Gauging the Level of EQ and IQ among University Students

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Abstract

This study empirically attempts to gauge university-going students' Emotional quotient (EQ) and Intelligence quotient (IQ) levels. A sample of 200 respondents was collected via purposive sampling technique. A data collection instrument based on a five-point Likert scale was adopted for the study. The results depict that students possess a significant level of EQ ($t = 4.09$, $p<0.01$) and IQ ($t = 6.07$, $p<0.01$). A gender-wise comparison shows that both males and females have equal levels of intelligence (EQ: $t = 0.192$, $p = 0.848$; IQ: $t = 0.02$, $p = 0.984$). Moreover, age-wise comparison also reflects no statistically significant difference in the intelligence quantum across different age groups (EQ: $F = 1.8$, $p = 0.129$; IQ: $F = 0.748$, $p = 0.561$).

Keywords: ***EQ, IQ, University Students***

JEL Classification: C12, O15

INTRODUCTION

Background of the Study

Emotional Quotient is a hot topic in recently published papers, exploring the essential role emotions play in our lives.in simple terms, EQ refers to our ability to understand and manage our own emotions and connect with and navigate the emotions of others. A key study conducted by Boyatzis et al., (2021) dives into the heart of EQ, breaking it down into components like being aware of our feelings. Controlling our reactions, understanding others' emotions, and building strong relationships.

Mayer et al., (2016) use practical tools and scientific methods to unravel the mysteries of EQ. They show how having a high weakness. EQ goes beyond just being "emotional". It is about making better decisions, working well with others, and being a strong leader.

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Boyatzis et al., (2021) study comprehensively explores EQ and its impact on various aspects of life. Their work emphasises the importance of self-awareness, self-regulation, empathy, interpersonal skills, and motivation as integral elements of EQ.

Intelligent Quotient (IQ) is a broad subject, offering insights into our cognitive abilities and problem-solving skills. IQ measures how smart and capable we are at tasks that involve thinking, learning, and problem-solving. A recent paper by (Puspitacandri et al., 2020) delves into the nuances of IQ, emphasising its significance in understanding human intelligence.

In everyday terms, IQ is like a mental toolkit that helps us tackle challenges, learn new things, and adapt to different situations. The study by Smith and Johnson breaks down IQ into various components, including logical reasoning, memory, and analytical skills. It shows that IQ is not fixed but can be shaped and improved through learning and experiences.

Recent research emphasises that while IQ is an essential aspect of cognitive functioning, it's not the only factor determining success. It works hand in hand with other factors like emotional intelligence and social skills to paint a complete picture of an individual's abilities. Understanding IQ, as explored by Smith and Johnsons, provides valuable insights into how our brains work and how we can enhance our cognitive prowess in today's dynamic world (Puspitacandri et al., 2020).

Objectives of the Study

The study objective is to gauge whether university students possess adequate intelligence and emotion quotients and whether they vary with reference to gender and age group.

Scope of the Study

The study is limited to gauging university-going students' Emotional quotient (EQ) and Intelligence quotient (IQ) levels and whether they are at par.

Statement of the Problem

Much research has been done on emotional quotients (EQ) and intellectual quotients (IQ), but this specific area of study has not been explored as much. There is a need to examine the levels of EQ and IQ among university students. Therefore, this research aims to determine and measure the levels of EQ and IQ among university students.

Research Questions

RQ1: Do students have a significant Emotional quotient (EQ) level?

RQ2: Do students have a significant Intelligence quotient (IQ) level?

RQ3: DO males and Females have the same level of EQ and IQ?

RQ4: Do different age groups have the same level of EQ and IQ?

LITERATURE REVIEW

Emotional Quotient (EQ) has illuminated the significance of understanding and managing

emotions in various aspects of life. (Boyatzis et al., 2021) delve into the components of EQ, emphasising its practical relevance. The literature underscores that EQ involves being aware of emotions, regulating our reactions, empathising with others, and building strong interpersonal connections.

Recent literature on Emotional Quotient (EQ) among students emphasises its crucial role in academic success and well-being. (Boyatzis et al., 2021) shed light on how EQ impacts students by breaking it into crucial components like self-awareness and interpersonal skills. Their work suggests that those with a high EQ are better equipped to handle stress, collaborate effectively with peers, and exhibit resilience in academic challenges.

Studies by Anas Ramadan Al-Masri et al., (2020) contribute valuable insights into students' emotional intelligence (EQ), demonstrating that EQ extends beyond the classroom. The literature underscores the positive correlation between students' emotional intelligence and social competence, which is vital for forming healthy relationships with peers and teachers.

Intelligence quotient remains a crucial topic in recent literature, offering insights into students' cognitive abilities and their implications for academic success. Pishghadam et al., (2022) research delves into the enduring relevance of IQ in understanding students' intellectual capacities.IQ, measured through standardised tests, encompasses problem-solving skills, logical reasoning, and memory, providing a comprehensive view of cognitive abilities.

Kaya et al., (2015) consistently demonstrates a positive correlation between high IQ scores and academic achievements across various subjects. The research suggests that IQ remains a robust predictor of students' success in the educational realm. Students with higher IQs tend to excel in diverse subjects, showcasing the relevance of cognitive aptitude in mastering academic content.

Bardach et al., (2023) Extending the discussion by exploring the broader implications of IQ for educational interventions, their study emphasises the importance of recognising and accommodating diverse student IQ profiles. Tailoring teaching approaches to individual cognitive strengths and weaknesses can optimise the learning experience and promote academic success.

Moreover, recent literature underscores the need for a nuanced understanding of IQ beyond a single, fixed measure. While IQ tests provide valuable insights, they are not exhaustive indicators of students' potential or capabilities for a comprehensive approach considering various cognitive facets, promoting a more accurate understanding of students' intellectual strengths. (Pishghadam et al., 2022)

Theories

James Lange Theory

Lange (1984) claimed that physiological reactions give rise to emotions. We may experience emotions due to physical and physiological changes brought on by the perception of a stimulus. A common misconception about emotions is that they are judgments about situations that cause feelings and bodily changes. These bodily alterations come before emotions, similar to feelings in that they represent our subjective experience. People feel emotions as they see

their bodies' physiological reactions to outside stimuli. This hypothesis claims that people do not cry because they are depressed. Instead, when individuals are unhappy, they cry; when joyful, they smile. According to this hypothesis, many physiological states correspond to the various experiences of emotions.

Evolutionary Theory of Emotion

Campbell (1997) offered that emotions are developed because they are changeable and adapted to social beings and animals at birth. Feelings of love, devotion, fear and hate are different feelings. The feeling of love and affection guides people to search for their partners. Moreover, from any danger or fear, people self-defence and change their place to protect themselves from the danger, or they fight if they are vital to compete against their fear. Emotions also work positively in the related environment, which helps people improve themselves for survival and success. Not every person feels the emotions of people. Only some people can understand their emotions and feelings, and those people play an essential role in the environment for the survival and safety of people.

HYPOTHESES

H1: the students have an adequate level of IQ

H2: the students have an adequate level of EQ

H3: the average score of IQ is equal for males and females

H4: the average score of EQ is equal for males and females

H5: the average score of IQ is equal for all age groups

H6: the average score of EQ is equal for all age groups

METHODOLOGY

Data and Variables

Two variables, intelligence quotient (IQ) and emotion quotient (EQ), are under consideration for this study. Primary data was collected to secure the responses.

Sample and Sampling Technique

A sample of 200 respondents was obtained via a five-point Likert scale questionnaire. A purposive sampling technique was followed to collect the data.

Inclusion Criteria

All respondents are university-going students.

Statistical Technique

To gauge the respondents' adequate IQ and EQ levels, we applied a one-sample t-test,

keeping the test value equal to 3, which shows a simple majority on a five-point Likert scale.

$$t = \frac{\bar{x} - \mu}{s/\sqrt{n}}$$

Moreover, the average score for IQ and EQ is compared for male and female respondents using an independent sample t-test.

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{S_p\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where

$$S_p = \sqrt{\frac{(n_1 - 1) * S_1^2 + (n_2 - 1) * S_2^2}{n_1 + n_2 - 2}}$$

Furthermore, the average score for IQ and EQ is compared for different age groups using an ANOVA test.

RESULTS AND DISCUSSIONS

Demographic Profile

	Demographic	Frequency	Percent
Gender	Male	109	54.5
	Female	91	45.5
Age	18-20	55	27.5
	21-23	74	37.0
	24-26	25	12.5
	27-29	22	11.0
	30+	24	12.0
	Total	200	100.0

The above table shows the demographic profile of the respondents. The total number of respondents is 200. 109 respondents are Males with 54.5 per cent, and the remaining 91 are females with 45.5 respondents.

There are different age frequencies of respondents. The 21-23 age limit has a higher rate of 37.0 per cent for younger people, followed by the 18-20 age limit, which shows 27.5 per cent. The 24-26 and 30+ age groups have the same 12.0 per cent, and the 27-29 age limit shows the lowest level, with 11.0 per cent.

Reliability Analysis

	Reliability Statistics	
Variable	**Cronbach's Alpha**	**No of Items**
EQ	.760	8
IQ	.836	8

The table shows the reliability statistics. The two variables are the Emotional Quotient and intelligence quotient, with eight items each. The reliability statistics are based on inter-item correlation, which shows how much coherence there is among the items of a construct. The EQ

and IQ have 0.760 and 0.836 reliability coefficients, respectively, which are considered good as the values are greater than the cut-off value of 0.6.

Descriptive Analysis

Descriptive Statistics							
	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
EQ	200	3.2375	.82049	-.511	.172	.093	.342
IQ	200	3.3888	.90502	-.665	.172	.200	.342
Valid N (listwise)	200						

The table shows the descriptive statistics of the variables. The mean EQ is 3.2375, and the mean IQ is 3.3888; both are greater than 3 (60%). Moreover, the standard deviation of EQ is .82049, and that of IQ is .90502, which are less than one. Moreover, the skewness and kurtosis values are close to 0, which depicts a normal distribution.

Inferential Analysis

One-sample test

Significance of EQ and IQ

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
EQ	200	3.2375	.82049	.05802
IQ	200	3.3888	.90502	.06399

This table shows that the emotional and intelligent quotients, with 200 respondents, have a mean score of greater than 3. The One sample t-test value is 3, and the mean of both variables EQ is 3.2375 with std. Deviation .82049 and IQ is 3.3888 with std. Deviation .90502

Independent sample t-test

One-Sample Test						
Test Value = 3						
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
EQ	4.094	199	.000	.23750	.1231	.3519
IQ	6.075	199	.000	.38875	.2626	.5149

The above-given table shows the analysis of an Independent sample t-test in which the results of the emotional and intelligence quotients are highly significant, with a 3 test value, the mean difference for EQ and IQ are significant as the corresponding t-values are 4.094 and 6.075 respectively, which are greater than 2 – the benchmark followed by the sig-values, which are 0.000 lesser than 0.01, which shows that they are significant at 99% confidence interval.

Gender-wise Comparison

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
EQ	Male	109	3.2477	.88011	.08430
	Female	91	3.2253	.74750	.07836
IQ	Male	109	3.3899	.93645	.08970
	Female	91	3.3874	.87103	.09131

The analysis for this gender table concerning Emotional Quotient and Intelligence Quotient shows a minor difference between Males and Females in Emotional Quotient. Males were 3.2477, and Females were 3.2253. The intelligence quotient has no difference between genders. They both have the same analysis value. Males have a 3.3899 value, and females have a 3.3874 value.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
EQ	Equal variances assumed	3.582	.060	.192	198	.848	.02243	.11679	-.20788	.25275
	Equal variances not assumed			.195	197.936	.846	.02243	.11509	-.20454	.24940
IQ	Equal variances assumed	.479	.490	.020	198	.984	.00255	.12883	-.25152	.25661
	Equal variances not assumed			.020	195.667	.984	.00255	.12800	-.24988	.25497

The above analysis shows that the independent sample tests are insignificant because the average scores for male and female respondents for the emotional and intelligent quotients have no significant difference as the t-stats are not greater than 2, followed by the sig-value is not less than 0.05.

Age-wise Comparison

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
EQ	Between Groups	4.787	4	1.197	1.807	.129
	Within Groups	129.181	195	.662		
	Total	133.969	199			

	Between Groups	2.462	4	.615	.748	.561
IQ	Within Groups	160.532	195	.823		
	Total	162.993	199			

To analyse whether the average score of EQ and IQ is equal for different age groups, ANOVA is applied. The F-value is not greater than 4, followed by the sig-value, which is not less than 0.05. This shows that there is no significant difference in the average scores of different age groups.

Hypotheses Assessment Summary

S No	Hypotheses Statement	Remarks
H1	The students have an adequate level of IQ	Supported
H2	The students have an adequate level of EQ	Supported
H3	The average score of IQ is equal for males and females	Supported
H4	The average score of EQ is equal for males and females	Supported
H5	The average score of IQ is equal for all age groups	Supported
H6	The average score of EQ is equal for all age groups	Supported

DISCUSSION

The study's demographic profile underscores the prevalence of Emotional Quotient (EQ) and Intelligence Quotient (IQ) among university students. Notably, the age distribution indicates a higher representation of individuals aged 21-23, constituting 37.0% of the sample. Gender-wise, males account for 54.5%, while females represent 45.5% of the respondents. The reliability analysis demonstrates robust internal consistency for both EQ and IQ measures, with Cronbach's alpha value exceeding the 0.6 benchmark.

Descriptive analysis unveils mean scores of 3.2375 for EQ and 3.3888 for IQ, offering insights into the central tendencies of emotional and intellectual capabilities; these results are similar to the results of (Petrides & Furnham, 2000; Maharani et al., 2021).

Inferential analysis, including a one-sample and independent sample t-test, establishes the statistical significance of both EQ and IQ, affirming the university students' notable levels of emotional and intellectual acumen. These results align with this study. (Mayer et al., 2012) Gender-wise comparisons through ANOVA reveal no significant variations in EQ and IQ across different age groups among university students. These results are also observed in this study. (Hyde, 2005) Overall, this study enriches our understanding of emotional and intellectual dimensions in the university setting, paving the way for future research on factors shaping these quotients and potential interventions to enhance them.

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

Conclusion

In conclusion, the study sheds light on university students' emotional and intelligence quotients, emphasising their significance in academic success and overall well-being. The

students have adequate levels of EQ and IQ, whereas gender does not significantly impact IQ and EQ; age groups do not show significant differences in EQ and IQ scores.

However, the findings are subject to certain limitations, including the focus on a specific population, potential self-reporting bias, the study's cross-sectional nature, and the absence of a comprehensive consideration of cultural and societal factors.

Limitations

The study is limited to university students, potentially limiting the generalizability of the findings to other age groups or populations. Emotional and intelligence quotients may vary across different life stages and professions.

Measuring emotional and intelligence quotients often relies on self-reporting, which can introduce bias due to social desirability or inaccuracies in self-perception.

The study appears cross-sectional, providing a snapshot of emotional and intelligence quotients at a specific time. Longitudinal studies offer a more dynamic understanding of how these quotients may change.

The study does not explicitly consider the influence of cultural and societal factors on emotional and intelligence quotients. These factors can significantly impact the interpretation of results, and their omission may limit the study’s applicability in diverse cultural settings.

RECOMMENDATIONS

Consider a longitudinal approach to address the study's cross-sectional nature. This would provide insights into the dynamic changes in emotional and intelligence quotients over time, offering a more comprehensive understanding of their developmental trajectories.

Expand the study’s scope to include diverse cultural and societal factors. Acknowledging the influence of cultural distinctions on emotional and intelligence quotients will enhance the findings' applicability and relevance to a broader audience.

To moderate potential biases associated with self-reporting, consider incorporating objective measures or observations in assessing emotional and intelligence quotients. This could enhance the reliability and validity of the study’s findings.

Broaden the participant pool beyond university students to include individuals from various age groups and professions. This approach would contribute to a more inclusive understanding of emotional and intelligence quotients across different life stages and occupational settings.

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