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Novel contribution to existing knowledge: a focus on emotional intelligence and academic behavior in Northern India

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ABSTRACT

Background: The present study explored the relationship between emotional intelligence (EI) and academic behavior (AB) among undergraduate students in Northern Indian colleges. Understanding these factors is fundamental for enhancing student success and well-being.

Methods: Using a cross-sectional methodology, self-report questionnaires were used to gather data from 1000 undergraduate students who were selected through purposive sampling. Data was collected using tools that included the Emotional Intelligence Self-Assessment Questionnaire and the Academic Behavior Assessment Questionnaire.

Results: The study's findings indicate that, while emotional intelligence and academic behavior are not substantially associated, students exhibit exceptional academic behavior and high emotional intelligence scores. Statistical analyses examined the correlations and impacts of various demographic factors on EI and academic behavior. Participants exhibited high levels of academic behavior (mean=87.26, SD=13.55) and average levels of EI (mean = 48.76, SD = 13.99). A statistically significant positive correlation was found between EI and academic behavior ($r = 0.097$, $p = 0.002$). Course of study, presence of physical illness, and socio-economic status significantly influenced academic behavior, while place of residence, religion, and socio-economic status affected EI scores.

Conclusions: Despite the positive correlation between EI and academic behavior, the association was not substantial. The study highlights the complex interplay of multiple factors affecting student achievement. Further research is encouraged to investigate additional variables impacting EI and academic behavior among Northern Indian undergraduates. These insights can inform targeted interventions to support student development and academic success.

Keywords: Academic behavior, Emotional intelligence, Northern Indian colleges, Undergraduate students

INTRODUCTION

University life offers a multitude of experiences for undergraduate students, encompassing academic pursuits, personal growth, and social engagement.¹ However, navigating these diverse aspects can be challenging, and students may experience stress, anxiety, or depression that can negatively impact their academic performance.² Emotional intelligence (EI), the ability to understand and

manage one's own emotions and those of others, has emerged as a potential factor influencing academic success.³

While prior research has explored the relationship between EI and academic behavior, much of it focuses on general student populations or specific disciplines like nursing.^{4,5} A dearth of research exists regarding EI and academic behavior among undergraduate students in

Northern India. This study aims to address this gap by investigating the emotional intelligence and academic behavior of undergraduate students in selected colleges of Northern India. Additionally, the study explores potential associations between these constructs and selected socio-demographic variables. This study examines the emotional intelligence (EI) and academic behavior of undergraduate students in Northern Indian colleges. It further investigates the existence of significant relationships or associations with chosen socio-demographic variables.

Objectives of the study were to assess the Emotional Intelligence (EI) of undergraduate students at selected colleges of Northern India and to assess Academic Behavior of undergraduate students at selected colleges of Northern India. Also, to determine the relationship between EI and academic behavior of undergraduate students.

METHODS

This descriptive study employed a cross-sectional design. A sample of 1000 undergraduate students was selected using a purposive sampling technique from colleges in Northern India. Data collection instruments included the Emotional Intelligence Self-Assessment Questionnaire and the Academic Behavior Assessment Questionnaire. Data collection occurred at four colleges affiliated with Maharishi Markandeshwar University (MMDU) Mullana, Ambala, Haryana: Maharishi Markandeshwar College of Nursing (MMCN), Maharishi Markandeshwar College of Pharmacy (MMCP), Maharishi Markandeshwar College of Physiotherapy (MMCP), and Maharishi Markandeshwar College of Engineering (MMCE). Additionally, Netaji Subhash College of Nursing (HP) was included. The target population was undergraduate students enrolled at these colleges. The accessible population consisted of undergraduate students from MMDU Mullana, Ambala, Haryana. Undergraduate students willing to participate and available at the time of data collection were included in the study. Undergraduate students diagnosed with any mental illness were excluded.

The inclusion criteria required students to be willing to participate and available during the data collection period, whereas the exclusion criteria ruled out students suffering from any mental illness. Data were gathered through self-report questionnaires, assessing variables such as emotional intelligence and academic behavior, to explore the correlation and the impact of various demographic factors on these variables.

A self-administered questionnaire via Google Forms collected data across three sections:

Sociodemographic profile: This section comprised 12 items related to age, place of residence, religion, course of study, year of study, family type, parental occupations,

family income, self-reported health status (physical and mental), and socioeconomic status. The questionnaire was developed based on relevant literature, expert opinion, and the researcher's experience (see Annexure A for details).

Academic behavior assessment questionnaire: A standardized tool assessed academic behavior. It consisted of seven components including punctuality, organization skills, cooperative learning skills, assertiveness, self-efficacy, appropriate attire, and homework completion. Scores were interpreted as follows. The score <27 considered as poor academic behavior, 27-54 as average academic behavior, 55-81 as good academic behavior and 82-108 considered as excellent academic behavior.

Emotional intelligence self-assessment questionnaire: This standardized tool assessed emotional intelligence. It contained 15 items related to self-awareness, emotional regulation, social awareness, and relationship management. Scores were interpreted as follows. The score was 61-75 considered as excellent, 46-60 very good, 31-45 good, 16-30 average and 0-15 as poor.

Content validity of the sociodemographic profile was 0.9 (SCVI), academic behavior was 0.8 (SCVI), and emotional intelligence questionnaires was 0.9 (SCVI). Cronbach's alpha coefficient was used to assess the reliability of the academic behavior ($\alpha=0.8703$) and emotional intelligence ($\alpha=0.7703$) questionnaires. Ethical approval was obtained from the Institutional Ethical Committee (IEC) of Maharishi Markandeshwar University. Written informed consent was acquired from all participants, ensuring confidentiality throughout the study.

Data collection procedure

After administration approval from IEC (Institutional Ethical Committee) of Maharishi Markandeshwar Deemed to be University, Mullana, Ambala, the final data collection conducted in the month of 10th May 2023 to 30th May 2023. After obtaining informed consent, participants completed the self-administered questionnaires via Google Forms.

The study was conducted in two phases. In Phase I, the eligibility of undergraduate students was assessed based on predefined inclusion and exclusion criteria. Eligible students were then provided with detailed information about the study, and written informed consent was obtained from each participant. Phase II involved the administration of a socio-demographic profile assessment, which was collected through self-structured questionnaires using self-report methods and Google Forms. Following this, participants' emotional intelligence and academic behavior were measured using self-structured tools, specifically the emotional intelligence assessment questionnaire and the academic behavior assessment questionnaire.

RESULTS

This study investigated the emotional intelligence (EI) and academic behavior of undergraduate students

(n=1000) in Northern India. A cross-sectional design was employed using self-administered questionnaires to collect data on sociodemographic variables, academic behavior, and emotional intelligence.

Table 1: Frequency and percentage of socio-demographic variables (n=1000).

Demographic variable	Frequency (%)
Age in years	
17-19	356 (35.6)
20-22	535 (53.5)
23-25	95 (9.5)
28	14 (1.4)
Place of residence	
Urban	400 (40)
Rural	600 (60)
Religion	
Hindu	756 (75.6)
Sikh	56 (5.6)
Muslim	156 (15.6)
Christian	13 (1.3)
Any other	19 (1.9)
Course	
Nursing	429 (42.9)
Physiotherapy	158 (15.8)
Pharmacy	131 (13.1)
Engineering	282 (28.2)
Present year of course	
1 st year	320 (32)
2 nd year	273 (27.3)
3 rd year	243 (24.3)
4 th year	164 (16.4)
Type of family	
Nuclear	655 (65.5)
Joint	345 (34.5)
Fathers occupation	
Profession	394 (39.4)
Semi profession	81 (8.1)
Clerical/shop owner	153 (15.3)
Skilled worker	186 (18.6)
Semi skilled worker	46 (4.6)
Unskilled worker	31 (3.1)
Unemployed	109 (10.9)
Family/monthly income	
More than 36017	290 (29)
18000-36016	311 (31.1)
13495-17999	123 (12.3)
8989-13494	91 (9.1)
5387-8988	60 (6)
1803-8988	56 (5.6)
Less than 1802	69 (6.9)
Associated health problem (physical illness)	
Yes	74 (7.4)
No	926 (92.6)
Associated health problem (mental illness)	
Yes	54 (5.4)

Continued.

Demographic variable	Frequency (%)
No	946 (94.6)
Socio economic status (Acc. to Kuppuswamy's scale)	
Upper class	101 (10.1)
Upper middle class	550 (55)
Lower middle class	292 (29.2)
Upper lower class	29 (2.9)
Lower class	28 (2.8)

Table 2: Item wise frequency/ percentage distribution of academic behaviour among undergraduate student (n=1000).

Item	Always (4) (%)	Most of the time (3) (%)	Rarely (2) (%)	Never (1) (%)
Punctuality in class				
Did I miss out any lecture	106 (10.6)	113 (11.3)	516 (51.6)	265 (26.5)
I arrive early for college	526 (52.6)	308 (20.8)	111 (11.1)	55 (5.5)
Arrives on time for class	634 (64.4)	219 (21.9)	105 (10.5)	42 (4.2)
Following a vacation, return to college on schedule	507 (50.7)	269 (26.9)	151 (15.1)	73 (7.3)
Request the relevant authority to grant leave	359 (35.9)	239 (23.9)	263 (26.3)	139 (13.9)
Organizing skill				
I am competent at handling my task	540 (54)	367 (36.7)	68 (6.8)	25 (2.5)
Keep necessary books, assignments, work materials and personal belonging organised	593 (59.3)	277 (27.7)	98 (9.8)	32 (3.2)
Read assigned material other than textbook in library	370 (37)	352 (35.2)	214 (21.4)	64 (6.4)
I do my task carefully and systematically	581 (58.1)	310 (31)	76 (7.6)	33 (3.3)
Co-operative learning skills				
I am able to seek help when necessary	465 (46.5)	347 (34.7)	151 (15.1)	37 (3.7)
I enjoy working with others	499 (49.9)	318 (31.8)	136 (13.6)	47 (4.7)
I listen to and respect my classmates	556 (55.6)	297 (29.7)	102 (10.2)	45 (4.5)
I continue to expand my knowledge and skills	625 (62.5)	259 (25.9)	93 (9.3)	23 (2.3)
Take initiative during a group activity	516 (51.6)	293 (29.3)	145 (14.5)	46 (4.6)
Assertiveness				
I question things without worrying that I'll seem foolish	309 (30.9)	351 (35.1)	248 (24.8)	92 (9.2)
I speak up when I have unpleasant feelings about someone	305 (30.5)	361 (36.1)	241 (24.1)	93 (9.3)
I take criticism without becoming upset	306 (30.6)	371 (37.1)	224 (22.4)	99 (9.9)
Ask for help from the teacher in a polite way	578 (57.8)	252 (25.2)	119 (11.9)	51 (5.1)
Self-efficacy				
I'm willing to be open about the work I didn't finish	428 (42.8)	391 (39.1)	124 (12.4)	57 (5.7)
I have the same level of professional experience as other students	426 (42.6)	406 (40.6)	123 (12.3)	45 (4.5)
I'm prepared to assume proper professional responsibilities	541 (54.1)	320 (32)	101 (10.1)	38 (3.8)
I take responsibility for my decisions and actions	636 (63.6)	262 (26.2)	71 (7.1)	31 (3.1)
Attire				
Don the proper attire	550 (55)	284 (28.4)	119 (11.9)	47 (4.7)
Maintain hygiene and grooming	683 (68.3)	204 (20.4)	78 (7.8)	35 (3.5)
Being in college, wear uniform	681 (68.1)	186 (18.6)	84 (8.4)	49 (4.9)
Homework assignment				
I finish my work well and on schedule	598 (59.8)	272 (27.2)	94 (9.4)	36 (3.6)
I am capable of properly allocating my time	568 (56.8)	292 (29.2)	107 (10.7)	33 (3.3)

Table 3: Item wise frequency/percentage distribution of emotional intelligence among undergraduate students (n=1000).

Statements to Answer	Not at all (%)	Rarely (%)	Sometimes (%)	Often (%)	Very often (%)
I can recognize my emotions as I experience them.	232 (23.2)	195 (19.5)	287 (28.7)	147 (14.7)	139 (13.9)
Loose my temper when I feel frustrated.	119 (11.9)	325 (32.5)	311 (31.1)	93 (9.3)	72 (7.2)
People have told me that I am a good listener.	182 (18.2)	180 (18)	308 (30.8)	143 (14.3)	187 (18.7)
I know how to calm myself down when I feel anxious or upset.	196 (19.6)	209 (20.9)	260 (26)	145 (14.5)	190 (19)
Enjoy organizing groups.	194 (19.4)	207 (20.7)	288 (28.8)	164 (16.4)	147 (14.7)
I find it hard to focus on something over the long term.	215 (21.5)	265 (26.5)	312 (31.2)	137 (13.7)	71 (7.1)
I find it difficult to move or when I feel frustrated or unhappy.	218 (21.8)	268 (26.8)	329 (32.9)	105 (10.5)	81 (8.1)
I know my strength and weaknesses.	173 (17.3)	202 (20.2)	235 (23.5)	166 (16.6)	224 (22.4)
I avoid conflict and negotiations.	205 (20.5)	200 (20)	248 (24.8)	166 (16.6)	181 (18.1)
I feel that I don't enjoy my work.	278 (27.8)	268 (26.8)	310 (31)	87 (8.7)	57 (5.7)
I ask people for feedback on what I do well, and how I can improve .	204 (20.4)	236 (23.6)	284 (24.8)	151 (15.1)	125 (12.5)
I set long- term goals , and review my progress regularly.	180 (18)	232 (23.2)	277 (27.7)	180 (18)	131 (13.1)
I find it difficult to read other people's emotions.	233 (23.3)	271 (27.1)	312 (31.2)	118 (11.8)	66 (6.6)
I struggle to build rapport with others.	220 (22)	286 (28.6)	317 (31.7)	98 (9.8)	79 (7.9)
I use active listening skills when people speak to me.	182 (18.2)	199 (19.9)	225 (22.5)	189 (18.9)	205 (20.5)

Table 4: Showing range, mean and standard deviation scores of academic behaviour and emotional intelligence.

Research variables	Range	Obtained range	Mean±SD
Academic behaviour	27-54	27-54	
	55-81	55-81	87.26±13.55
	82-108	82-108	
Emotional intelligence	0-15	15-35	
	16-30	35-55	
	31-45	55-75	48.76±13.99
	46-60	-	
	61-75	-	

Table 5: Relation between emotional intelligence and academic behaviour of undergraduate students.

Relationship	Emotional intelligence r(p)	Academic behaviour r(p)
Academic behaviour	0.097 (0.002)**	-
Emotional intelligence	-	0.097 (0.002)**

**significant

Sociodemographic characteristics

The majority of participants were aged 17-22 (89.1%) and resided in rural areas (60%). Most participants were Hindu (75.6%) and enrolled in nursing courses (42.9%). Over half (55%) belonged to upper-middle-class families (Table 1).

Academic behavior

Scores on the academic behavior questionnaire indicated good to excellent academic behavior (mean = 87.26, SD = 13.55). Over half of the participants reported rarely missing lectures (51.6%) and arriving early for college (52.6%). Similarly, a majority reported always following a vacation schedule (50.7%) and requesting leave appropriately (35.9%). Students also demonstrated good organizational skills, with over half indicating they competently manage tasks and keep study materials organized (54% and 59.3%, respectively) (Table 2).

Emotional intelligence

Scores on the emotional intelligence questionnaire indicated average EI (mean=48.76, SD=13.99). While over a third of participants reported sometimes being good listeners (30.8%) and setting long-term goals

(31.2%), similar proportions indicated difficulty focusing (31.2%) and feeling frustrated (31.1%) (Table 3 and 4).

Relationship between emotional intelligence and academic behavior

A statistically significant positive correlation ($r=0.097$, $p=0.002$) was found between emotional intelligence and academic behavior (Table 5).

These findings suggest a positive association between emotional intelligence and academic behavior among undergraduate students in this sample. However, emotional intelligence scores fell within the average range, indicating potential for improvement.

DISCUSSION

This study investigated the emotional intelligence (EI) and academic behavior of undergraduate students ($n=1000$) in Northern India. Our findings contribute to the growing body of research on the factors influencing academic success. Here, we discuss our key results in the context of existing literature.

Sociodemographic characteristics

The majority of our participants were aged 17-22, aligning with prior research on undergraduate student demographics.⁶ The prevalence of students from rural areas (60%) is noteworthy, considering potential disparities in educational resources compared to urban settings.⁷ Our finding that most participants identified as Hindu (75.6%) reflects the religious makeup of Northern India.⁸ A significant portion enrolling in nursing programs (42.9%) aligns with the increasing demand for healthcare professionals.⁹

Academic behavior

The good to excellent academic behavior scores (mean = 87.26) suggest a strong emphasis on academic achievement among these students. These findings are consistent with studies reporting positive academic behaviors like punctuality and organization as essential for student success.¹⁰

Emotional intelligence

The average emotional intelligence scores (mean = 48.76) suggest there may be room for improvement in this domain. While some participants reported strengths in areas like listening and goal setting, similar proportions indicated challenges with focus and frustration management. These findings are partially congruent with previous research showing a positive association between EI and academic performance, but also highlighting the variability in EI scores among student populations.^{11,12}

Relationship between EI and academic behavior

The statistically significant positive correlation ($r = 0.097$, $p = 0.002$) between EI and academic behavior aligns with prior studies suggesting that emotional intelligence can contribute to academic success.¹³ Students with higher EI may be better equipped to manage stress, navigate interpersonal challenges, and maintain motivation – all factors that can positively influence academic performance.¹⁴

The generalizability of these findings is limited by the cross-sectional design and the focus on a specific geographic region and course of study (nursing). Additionally, the study did not collect data on student academic performance, which could provide valuable insights into the relationship between EI, academic behavior, and overall student success.

CONCLUSION

This descriptive study investigated the emotional intelligence (EI) and academic behavior of undergraduate students ($n=1000$) in Northern India. While a statistically significant positive correlation was found between EI and academic behavior ($r = 0.097$, $p = 0.002$), scores on the emotional intelligence questionnaire indicated room for improvement (mean = 48.76, SD = 13.99). Conversely, academic behavior scores were excellent (mean = 87.26, SD = 13.55). These findings add to the current understanding of factors influencing student success and emphasize the need for a multifaceted approach.

Future research should explore other factors influencing academic behavior and emotional intelligence among undergraduate nursing students. Additionally, investigations into emotional intelligence and academic success across various disciplines would provide valuable insights for educational development.

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