for each participant from their respective ratings to obtain Schwartz's value score. Subsequently, a composite score for empathic concern and perspective-taking was computed for each participant, serving as a measure of trait empathy. Moreover, we conducted a thorough critical evaluation and discussion of the study's results in light of the existing literature, recognizing and addressing any limitations, and suggesting avenues for future research.

## RESULTS

Zero-order correlations were conducted to assess the relationships between the three levels of universal values and empathy (hypotheses 1.1, 1.2, 2.1, 2.2, 3.1, 3.2). To address the issue of multiple comparisons, Bonferroni corrections were applied to control for family-wise error rates and false positives. Following the correction, the adjusted p-values were set at '0.0125' for hypotheses 1.1, 1.2 & 4, '0.005' for hypotheses 2.1 and 2.2, and '0.00263' for hypotheses 3.1 and 3.2. Subsequently, integrated values-empathy hypotheses (1.3, 2.3, 3.3) were evaluated using Spearman Rho correlation to examine the predicted and actual rank order correlations between empathy and universal values. Furthermore, to assess hypothesis 4, a sequence of hierarchical multiple regression analyses was performed, the steps of which have been further delineated in the results section for the said hypothesis below.

Hypothesis 1 (Higher Order Value Quadrant Based: Correlational & Rank Ordering)

In Table 1 presented below, correlation coefficients are reported alongside the calculated and predicted rank order correlations between empathy and Schwartz's four higher quadrant values.

Additionally, correlations of EC and PT with the value quadrants are delineated separately within the table. However, it is noteworthy that only the aggregate correlation between empathy and Schwartz's values is utilized for hypothesis-testing purposes.

**Table 1** Correlation coefficients, along with calculated and predicted rank order between empathy and its constituent parts, EC & PT, with Schwartz's four higher quadrant values (in ascending order).

PVQ-4 Values (N=580)	Correlation Coefficient (r) with EC	Correlation Coefficient (r) with PT	Correlation Coefficient (r) with Empathy (EC+PT)	Calculated Order	Predicted Order
Self Transcendence	0.513***	0.423***	0.542***	4	4
Self Enhancement	-0.073	-0.066	-0.08	1	1
Openness to Change	0.271***	0.255***	0.303***	3	3
Conservation	0.287***	0.219***	0.293***	2	2

Note. \*= $p < .05$ ; \*\*= $p < .01$ ; \*\*\*= $p < .001$ . Both \*\* and \*\*\* satisfies our adjusted p-value, in accordance with Bonferroni correction stated at the beginning of the results section.

As outlined in the third column of Table 1, empathy demonstrated its most robust positive correlation with the self-transcendence quadrant value [ $r = .542$ ,  $p < .001$ ,  $p_{adj} < .0125$ ], hence we can not reject Hypothesis 1.1. Furthermore, the findings also suggest a significant relationship between self-transcendence and the two chosen facets of empathy i.e. empathetic concern (EC) [ $r = 0.513$ ,  $p < .001$ ,  $p_{adj} < .0125$ ] and perspective taking (PT) [ $r = 0.423$ ,  $p < .001$ ,  $p_{adj} < .0125$ ]. However, statistical analysis could not show a significant correlation between empathy and self-enhancement, leading to the rejection of hypothesis 1.2. Additionally, a modest correlation was found between empathy and openness to change quadrant [ $r = 0.303$ ,  $p < .001$ ,  $p_{adj} < .0125$ ] as well as between empathy and the conservation quadrant [ $r = 0.293$ ,  $p < .001$ ,  $p_{adj} < .0125$ ].

The fifth and sixth column in the given table presents our calculated and predicted ranking. Moreover, the Spearman Rho correlation between the predicted and actual rank order of correlations between empathy and the four higher quadrant values was proved to be robust and statistically significant with Spearman's Rho = 1 ( $p < .05$ ), indicating a close alignment between observed and theoretical expectations. Thereby hypothesis 1.3 also failed to reject. The ranking ranging from the most robust positive to the most pronounced negative associations unfolds as follows: (1) self-transcendence, (2) openness to change, (3) conservation, and (4) self-enhancement.

### Hypothesis 2 (10 Basic Values Based: Correlational & Rank Ordering)

Below in Table 2, are correlation coefficients, along with calculated and predicted rank orders, examining the relationship between empathy and Schwartz's 10 basic values. Additionally, correlations between EC and PT with the values are specified separately in the table. However,

following our previous method, we have excluded them from hypothesis testing. The adjustments in significance levels made in the case of Bonferroni corrections are stated above in the results section.

**Table 2** Correlation coefficients, along with calculated and predicted rank order between empathy and its constituent parts, EC & PT, with Schwartz's 10 basic values (in ascending order).

PVQ-10 Values (N=580)	Correlation Coefficient (r) with EC	Correlation Coefficient (r) with PT	Correlation Coefficient (r) With Empathy (EC+PT)	Calculated Order	Predicted order
Self-Direction	0.08	0.087*	0.096*	8	8
Stimulation	-0.035	0.029	-0.005	5	4
Hedonism	-0.134**	-0.096*	-0.0133**	2	3
Achievement	-0.008	-0.166***	-0.097*	3	2
Power	-0.458***	-0.333***	-0.458***	1	1
Security	0.109**	-0.023	0.052	6	6
Conformity	0.070	0.07	0.081	7	7
Tradition	-0.101*	-0.032	-0.078	4	5
Benevolence	0.320***	0.172***	0.286***	9	9
Universalism	0.318***	0.318***	0.364***	10	10

Note. \*= $p < .05$ ; \*\*= $p < .01$ ; \*\*\*= $p < .001$ . Only \*\*\* satisfies our adjusted p-value, in accordance with Bonferroni correction stated at the beginning of the results section.

As shown in the third column of Table 2, empathy exhibited its most robust positive correlation with universalism [ $r = .364$ ,  $p < .001$ ,  $p_{adj} < .005$ ] which is further delineated into the two measured facets of empathy i.e. empathetic concern (EC) [ $r = 0.318$ ,  $p < .001$ ,  $p_{adj} < .005$ ] and perspective taking (PT) [ $r = 0.318$ ,  $p < .001$ ,  $p_{adj} < .005$ ]. Additionally, empathy showed a moderate positive correlation with benevolence values [ $r = .286$ ,  $p < .001$ ,  $p_{adj} < .005$ ] with both EC [ $r = .320$ ,  $p < .001$ ,  $p_{adj} < .005$ ] and PT [ $r = .1726$ ,  $p < .001$ ,  $p_{adj} < .005$ ] having a significant correlation. These findings align with Hypothesis 2.1. Furthermore supporting Hypothesis 2.2, trait empathy demonstrated its most pronounced negative correlations with self-enhancing values like power [ $r = -.458$ ,  $p < .001$ ,  $p_{adj} < .005$ ] with both EC [ $r = -.458$ ,  $p < .001$ ,  $p_{adj} < .005$ ] and PT [ $r = -.333$ ,  $p < .001$ ,  $p_{adj} < .005$ ] having a significant correlation. However, empathy had very weak negative associations with hedonism [ $r = -.0133$ ,  $p < .01$ ] and achievement [ $r = -.097$ ,  $p < .05$ ] were observed, given that both the values belong to the self-enhancement quadrant.

The Spearman Rho correlation between the calculated and predicted rank order of correlations between empathy and the ten basic values (presented in the fifth and sixth columns of Table 2) was highly significant and robust, with Spearman's Rho being .964 ( $p < .001$ ). Progressing from the most positively correlated to the most negatively correlated relationships, the order unfolds as follows: (1) universalism, (2) benevolence, (3) self-direction, (4) conformity, (5) security, (6) stimulation, (7) tradition, (8) achievement, (9) hedonism, (10) power, supporting hypothesis 2.3 as well.

### Hypothesis 3 (19 Narrowly Defined Values Based: Correlational & Rank Ordering)

In Table 3 below, correlation coefficients are provided alongside calculated and predicted rank orders, exploring the relationship between empathy and Schwartz's 19 narrowly defined values. Additionally, correlations of EC and PT with the values are delineated again separately within the table.

**Table 3** Correlation coefficients, along with calculated and predicted rank order between empathy and its constituent parts, EC & PT, with Schwartz's 19 narrowly defined values (in ascending order).

PVQ-RR 19 Values (N=580)	Correlation Coefficient (r) with EC	Correlation Coefficient (r) with PT	Correlation Coefficient (r) With Empathy (EC+PT)	Calculated Order	Predicted Order
Self Direction-Thought	0.083*	0.118**	0.115**	14	13
Self Direction-Action	0.047	0.035	0.048	12	12
Stimulation	-0.038	0.031	-0.005	6	6
Hedonism	-0.137***	-0.094*	-0.134**	3	3
Achievement	-0.011	-0.165***	-0.098*	5	4
Power-Dominance	-0.397***	-0.282***	-0.394***	1	1
Power-Resources	-0.353***	-0.259***	-0.355***	2	2
Face	0.052	-0.037	0.011	8	9
Security-Personal	0.096*	-0.049	0.03	10	10
Security-Societal	0.056	0.017	0.043	11	11
Tradition	-0.106*	-0.071	-0.103*	4	5
Conformity-Rules	-0.007	0.018	0.006	7	7
Conformity-Interpersonal	0.111**	0.092*	0.117**	15	14
Humility	-0.031	0.054	0.011	9	8
Universalism-Nature	0.051	0.056	0.062	13	15
Universalism-Concern	0.341***	0.229***	0.331***	19	19
Universalism-Tolerance	0.199***	0.31***	0.291***	18	18
Benevolence-Care	0.3***	0.162***	0.269***	17	17
Benevolence-Dependability	0.199***	0.114**	0.182***	16	16

Note. \*= $p < .05$ ; \*\*= $p < .01$ ; \*\*\*= $p < .001$ . Only \*\*\* satisfies our adjusted p-value, in accordance with Bonferroni correction stated at the beginning of the results section.

As outlined in the third column of Table 3, empathy showed its strongest positive correlation with universalism-concern [ $r = .331, p < .001, p_{adj} < .0026$ ] with both EC [ $r = .341, p < .001, p_{adj} < .0026$ ] and PT [ $r = 0.229, p < .001, p_{adj} < .0026$ ] having a significant correlation. Additionally, empathy exhibited a significant positive correlation with universalism-tolerance values [ $r = .291, p < .001, p_{adj} < .0026$ ] both EC [ $r = .199, p < .001, p_{adj} < .0026$ ] and PT [ $r = 0.31, p < .001, p_{adj} < .0026$ ] having a significant correlation, thus confirming Hypothesis 3.1. An intriguing finding emerged from the analysis: although both universalism tolerance and universalism concern demonstrated noteworthy correlations with empathy, universalism nature showed no such association, despite all three variables falling within the self-transcending quadrant. This underscores the intricacies inherent in the relationship between empathy and distinct facets within a shared quadrant. Moreover, supporting Hypothesis 3.2, trait empathy demonstrated its most notable negative correlations with self-enhancing values such as power-dominance [ $r = -.394, p < .001, p_{adj} < .0026$ ], with both EC [ $r = -.397, p < .001, p_{adj} < .0026$ ] and PT [ $r = -.282, p < .001, p_{adj} < .0026$ ] exhibiting significant negative correlations. Furthermore, power resources [ $r = -.355, p < .001, p_{adj} < .0026$ ] exhibited a significant correlation with trait empathy, with EC [ $r = -.353, p < .001, p_{adj} < .0026$ ] and PT [ $r = -.259, p < .001, p_{adj} < .0026$ ] showing significant negative correlations. Additionally, weak yet negative associations with hedonism and achievement were observed with empathy.

In addition, Spearman's Rho = .993 ( $p < .001$ ), i.e., the correlation for the assessment of integrated hypothesis 3.3 was found to be statistically significant and robust. The following is the calculated ranking, which goes from the most notable positive relationships to the most significant negative relationships: (1) universalism-concern, (2) universalism-tolerance, (3) benevolence-care, (4) benevolence-dependability, (5) conformity-interpersonal (6) self-direction thought, (7) universalism nature, (8) self-direction action, (9) security-societal, (10) security-personal, (11) humility, (12) face, (13) conformity-rules, (14) stimulation, (15) achievement, (16) tradition, (17) hedonism, (18) power-resource, (19) power-dominance. {note that two values are tied at the 7th rank}.

#### **Hypothesis 4 (Karuna Values Quadrant: Hierarchical Regression):**

The hierarchical regression analysis commenced by integrating BFI traits with trait empathy as independent variables (IV), followed by the subtraction of BFI traits in the subsequent step wherein both the models were predicting Schwartz's values (DV). This sequential approach aimed to evaluate the impact of empathy on value quadrants beyond the influence of BFI traits. Thus, a two-model hierarchical regression was employed to ascertain this heightened influence of empathy on values; measured using "delta R-squared" ( $\Delta R^2$ ) mentioned below which denotes the percentage variance attributed to value quadrants by trait empathy after adjusting for personality traits.

$$\Delta R^2 = \{ \text{Variance explained by BFI traits and Empathy together (step 2)} \} - \{ \text{Variance explained by BFI traits alone (step 1)} \} = \text{Additional change } (\Delta) \text{ in variance explained by Empathy alone}$$

**Table 4** Linear and hierarchical regression coefficients between empathy (EC, PT) and Schwartz's higher order quadrants along with the accounted variance from the BFI and empathy.

PVQ-4 values (N=580)	EC ( $\beta$ )	PT ( $\beta$ )	BFI R2% (Step 1)	BFI + EC + PT R2% (Step 2)	Delta R <sup>2</sup> (%) (Step 2 - Step 1)	EC ( $\beta$ ) (Step 2)	PT ( $\beta$ ) (Step 2)	Empathy (EC + PT) ( $\beta$ ) (Step 2)
Self-Transcendence	0.402***	0.221***	26.2***	35.2***	8.99***	0.2855***	0.1626***	0.3816***
Self-Enhancement	-0.0533	-0.0393	12.2***	13.6***	1.43**	-0.1007	-0.0786	-0.1544**
Openness to Change	0.191***	0.159***	19.6***	21.1***	1.42**	0.0869	0.0899*	0.154***
Conservation	0.237***	0.1*	16.3***	19.0***	2.63***	0.160**	0.0816	0.2049***

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Note: R<sup>2</sup> is reported in percentages. Both \*\* and \*\*\* satisfies our adjusted p-value, in accordance with Bonferroni correction stated at the beginning of the results section.

Hierarchical regression-based coefficients of the two differential steps are stated in columns four to nine of table 4. Results obtained from the hierarchical regression model indicate that empathy plays a crucial role in revealing significant variance of ( $\Delta R^2 = 8.99\%$ ,  $\beta = .3816$ ,  $p < .001$ ,  $p_{adj} < .0026$ ) in predicting Schwartz's self-transcendence value after controlling for personality factors. Specifically, EC ( $\beta = .2855$ ) accounts for a greater proportion of this variance as compared to PT ( $\beta = .1626$ ). Note that  $\beta$  mentioned herein signifies that for every one standard deviation alteration in the EC or PT score, the mentioned value is augmented by  $\beta$  standard deviation units, wherein the model is the one belonging to the step-2 in hierarchical regression. Additionally, empathy explains the added minor variance in Schwartz's value of openness to change ( $\Delta R^2 = 1.42\%$ ,  $\beta = .154$ ,  $p < .001$ ,  $p_{adj} < .0125$ ) and conservation value ( $\Delta R^2 = 2.63\%$ ,  $\beta = .2049$ ,  $p < .001$ ,  $p_{adj} < .0125$ ). Moreover, empathy emerges as a significant predictor of Schwartz's self-enhancement values, explaining a smaller variance of ( $\Delta R^2 = 1.43\%$ ,  $\beta = -.1544$ ,  $p < .01$ ) beyond the influence of personality factors. Furthermore, linear regression coefficients between empathy (IV) and values (DV) are mentioned in column two and three of table 4, which is a simple model of empathy predicting values.

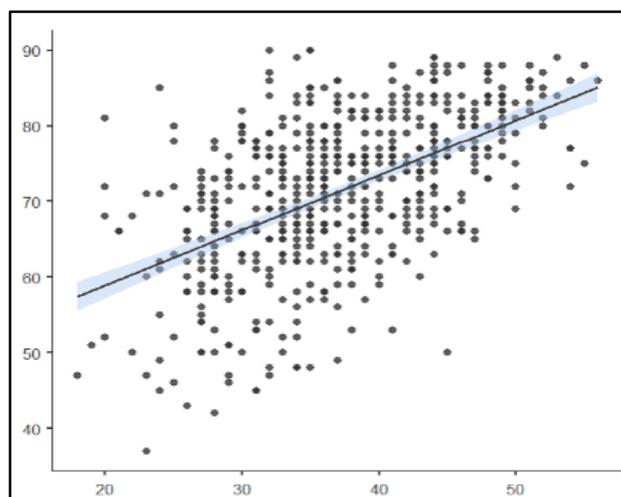
## DISCUSSION & CONCLUSION

The findings of our present investigation substantiate the postulated associations between trait empathy and Schwartz's values. Moreover, the study elucidates the pivotal role of empathy in influencing universal human values within the specific cultural framework of India while

illuminating the robust effect of the independent presence of empathy beyond personality, as encapsulated in the Jnana-karuna paradigm.

### Bipolar Modulations in Empathy-Value Associations

Since Hypothesis 1.1<sub>A</sub> was not rejected, our study demonstrated a robust positive correlation between trait empathy and self-transcendence values quadrant. Furthermore, Hypothesis 2.1 was affirmed as our study revealed that trait empathy exhibits the most robust positive correlation with universalism, closely followed by benevolence. Similarly, in Hypothesis 3.1, trait empathy manifests the most robust positive correlation with universalism-concern and universalism-tolerance values, followed by benevolence-care and benevolence-dependability. Hypothesis 2.2 indicates that trait empathy displays the most substantial negative correlation with power. For Hypothesis 3.2, our results indicate that trait empathy exhibits the most substantial negative correlation with power-dominance and power-resources, coupled with a slight negative association with hedonism. However, transitioning to Hypothesis 1.2, we could not substantiate the overall negative correlational association between trait empathy and the overarching self-enhancement values quadrant. This moreover aligns with prior research from Western samples, which has consistently shown the pattern wherein the trait empathy is negatively linked to self-enhancing values like achievement and power, with occasional negative correlations with openness to change values such as hedonism and stimulation (Balliet et al., 2008; Silfver et al., 2008; Myyry & Helkama, 2001). Examining these results through the lens of the Indian sample perspective, our findings underscore the significant role of empathy in both altruistic motivations and self-enhancing tendencies, same as witnessed in the Western literature framework provided by Batson et al. (2015), further substantiating our Jnana-Karuna paradigm. This concept is further illustrated in Figure 1, which visually depicts the relationship between empathy (Jnana) and self-transcending values (Karuna) as outlined in the hypothesis discussed above.



**Figure 1.** Diagrammatic presentation of empathy and self-transcending values correlation from hypothesis 1.1 {Note: The graph depicts empathy on the x-axis with a self-transcending higher-order quadrant on the y-axis.}

Finally, what emerged as imminent was the observation of how empathy from one opposing vantage point served to amplify the giving, humanitarian values of Schwartz presenting themselves in the form of a self-transcending higher-order quadrant and on the other, working to diminish the presence of egocentric self-serving values of self-enhancement higher order quadrant. Meanwhile, the values associated with openness to change and conservation were positioned statistically and culturally somewhere in the middle, reflecting a bipolar interplay within this framework.

### **Empathy's Influence on Cross-Cultural Value Preferences Reflected Through Rank Ordering**

The findings elucidated in Hypothesis 1.3, 2.3 and 3.3 demonstrated a notably strong Spearman's Rho correlation coefficient between the observed and predicted rank order. These findings are substantiated by a study conducted by Davis and Oathout (1987), encompassing participants from diverse cultural backgrounds; a consistent positive correlation emerged between trait empathy and the notable presence of self-transcendent values. In a comparable investigation undertaken by Balliet et al. (2008) involving a Western sample, values were organized in a clockwise fashion around a two-dimensional circle, and a rank order was anticipated. While their study corroborated our findings regarding empathy exhibiting the most negative correlation with power, they discovered a notable positive association with benevolence rather than universalism, as reported by Krumrei-Mancuso (2017). These discoveries reinforce the notion that empathy is intricately linked to a preference for values that extend beyond self-interest, contributing to the well-being of others.

Consequently, our findings contribute valuable insights into potential Indian cultural variations in defining the circular structure of Schwartz's value model. Besides, the emphasis in Indian culture on community, family ties, and a collectivistic orientation, arising from indigenous naturalized concepts of Jnana and Viveka, underscores the possible importance placed on group harmony, social resonance, and collective opinion. Consequently, individuals in collectivist cultures are more predisposed to exhibit empathy towards their group members, stemming from a stronger identification of their needs and emotions (Jami and Walker, 2022; Riess, 2017).

### **The Predictive Influence of Empathy on the Karuna Values Quadrant**

Significant results are explicated in Hypothesis 4.1, indicating empathy accounts for statistically significant variance in explaining Schwartz's self-transcendent values suggesting that empathy plays a pivotal role in positively predicting the self-transcendent values above and beyond personality factors. Of particular note is the larger portion of explained variance attributed to EC compared to PT. Additionally, EC demonstrates a positive prediction of Schwartz's values related to openness to change, contributing significantly to the variance, as well as conservation values. These findings align with the empathy-altruism hypothesis (Batson et al., 1981) which suggests that empathy can lead to altruistic behaviors rooted in genuine concern for others' welfare, contrasting with self-serving motives driven by personal interest (Batson et al., 2014). Another pertinent study suggests that people who feel empathy were more likely to engage in helping behavior, even when they had the opportunity to avoid helping without facing social consequences (Eisenberg et al., 1989). Additionally, a reduced sense of

empathy can also account for non-altruistic values such as self-interest, achievement, hedonism, and competition (Davis, 1980). Thus, as witnessed, this framework still finds itself relevant in today's time as we see our study as well as some others elucidating the same. Moreover, the consistent predictive relationship between empathy and Schwartz's self-transcending values can be investigated through an evolutionary perspective such that primates showed empathic responses to the distress of others and engaged in altruistic behavior, such as comforting and sharing with others (Preston et al., 2002).

Within the context of India, the prominent role ascribed to empathy seems to find explication through the philosophical principles of our Jnana-Karuna paradigm, which is quite similar to the well-established previously mentioned 'Empathy-Altruism Hypothesis' in Western literature. Parallels of the same can be found in the Indian ideas of Jnana i.e., the knowledge of the united sense of self which invokes karuna (compassion) and related traits in an individual, indicating that the positive emergence of Jnana leads to Karuna and other altruistic values, such as Ahimsa (non-violence) and Seva (service), while negatively influencing self-enhancing values like power and hedonism resulting from Avidya (ignorance). This ability possibly allows individuals to experience cognitive and emotional resonance with others, fostering a shared understanding. Considering these premises, it becomes conceivable that the Jnana-Karuna framework significantly contributes to empathy among Indian populations and plausibly multiculturally.

### **Cultivating Empathy & Promoting Pro-social Values: The Jnana-Karuna Framework**

Drawing on the empirical configurations revealed in the previous sections, Jnana denoting the capacity to discern the illusory from the real (Viveka) and to cultivate a sense of interconnectedness with others, could be considered a foundational basis for individual empathy. This recognition of commonality and equanimity in all stems from a shared origin of all that is "Brahman" (Chāndogya Upaniṣad 3.14.1), serving as the impetus for Karuna, which is a natural expression of universalism, benevolence, and tolerance, devoid of personal motives or gains (Dasgupta & Dasgupta, 1996). In this transcendental framework, individuals will likely be prompted to forego narrow and unidimensional interpretations of reality, encouraging them to empathize with alternative perspectives. This inclination towards empathy seems to play a pivotal role in positively influencing altruistic values, encouraging individuals to consider diverse perspectives and experiences beyond mere emotional pity or sympathy as a manifestation of Karuna. Conversely, those unable to appreciate empathy due to Avidya and a lack of Jnana may be confined to narrow, subjective versions of truth, asserting absolute truths and disregarding diverse viewpoints beyond their worldview. This limitation may lead to the development of self-enhancing, egocentric values such as the pursuit of power, hedonism, individualistic achievement, and control.

This appreciation of diverse viewpoints and embracing multiple perspectives as possible outcomes of Jnana and Viveka seems to play a crucial role in fostering empathy, with positive implications for building a more compassionate, tolerant, and harmonious society. In essence, our research provides meaningful insights that connect Eastern philosophical principles with social psychology, offering a deeper understanding of how empathy, values, and cultural

contexts intertwine, especially within the Indian ethos. Philosophically, the results demonstrate the correlation between Jnana and Karuna through the lens of Buddhism's philosophy of four sublime states such that empathy inculcated through an understanding of the greater reality, evolved into Karuna, which manifests as altruistic behavior (Gopalakrishna & Datt, 2011).

### **Potential Limitations**

This study presents some inherent limitations, notably relying on self-report measures vulnerable to biases like social desirability. Non-probability sampling techniques and online questionnaires may potentially hinder representation and introduce biases related to self-selection and internet access. Cultural biases in questionnaire interpretation may compromise cross-cultural validity, and the sample's homogeneity, regionally and educationally, limits broader generalizability. Exclusive use of English may exclude non-English speakers, reducing applicability across diverse language groups. Notably, focusing on specific facets of empathy and values may overlook other influential factors, adding nuance to the interpretation of results.

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### **Conflict of interest statement**

The authors declare no conflict of interest.

### **Ethics statement**

Approval was obtained from the Institute Ethics Committee of the Indian Institute of Technology, Delhi (IEC-IITD; Proposal No. P021/P0101).

### **References**

- Ashok, R. (2018). Possibility of universal religion a reassessment of Swami Vivekananda (Doctoral dissertation, Department of Philosophy, Pondicherry University).
- Atwal, S. (2010). Indian psychology: The connection between mind, body, and the universe. Pepperdine University.
- Augustine, P., & Wayne, M. (2019). Understanding the phenomenon: A comparative study of compassion of the West and Karuna of the East. *Asian Philosophy*, 29(1), 1-19.
- Balliet, D., Joireman, J., Daniels, D., & George-Falvy, J. (2008). Empathy and the Schwartz Value System: A Test of an Integrated Hypothesis. *Individual Differences Research*, 6(4).
- Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation?. *Journal of Personality and Social Psychology*, 40(2), 290.
- Batson, C. D., Dyck, J. L., Brandt, J. R., Batson, J. G., Powell, A. L., McMaster, M. R., & Griffitt, C. (1988). Five studies testing two new egoistic alternatives to the empathy-altruism hypothesis. *Journal of personality and social psychology*, 55(1), 52.
- Batson, C. D., Fultz, J., & Schoenrade, P. A. (1987). Distress and empathy: Two qualitatively distinct vicarious emotions with different motivational consequences. *Journal of Personality*, 55(1), 19-39.
- Batson, C. D., Lishner, D. A., & Stocks, E. L. (2015). The Empathy-Altruism Hypothesis. In *The Oxford Handbook of pro-social behavior* (pp. 259-268). Oxford library of psychology.
- Beyerlein, K., & Sikkink, D. (2008). Sorrow and solidarity: Why Americans volunteered for 9/11 relief efforts. *Social Problems*, 55(2), 190-215.

- Bhavanani, A. B. (2013). Yoga Chikitsa: The application of Yoga as a therapy. Pondicherry, India: Dhivyananda Creations, 2.
- Carlo, G., Eisenberg, N., Troyer, D., Switzer, G., & Speer, A. L. (1991). The altruistic personality: In what contexts is it apparent? *Journal of personality and social psychology*, 61(3), 450.
- Cliffordson, C. (2002). The hierarchical structure of empathy: Dimensional organization and relations to social functioning. *Scandinavian journal of psychology*, 43(1), 49-59.
- Cuff, B. M., Brown, S. J., Taylor, L., & Howat, D. J. (2016). Empathy: A review of the concept. *Emotion Review*, 8(2), 144-153.
- Dasgupta, S., & Dasgupta, S. N. (1996). *Yoga philosophy: In relation to other systems of Indian thought*. Motilal Banarsidass.
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of personality and social psychology*, 44(1), 113.
- Davis, M. H., & Oathout, H. A. (1987). Maintenance of satisfaction in romantic relationships: Empathy and relational competence. *Journal of personality and social psychology*, 53(2), 397.
- Decety, J., & Jackson, P. L. (2004). The functional architecture of human empathy. *Behavioral and cognitive neuroscience reviews*, 3(2), 71-100.
- Eisenberg, N., Lennon, R., & Roth, K. (1983). Pro-social development: A longitudinal study. *Developmental Psychology*, 19(6), 846.
- Foot, J. E. A. (1999). Non-violence in the Indian religious tradition.
- Fox, J., & Weisberg, S. (2020). Using car and effects Functions in Other Functions. *Using Car Eff. Funct. Other Funct*, 3, 1-5.
- Gopalakrishna, D., & Datt, A. (2011). Buddhist virtues: The foundations of socio-economic development—A Study. In *8th International Buddhist Conference on the United Nations Day of Vesak Celebrations, Thailand*.
- Gupta, M. D., Basu, A., & Thakurta, R. (2022). Re-examining the relationship between interpersonal reactivity index sub-scales and mental well-being: Implications of the pandemic. *Acta Psychologica*, 228, 103621. <https://doi.org/10.1016/j.actpsy.2022.103621>
- Gupta, S. (2013). Advaita Vedanta and Vaisnavism: The Philosophy of Madhusudana Sarasvati. Routledge.
- Gyaltzen, V. S. Love and Compassion.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American psychologist*, 48(1), 26.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33(2-3), 61-83.
- Hepper, E. G., Hart, C. M., Meek, R., Cisek, S., & Sedikides, C. (2014). Narcissism and empathy in young offenders and non-offenders. *European Journal of Personality*, 28(2), 201-210.
- Huang, X., Li, W., Sun, B., Chen, H., & Davis, M. H. (2012). *Interpersonal Reactivity Index—Chinese Version (C-IRI)* [Database record]. APA PsycTests.
- Irani, A. S. (2018). Positive altruism: helping that benefits both the recipient and giver. Master of Applied Positive Psychology (MAPP) Capstone Projects, 152.
- Jami, P. Y., & Walker, D. I. (2022). Exploring situational empathy and intergroup empathy bias among people with two opposing cultural norms: Collectivism and individualism. *International Journal of Intercultural Relations*, 91, 282-296.
- jamovi - open statistical software for the desktop and cloud*. (n.d.). <https://www.jamovi.org/>
- Jenkins, S. (2013). Compassion and the Ethics of Violence. *A Companion to Buddhist Philosophy*, 466-475.
- Keshavan, M. S., & Bhargav, H. (2024). Know thyself (Jnana Yoga): Psychotherapeutic insights from the East. *Asian Journal of Psychiatry*, 103907.
- Kraig Beyerlein, David Sikkink, Sorrow, and Solidarity: Why Americans Volunteered for 9/11 Relief Efforts, *Social Problems*, Volume 55, Issue 2, 1 May 2008, Pages 190–215.
- Krumrei-Mancuso, E. J. (2017). Intellectual humility and pro-social values: Direct and mediated effects. *The Journal of Positive Psychology*, 12(1), 13-28.
- Lönnqvist, J. E., Jasinskaja-Lahti, I., & Verkasalo, M. (2011). Personal values before and after migration: A longitudinal case study on value change in Ingrian–Finnish migrants. *Social Psychological and Personality Science*, 2(6), 584-591.

- Makransky, J. (2021). Compassion in Buddhist psychology.
- Mane, G. M. (2023). Indian Cultural Value System Based on Ancient Indian Knowledge Based on in the Pursuit of Pillars of Values for Human Life. *The Wisdom of Bharat: An Exploration of the Indian Knowledge System*, 69.
- Melchers, M. C., Li, M., Haas, B. W., Reuter, M., Bischoff, L., & Montag, C. (2016). Similar personality patterns are associated with empathy in four different countries. *Frontiers in psychology*, 7, 290.
- Migliore, L. A. (2011). Relation between big five personality traits and Hofstede's cultural dimensions: Samples from the USA and India. *Cross Cultural Management: An International Journal*, 18(1), 38-54.
- Mishra, G. (2015). *Foundations and Applications of Indian Psychology*. Pearson India Education Services Pvt. Ltd.
- Moudatsou, M., Stavropoulou, A., Philalithis, A., & Koukoulis, S. (2020, January). The role of empathy in health and social care professionals. In *Healthcare* (Vol. 8, No. 1, p. 26). MDPI.
- Myry, L., & Helkama, K. (2001). University students' value priorities and emotional empathy. *Educational Psychology*, 21(1), 25-40.
- Narasimham, P. (1915). The vedantic good. *Mind*, 24(93), 37-59.
- Narayanan, A. C. (2020). The meaning of generosity: A subjective culture study in India (Doctoral dissertation, University of Hawai'i at Manoa).
- Paranjpe, A. C., & Paranjpe, A. C. (1984). Self and Identity. In *Theoretical Psychology: The Meeting of East and West* (pp. 231-274). Springer US.
- Pedrotti, J. T., Lopez, S. J., McDermott, R. C., & Snyder, C. R. (2024). *Positive psychology: the scientific and practical explorations of human strengths*. SAGE Publications.
- Post, S. G. (2003). *Religion & Spirituality and Human Flourishing*.
- Persson, B. N., & Kajonius, P. J. (2016). Empathy and universal values explicated by the empathy-altruism hypothesis. *The Journal of social psychology*, 156(6), 610-619.
- Preston, S. D., & De Waal, F. B. (2002). Empathy: Its ultimate and proximate bases. *Behavioral and brain sciences*, 25(1), 1-20.
- Radhakrishnan, S. (1914). The ethics of the Vedanta. *The International Journal of Ethics*, 24(2), 168-183.
- Rajput, Soni & Puranik, Manjunath & Shanbhag, Namita & Kumar, Amit. (2020). Factors affecting Empathy among Indian Dentists. *Indian Journal of Dental Research*. 31.
- Rangari, V. P., & Mehta, K. (2017). The Buddhist psychology: The 360 degree model of Karuna (Compassion) developed from Buddhist literatures. *Indian Journal of Positive Psychology*, 8(3), 474-477.
- Riess, H. (2017). The science of empathy. *Journal of patient experience*, 4(2), 74-77.
- Rooney, N. L. (2020). Ayurveda, Preconception, Biological Plasticity, and the Re-conception of a Nation.
- R Core Team (2021). *R: A Language and environment for statistical computing*. (Version 4.1) [Computer software]. Retrieved from <https://cran.r-project.org>. (R packages retrieved from MRAN snapshot 2022-01-01).
- Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., ... & Konty, M. (2012). Refining the theory of basic individual values. *Journal of personality and social psychology*, 103(4), 663.
- Schwartz, S. H., & Cieciuch, J. (2022). Measuring the refined theory of individual values in 49 cultural groups: psychometrics of the revised portrait value questionnaire. *Assessment*, 29(5), 1005-1019.
- Sharma, V. (2019). Vedic Education: The Only Means To Realise Sarvam Khalu Idam Brahman. *NEW RACE*, 54.
- Silfver, M., Helkama, K., Lönnqvist, J. E., & Verkasalo, M. (2008). The relation between value priorities and proneness to guilt, shame, and empathy. *Motivation and Emotion*, 32, 69-80
- Siu, A. M., & Shek, D. T. (2005). Validation of the interpersonal reactivity index in a Chinese context. *Research on Social Work Practice*, 15(2), 118-126.
- Singh, A. (2019). *Indian Knowledge Systems: A Journey through the Ages*. New Delhi: HarperCollins India.
- Singh, K., Kaur Sohi, K., Kaur, H., & Singh, P. (2023). Buddhism and Its Contribution to Positive Psychology. In *Religious and Spiritual Practices in India: A Positive Psychological Perspective* (pp. 113-139). Singapore: Springer Nature Singapore.
- Smith, E. R., & Trope, Y. (2006). Theory of mind and social behavior: Causal models tested in a laboratory setting. In R. V. Kail (Ed.), *Advances in Child Development and Behavior* (Vol. 34, pp. 1-39). Academic Press.

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Sridhar, Y. N. (2015). Guidance and counselling needs of teacher trainees. *International Journal of Social and Economic Research*, 5(1), 93-97.

Swahananda, S. (2022). Chandogya Upanisad. Sri Ramakrishna Math.