

Empathy among management students : An assessment scale-based study of university students in Gujarat

Jayendra P. Siddhapura *

School of Management

RK University

Rajkot 360020

Gujarat

India

Ranjana Dureja [†]

LJ Institute of Management

LJK University

Ahmedabad 382210

Gujarat

India

Priyanka K Suchak [§]

Aarti Joshi [‡]

School of Management

RK University

Rajkot 360020

Gujarat

India

Abstract

Empathy refers to perceiving the emotional state of others, an essential soft skill yet missing among today's generation. The present study investigates the significance of empathy

This article has been corrected with minor changes. These changes do not impact the academic content of the article.

* ORCID-ID: 0009-0000-6239-2423

† ORCID-ID: 0000-0002-4112-0610

§ ORCID-ID: 0009-0004-7244-5671

‡ ORCID-ID: 0000-0002-7275-8481

* E-mail: jayendra01phd@gmail.com (Corresponding Author)

† E-mail: ranjanadureja@ljk.edu.in

§ E-mail: priyanka.suchak@rku.ac.in

‡ E-mail: aarti.joshi@rku.ac.in

among management students by evaluating the variables affecting empathy levels, exploring the factors influencing empathy scores and using the Toronto Empathy Questionnaire (TEQ) for selected universities in Gujarat. A structured questionnaire was administered to 482 university students between November 2024 and January 2025, collecting primary data. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were applied to assess construct validity, internal consistency, and test-retest reliability using the AMOS tool to ensure the robustness of the TEQ. The findings indicate that Leader Emotional Engagement (LEE) has a strong positive impact on Employee Dedication (ED). Emotional Awareness (EA) shows a moderate influence on Emotional Resilience (ER), while Employee Dedication (ED) exhibits a moderate-to-strong effect on ER. These results highlight the interconnected roles of leadership, emotional awareness and dedication in shaping workplace emotional resilience.

Subject Classification: C38, C30.

Keywords: *Toronto empathy questionnaire (TEQ), Empathy, Emotional awareness, Emotional responsiveness, Emotional detachment, Lack of emotional empathy.*

Introduction

Digital lifestyles and less face-to-face interaction are weakening emotional bonds, resulting in problematic emotional gaps, social alienation and widespread emotional-detachment. [1]. Rising stress levels, growing preference for nuclear family structures and the increasing cultural emphasis on individualism have further contributed to the decline of empathy, particularly among students and young professionals [2].

Management training often prioritizes technical skills over human competencies like empathy[3]. Even though international organizations such as the World Health Organization (WHO) support management education lacks a systematic approach to cultivating it [4]. This study will explore empathy among MBA students and its implications for their future professional roles.

Theoretical Background

This study evaluated Gujarati management students' empathy using the Toronto Empathy Questionnaire (TEQ). With a 5-point Likert scale, the 16-item test assesses affective empathy in a variety of dimensions, such as social self-confidence and sensitivity. Further longitudinal and cross-cultural studies of these dimensions are suggested by the study, which also validates the construct validity, reliability, and internal consistency of empathy responses within this cohort. [5]

Literature Review

Empathy has emerged as a critical construct in improving individual satisfaction, decreasing burnout, and reducing errors [6] and plays a vital role in enhancing overall health and promoting prosocial behavior [7]. Conversely, a lack of empathy has been associated with a range of adverse outcomes, including increased aggression [8], heightened economic stress [1], insufficient professional training [9], and diminished job satisfaction [10]. This study bridges a research gap by investigating the relationship between variables affecting Empathy among Management Students.

Empathy, Emotional Regulations, and Emotional Detachment

Empathy makes it possible for people to understand and react to the feelings of others, which is crucial for social and emotional functioning. Its foundation is self-control. [11] Previous studies have linked occupational alienation, which leads to emotional detachment, to empathy and ego depletion [12]. Further, research suggests to incorporate empathetic essentials in educational planning to reduce emotional disengagement [13].

H₀₁- There is no influence of Lack of Emotional Empathy on Emotional Detachment

Emotional responsiveness is theorized as recognizing, understanding, and regulating emotions for managing physical and emotional health. [14] Emotional disengagement reduces affective engagement and may result in social disengagement. Social interaction is known to reduce detachment. [15] Thus, the following hypothesis is proposed:

H₀₂ - There is no influence of Emotional Detachment on Emotional Responsiveness.

Emotional Awareness and Emotional Responsiveness

Research has increasingly highlighted the effectiveness of Emotional proficiencies such as emotional awareness, mindfulness, and emotion regulation. For instance, the study investigated the association between mindfulness and emotion regulation, revealing that association of higher levels of awareness and mindfulness on adaptive emotion regulation strategies [16]. Thus, research hypothesized that

H₀₃- There is no influence of Emotional Awareness on Emotional Responsiveness

Studies have identified individual and contextual factors influencing empathy levels. [5]Identifies emotional empathy influenced by factors like gender [17]personality traits [18]; emotional intelligence [19] and the impact of empathy on demographic factors like age, social context, and cultural context [17].The previous research showed the influence of age on empathic responses [20] Younger individuals show higher emotional reactivity, and older adults exhibit greater empathy and more emotional regulation [21]. Based on the preceding discussion, the following hypothesis was framed

H₀₄- There is no significant relationship of the Demographic factor on the Empathy level.

Research Methodology

This research adopts a quantitative approach, utilizing the Toronto Empathy Questionnaire (TEQ) developed by Spreng, R. N., McKinnon, M. C., Mar, R. A., & Levine, B. to evaluate empathy levels among 482 selected universities management students in Gujarat. Data analysis involved EFA and CFA using SPSS. For Structural Equation Modelling AMOS has been used. Reliability and validity were verified, revealing significant demographic influences. Ethical guidelines were upheld, maintaining confidentiality and obtaining informed consent.

Objectives

- To identify the key variables influencing empathy levels using the Toronto Empathy Questionnaire (TEQ).
- To Study the effect on Demographic factors on level of Empathy in MBA Students.

Data Interpretation

KMO and Bartlett's Test

The KMO Measure of Sampling Adequacy and Bartlett's Test of Sphericity were conducted to assess the suitability of the data for factor

Table 1
KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.747
Bartlett's Test of Sphericity	Approx. Chi-Square	1593.466
	Df	120
	Sig.	.000

(Source: SPSS Software version - 26)

analysis. Table-1 shows that the KMO value was 0.747, which exceeds the recommended threshold of 0.60 [27], indicating that the sample size was adequate for factor analysis. According to criteria, a KMO value between 0.70 and 0.80 is considered "good," suggesting that the data were appropriate for dimensionality reduction techniques.

Bartlett's Test of Sphericity was significant, $\chi^2(120) = 1593.47$, $p < .001$, rejecting the null hypothesis that the correlation matrix was an identity matrix [23]. This confirms that there were sufficient correlations among the variables to proceed with factor analysis [24].

Table 2
Rotated Component Matrix

Component	Psychological Factor	Key Items
Factor 1	Lack of Emotional Empathy	LEE16(0.783) LEE15(0.699) LEE07(0.638) LEE11(0.584)
Factor 2	Emotional Responsiveness	ER05(0.689) ER09(0.670) ER06(0.643) ER01(0.634)
Factor 3	Emotional Awareness	EA02(0.704) EA03(0.636) EA08(0.577) EA14 (0.471)
Factor 4	Emotional Detachment	ED10(0.703) ED12(0.695) ED04 (0.570)

(Source: SPSS Software version - 26)

Analysis of Rotated Component Matrix (PCA with Varimax Rotation)

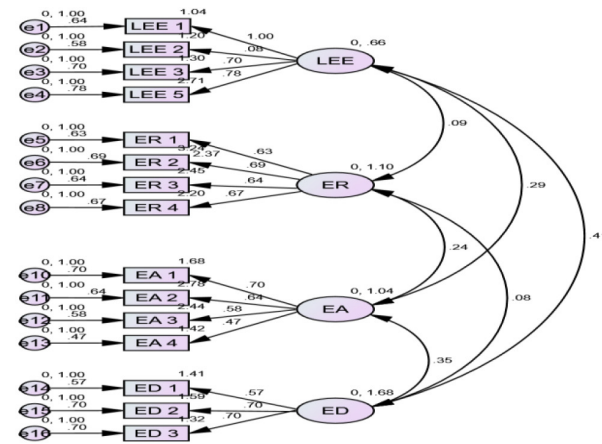
This analytical approach serves the crucial purpose of determining whether the measured items cluster into theoretically meaningful psychological constructs while ensuring minimal cross-loadings between factors [25]. The analysis revealed four distinct and psychologically interpretable factors, each demonstrating statistically significant item loadings above the conventional threshold of 0.50 (Table-2) [24]. The analysis demonstrates good discriminant validity as items loaded cleanly on their respective factors without significant cross-loadings [22].

The SEM illustrates relationships among psychological factors like emotional empathy, responsiveness, awareness, and detachment. It consists of four latent variables measured by multiple indicators, revealing insights into emotional processing and interpersonal sensitivity.

Hypothesized Relationship

SEM is a widely accepted multivariate statistical method suitable for analyzing complex relationships among latent variables in psychological and behavioral research [26].

Hypothesis	Path Coefficient	Interpretation
H ₀ 1	0.66	Strong positive influence of LEE on ED
H ₀ 2	0.24	Moderate influence of EA on ER
H ₀ 3	0.35	Moderate-to-strong influence of ED on ER



(Source: AMOS -23)

Figure 1
SEM of Factors

The model as demonstrated in figure-1 demonstrates that emotional awareness is a key factor in fostering emotional responsiveness. Lack of empathy is a strong predictor of emotional detachment, suggesting that interventions targeting empathy could reduce emotional disengagement. Emotional detachment weakens emotional responsiveness, meaning detached individuals are less likely to support or comfort others.

H₀4- There is no significant relationship of Demographic factor on Empathy level.

The objective of this cross-tabulation analysis is to explore the relationship between gender and levels of empathy among participants. [27] In this analysis, empathy levels are categorized as low, moderate, and high, and the distribution across male and female respondents is examined.

Table 3
Cross Tabulation of Gender on Empathy level

Gender	Low	Moderate	High	Total
Male	112	100	10	222
Female	124	130	06	260
Total	236	230	16	482

(Source: Authors' Contribution)

The table 3 presents empathy levels by gender among 482 individuals. Both genders mostly show low to moderate empathy, with slight differences moderate empathy is higher in females (50.0%) than males (45.0%), while high empathy is rare (4.5% in males, 2.3% in females).

Table 4
Cross Tabulation of Family Structure on Empathy level

Family Structure	Low	Moderate	High	Total
Nuclear	115	104	07	226
Joint Family	103	101	06	210
Single Parents	18	25	03	46
Total	236	230	16	482

(Source: Authors' Contribution)

The table 4 presents empathy levels by family structure among 482 individuals. Low empathy is most common in nuclear (50.9%) and joint families (49.0%), while single-parent families show higher moderate (54.3%) and high empathy (6.5%). Overall, empathy remains mostly low to moderate across all family structures.

Research Finding

The study shows that emotions at work are deeply connected when leaders genuinely engage with their teams, employees become more dedicated and invested. People who understand their own emotions tend to bounce back from stress more easily, and those who feel committed to their work also handle challenges with greater resilience. Together, these insights reveal how emotional awareness, strong leadership and workplace dedication all weave together to create a healthier, more supportive work environment.

Implication of Research

In the past, empathy was only assessed on affective (e.g., Mehrabian & Epstein, 1972) or cognitive scales (e.g., Hogan, 1969). This study strengthens the theoretical basis for measuring empathy in MBA education by using a comparative method to evaluate these aspects. Fostering teamwork and organizational success requires developing empathy in addition to job-related skills. Incorporating mindfulness programs, global perspectives in value-added courses, and experiential learning such as social immersion and cultural exchanges are all feasible options for educational institutions to help students acquire these competencies.

Conclusion

The study highlights the critical role of empathy among management students, emphasizing its significance in shaping social interactions and educational experiences. By employing the Toronto Empathy Questionnaire (TEQ) and rigorous statistical analyses, the research validates key demographic influences on empathy levels. The findings underscore the need for integrating empathy-driven initiatives within educational frameworks to enhance students' interpersonal skills. Ultimately, fostering empathy can contribute to the development of well-rounded professionals capable of effective leadership and collaboration in diverse environments.

Conflict of Interest

The authors declare no conflicts of interest.

Funding

No outside funding sources contributed to this work.

References

- [1] S. H. Konrath, "Changes in dispositional empathy in American college students over time: A meta-analysis," *Personality and Social Psychology Review*, vol. 15, no. 2, pp. 180–198 (2011).
- [2] Y. T. Uhls, P. Greenfield, and M. R. Subrahmanyam, "Five days at outdoor education camp without screens improves preteen skills with nonverbal emotion cues," *Computers in Human Behavior*, vol. 39, pp. 387–392 (2014).
- [3] N. Uddin, R. Hasan, N. Papé, and A. Khan, "Independent higher education educators in England: Tutors' behavioural characteristics preferred by mature students on business management courses," *Journal of Statistics and Management Systems*, vol. 26, no. 7, pp. 1777–1801 (Jan. 2023), doi: 10.47974/JSMS-1145.
- [4] UNESCO, *Social and Emotional Learning: A Framework for Policy and Practice* (2021).
- [5] R. N. Spreng, M. C. McKinnon, R. A. Mar, and B. Levine, "The Toronto Empathy Questionnaire: Scale development and initial validation of a factor-analytic solution to multiple empathy measures," *Journal of Personality Assessment*, vol. 91, no. 1, pp. 62–71 (2009).
- [6] M. S. Clark, D. A. Robertson, and J. H. Smith, "How empathy connects to meaningful work and burnout in service employees," *Journal of Managerial Psychology*, vol. 34, no. 5, pp. 332–345 (2019).
- [7] M. Hojat, S. Mangione, T. J. Nasca, M. M. Rattner, J. S. Erdmann, and G. Veloski, "Underlying construct of empathy, gender, and specialty preferences in medical students," *Medical Teacher*, vol. 31, no. 10, pp. 944–947 (2009).
- [8] S. Subha Lakshmi and M. K. Krishnan, "Aggression and empathy in young adults: A correlational study," *Indian Journal of Psychology and Education*, vol. 14, no. 1, pp. 22–30 (2024).

- [9] Z. Yue, L. Chen, and Y. Wang, "Empathy and burnout in medical staff: Mediating role of job satisfaction and job commitment," *BMC Public Health*, vol. 22, no. 1, Article 1885 (2022).
- [10] Y. T. Uhls, "Media use and empathy development in emerging adults," *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, vol. 8, no. 2 (2014).
- [11] C. P. Cusimano and J. L. Goodwin, "Emotion regulation and moral judgment: A closer look at the evidence," *Journal of Experimental Psychology: General*, vol. 149, no. 2, pp. 272–285 (2020).
- [12] A. F. Fisher, M. J. Lang, and P. S. Ortega, "Improving emotional awareness and regulation through structured training," *Journal of Affective Disorders*, vol. 310, pp. 45–54 (2022).
- [13] C. Tsamadias and A. Dimakopoulou, "The social rates of return on investment in tertiary technological education by faculty as a guide for educational planning: The case of Greece," *Journal of Statistics and Management Systems*, vol. 7, no. 1, pp. 1–23 (2004), doi: 10.1080/09720510.2004.10701100.
- [14] Q. Wu, L. Zhang, and Y. Chen, "Relationship between psychological detachment from work and depressive symptoms: Indirect role of emotional exhaustion and moderating role of self-compassion," *BMC Psychology*, vol. 11, no. 1, Article 163 (2023).
- [15] E. M. Geiger, J. R. Lucas, and C. M. Martin, "Empathy is associated with interpersonal emotion regulation goals in everyday life," *Emotion*, vol. 24, no. 4, pp. 1092–1108 (2024).
- [16] A. B. Tuck and R. D. Lane, "Social contexts are associated with higher emotional awareness than nonsocial contexts: Evidence in a sample of people with and without major depressive disorder," *Emotion*, vol. 25, no. 3, p. 633 (2025).
- [17] T. Totan, E. Doğan, and Ö. Sapmaz, "The role of emotional self-efficacy and self-esteem in the development of empathy in university students," *Educational Sciences: Theory & Practice*, vol. 12, no. 2, pp. 732–737 (2012).
- [18] A. L. Del Gaizo and J. R. Falkenbach, "Primary and secondary psychopathic traits and their relationship to emotional intelligence," *Personality and Individual Differences*, vol. 45, no. 3, pp. 206–212 (2008).

- [19] J. Kollerová and M. J. Halamová, "The relationship between emotional intelligence and empathy: A mediating model," *Psychological Studies*, vol. 66, no. 3, pp. 267–278 (2021).
- [20] S. Whitmoyer, J. Gross, and M. T. Charles, "Age differences in emotion regulation strategy use and flexibility in daily life," *Aging & Mental Health* (2023).
- [21] J. Sze, D. Gyurak, J. Goodkind, and R. W. Levenson, "Greater emotional empathy and prosocial behavior in late life," *Emotion*, vol. 12, no. 5, pp. 1129–1140 (2012).
- [22] H. F. Kaiser and J. Rice, "Little Jiffy," *Educational and Psychological Measurement*, pp. 111–117 (1974).
- [23] M. S. Bartlett, "Tests of significance in factor analysis," *British Journal of Statistical Psychology*, pp. 77–85 (1950).
- [24] A. Field, *Discovering Statistics Using IBM SPSS Statistics*, London, U.K.: Sage (2018).
- [25] B. G. Tabachnick and L. S. Fidell, *Using Multivariate Statistics*, New York, NY: Pearson (2019).
- [26] K. R. Bollen, *Principles and Practice of Structural Equation Modeling*, New York, NY: Guilford Press (2016).
- [27] A. Bryman, *Social Research Methods*, Oxford, U.K.: Oxford University Press (2016).

Received April, 2025