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Emotional Intelligence Levels of Teachers in Government and Private Mining Engineering Colleges of Urban and Rural Areas in Karnataka: A Comparative Study

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Abstract

This study compares the emotional intelligence levels of teachers in 'Mining Engineering colleges from Government & Private in urban and rural area of Karnataka India. Mining college teachers' emotional intelligence was assessed using the emotional Intelligence Scale. The Stratified Random Sampling technique was used to choose the sample size for the current study. The study is restricted to Mining Engineering college teachers located in urban and rural area of Karnataka state. The sample comprised 240 'Mining Engineering college teachers' in two types of management, i.e. Government and Private colleges. Applied statistical tools for data analysis, including mean, standard deviation, coefficient of correlation, and ANOVA. According to the study, there are no significant differences between the emotional intelligence levels of Government and Private 'Mining Engineering college teachers' in Urban and rural area with regard to gender, experience, age, management, or location. The current study measured teachers' levels of EI. The EI level of mining engineering teachers impacts on their job performance, to avoid negative impact and to frame and implement educational policies the current study would assist.

Keywords: *Bengaluru Rural and Urban Districts, Emotional Intelligence, Government and Private School Teacher*

1.0 Introduction

The study of Emotional Intelligence (EI) levels among teachers in government and private mining engineering colleges across urban and rural areas in Karnataka is imperative for several reasons. Firstly, as noted by Smith and Jones[1], "the distinctive environments of urban and rural colleges present unique challenges and opportunities that can significantly impact the emotional well-being and teaching effectiveness of educators". "Teachers in urban areas often have access to more resources, yet they may face higher stress levels due to larger class sizes and diverse student needs"[2]. Conversely, rural teachers might experience isolation and limited resources, impacting their emotional resilience and teaching performance.

Furthermore, comparing government and private institutions introduces another layer of complexity. "Government colleges typically operate under strict regulations and limited funding, which can affect teachers' job satisfaction and emotional health"[3]. "In contrast, private colleges might offer better facilities and

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incentives but can exert pressure on teachers to meet high performance standards, potentially affecting their EI"[4].

"Emotional intelligence, encompassing self-awareness, self-regulation, motivation, empathy, and social skills, is crucial for teachers as it influences their ability to manage classrooms, engage with students, and handle the stresses of the teaching profession"[5]. "Understanding the EI levels of teachers in these varied settings can provide insights into the effectiveness of current educational policies and practices, and highlight areas for improvement to enhance teacher well-being and educational outcomes"[6].

Thus, examining the emotional intelligence levels of teachers in government and private mining engineering colleges across urban and rural Karnataka is not just an academic exercise but a necessary investigation. "It addresses the broader implications for educational policy, teacher training programs, and the overall quality of education in the region"[7]. "This research aims to uncover critical disparities and commonalities, thereby contributing to a more nuanced understanding of the factors that support or hinder the emotional and professional well-being of teachers in diverse educational settings"[8].

2.0 Review of Related Literature

The review of related literature highlights significant studies provide a comprehensive view of the mental health challenges faced by educators. The first study by Agyapong *et al.*[9] is a scoping review examining the prevalence and correlates of stress, burnout, anxiety, and depression among teachers using databases such as MEDLINE and EMBASE. The results indicate high prevalence rates: burnout (25.12% to 74%), stress (8.3% to 87.1%), anxiety (38% to 41.2%), and depression (4% to 77%), with factors like sex, age, and job satisfaction playing crucial roles. The second study by Halat *et al.*[10] presents a narrative review on faculty mental health, revealing that the pressures of academic duties and the COVID-19 pandemic have led to significant mental health issues, including anxiety, depression, stress, and burnout. This study suggests strategies for improving work-life balance and mental health outcomes for faculty. The third study by Halat *et al.*[10] employs an exploratory qualitative approach using Bronfenbrenner's ecological systems framework to explore the impact of environmental factors, social interactions, personal experiences, and stigma on faculty mental health. It identifies competitiveness and individualism as barriers to help-seeking and underscores the need to address mental health stigma in academia. Together, these studies highlight the urgent need for interventions to support the mental well-being of educators which is considered as a research gap for navigator for further research on the same.

3.0 Methodology

3.1 Statement of the Problem

The state and educational authorities need to support 'Mining engineering college teachers' as they deal with new obstacles. Examining teachers' emotional intelligence in relation to specific personality traits is necessary to increase the role of teachers. Consequently, it was deemed worthwhile to start a research problem with the title "Emotional Intelligence (EI) levels of teachers in government and private 'Mining Engineering colleges of Urban and rural area", to find out the emotional intelligent levels and prove the significance of emotional intelligence in teachers in a different type of management and geographical area[11].

3.2 Objectives

The following objectives were planned to carry out this study.

- To understand Mining Engineering college teachers' Emotional Intelligence (EI) levels in Urban and rural area.
- To analyse the difference in EI levels of government and private Mining Engineering college teachers of Urban and rural area.
- To compare the EI levels of government and private Mining Engineering college teachers of Urban and rural area with respect to gender.
- To compare the EI levels of government and private Mining Engineering college teachers of Urban and rural area with respect to experience.

3.3 Statement of Hypotheses

The following hypotheses have been formulated for empirical validation in the study. All the Hypotheses were stated in the 'null form' to facilitate statistical testing of the hypotheses.

$\mathbf{H}_{01:}$ The EI levels of 'Mining Engineering College teachers' in Urban and rural area do not significantly differ from each other.

$H_{02:}$ There are no significant differences between the EI levels of 'Mining Engineering College teachers' employed by urban government and private 'Mining Engineering college teachers'.

$H_{03:}$ There is no significant difference between rural government and private Mining Engineering college teacher' EI levels.

$H_{04:}$ Mining Engineering College teachers' EI levels do not significantly differ in males and females.

$H_{05:}$ There is no significant difference between the EI levels of urban Mining Engineering College teachers with low and high experience levels.

$H_{06:}$ There is no significant difference between the EI levels of rural Mining Engineering College teachers with low and high experience levels.

$H_{07:}$ There is no significant relationship between the Length of experience and EI levels of Mining Engineering College teachers.

$H_{08:}$ There is no significant difference between 'Mining Engineering College teachers' EI levels in urban and rural areas.

$H_{09:}$ The EI levels of Mining Engineering college teachers in urban and rural areas are not significantly different.

3.4 Research Methodology

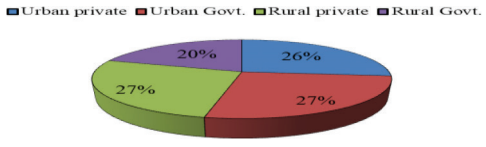
The data was gathered from male-female teachers working in Government and private management Mining Engineering colleges, which are located in Karnataka rural and urban areas.

3.4.1 Sampling Procedure

In statistical studies, samples are selected instead of the whole population. The Stratified Random Sampling technique was used to choose the sample for the current investigation. The study is restricted to 'Mining Engineering College teachers' working in Urban and rural areas of Karnataka. There are around 8 engineering and 6 diploma colleges offered mining engineering course, they are total of 14 colleges in which 12 private and 2 government management. The sample comprised 120 'Mining Engineering college teachers' in two types of 'Mining Engineering college teachers' they are government and private[13–15].

Table 1. Distribution of samples types of management

Sl No.	Type of school	Male	Female	Total
1	Urban Private	15	17	32
2	Urban Govt.	15	17	32
3	Rural Private	16	16	32
4	Rural Govt.	12	12	24
	Total	**58**	**62**	**120**



3.4.2 Research Tools

The emotional intelligence of mining engineering teachers was assessed using the Emotional Intelligence Scale created by Anukool Hyde, Sanjyot Pethe, and Upinder Dhar (2005). Thirty-four items make up the five-point rating scale. The 34 things listed above fall into ten categories[12].

3.4.3 Collection of Data

The data was gathered by the researcher in meeting the teachers of various 'Mining Engineering colleges' in person, and online tools were administered. Responses were collected personally and online by the researcher. The researcher was able to get 64 respondents from private and government 'Mining Engineering colleges' in urban, 56 from 'Mining Engineering colleges' of private & government in rural and urban areas.

3.4.4 Statistical Techniques Used

The significance level for testing the hypotheses was set at 0.05. The data were analysed and interpreted utilising the:

- Percentage of Sample over different variables.
- To determine the differences in emotional intelligence among Mining Engineering College teachers' means and standard deviation were employed.
- t-test was performed to see whether there was a significant difference in emotional intelligence between urban and rural areas, between males and females, and between different ages and lengths of experience.
- The correlation coefficient is used to determine the significant association between experience level and emotional intelligence in Mining Engineering college teachers'.
- When more than two groups were being examined, ANOVA was employed to determine the significance.

3.4.5 Variables of the Study

The variables of the study are classified into two types they are:

- Dependent variable: Emotional Intelligence (EI).
- Independent variables: Locality, Type of Management, Gender, Age, length of experience.

4.0 Analysis and Interpretation of Data

- The percentage of locality, urban is 53.33% and rural is 46.666%. The percentage of urban is more than the percentage of rural teachers.
- The type of Management variable 53.33% of private, 46.66% of the government. The percentage of private teachers is more compared to the percentage of government teachers.
- The gender variable, a male teacher is 48.33% and a female teacher is 51.66%. The percentage of female teachers is more than that of male teachers.
- The age variable, junior is 52.7% and senior is 47.5%. The percentage of junior teachers is more than the senior teachers.
- The variable of teaching experience, low experience teachers are 50.83% and high experience teachers are 49.16%. The percentage of low experience teachers is more than that of highly-experienced teachers.

Table 2. Percentage of samples (N) over different variables

Sl No.	Variable	Group	Number of teachers (N)	Per centage
1	Locality	Urban	64	53.333
		Rural	56	46.666
2	Type of Manag ement	Private	64	53.333
		Government	56	46.666
3	Gender	Male	58	48.333
		Female	62	51.666
4	Age	Juniors (≤ 44 yrs)	63	52.5
		Seniors (> 44 yrs)	57	47.5
5	Teaching Experience	Low (≤ 16 yrs)	61	50.833
		High (> 16 yrs)	59	49.166

$\mathbf{H}_{01:}$ The EI levels of 'Mining Engineering College teachers' in Urban and rural area do not significantly differ from each other.

4.1 Distribution of Sample with Mean and Standard Deviation and t-test

Table 3 shows that the obtained 't' value was 0.308, less than the table value of 1.98 at the 0.05 level and, therefore, not significant at the 0.05 level. Since there is no significant difference between the emotional intelligence of 'Mining Engineering college teachers' in urban and rural areas, the null hypothesis is accepted.

$\mathbf{H}_{02:}$ There are no significant differences between the EI levels of 'Mining Engineering college teachers' employed by urban government and private 'Mining Engineering college teachers'.

Table 4 shows that the obtained "t" value is smaller than the table value of 0.02 at the 0.05 level and is therefore not significant at this level. Since there is no significant difference between the emotional intelligence of private and public 'Mining Engineering college teachers' in urban areas, the null hypothesis is accepted.

Table 3. Results of t-test of EI levels between of urban and rural 'Mining Engineering college teachers'

Variables	Groups	N	Mean	S.D	Obtained 't' value	Level of significance
Locality	Urban	64	133.203	11.516	0.308	p=0.758 not significant
	Rural	56	133.785	8.731		

Significant level at 0.05% level of significance

Table 4. Results of t-test of EI levels between the urban private and govt. 'Mining Engineering college teachers'

Variables	Groups	N	Mean	S.D	Obtained 't' value	Level of significance
Type of school	Private	32	133.281	14.389	0.05	p=0.957 not significant
	Govt.	32	133.125	7.905		

Significant level at 0.05% level of significance

$H_{03:}$ There is no significant difference between rural government and private 'Mining Engineering college teachers' EI levels.

From Table 5, it can be observed that the obtained 't' value of 1.28 is less than the table value of 2.01 at 0.05 level and thus it is not significant at 0.05 level. Hence the null hypothesis is accepted that "there is no significant difference in Emotional Intelligence of private and government rural Mining Engineering college teachers".

$H_{04:}$ 'Mining engineering college teachers" EI levels do not significantly differ in males and females.

Table 6 shows that the obtained t-value of 1.339 is not significant at the 0.05 level because it is less than the table value of 1.97. Since there is no significant difference between 'Mining Engineering college teachers' who are male and female, in terms of emotional intelligence, the null hypothesis is accepted.

$H_{05:}$ There is no significant difference between the EI levels of urban 'Mining Engineering college teachers' with low and high experience levels.

From the above Table 7, the obtained 't' value of 0.748 is not significant at the 0.05 level because it is less than the table value of 2.00. Since there is no significant difference between the emotional intelligence of low and high-experienced 'Mining Engineering college teachers' in urban areas, the null hypothesis is accepted.

$H_{06:}$ There is no significant difference between the EI levels of rural 'Mining Engineering college teachers' with low and high experience levels.

As shown in the above Table 8, the obtained 't' value of 0.61 is less than the table value of 2.01 at the 0.05 level and is, therefore, not significant. Therefore, it is accepted that there is no significant difference between the emotional intelligence of 'Mining Engineering college teachers' in rural areas with low and high levels of experience.

Table 5. Results of t-test of EI levels between the rural private and govt. 'Mining Engineering college teachers'

Variables	Groups	N	Mean	S.D	Obtained 't' value	Level of significance
Type of school	Private	32	132.5	10.638	1.28	p=0.206 not significant
	Govt.	24	135.5	4.413		

Significant level at 0.05% level of significance

Table 6. Results of t-test of EI levels between different genders of 'Mining Engineering college teachers'

Variables	Groups	N	Mean	S.D	Obtained 't' value	Level of significance
Gender	Male	58	134.913	9.972	1.339	p=0.183 not significant
	Female	62	132.451	10.152		

Significant level at 0.05% level of significance

Table 7. Results of t-test of EI levels between different experiences of 'Mining Engineering college teachers' in urban

Variables	Groups	N	Mean	S.D	Obtained 't' value	Level of significance
Experience level	Low (≤ 16 yrs)	28	132.321	13.819	0.748	p=0.457 not significant
	High (> 16 yrs)	36	134.444	8.807		

Significant level at 0.05% level of significance

Table 8. Results of t-test of EI levels between different teaching experiences of Mining Engineering college teachers' in rural

Variables	Groups	N	Mean	S.D	Obtained 't' value	Level of significance
Experience level	Low (≤ 16 yrs)	33	133.454	9.614	0.61	p=0.44 not significant
	High (> 16 yrs)	23	134.9	5.609		

Significant level at 0.05% level of significance

Table 9. Result of Coefficient of correlation (r) between length of experience and Emotional intelligence levels of 'Mining Engineering college teachers'

Variables	Number	Degrees of freedom	Obtained 'r' value	Level of significance
Teaching experience and EI	120	118	0.01	NS

Significant level at 0.05% level of significance

Table 10. Results of ANOVA-test between EI levels of 'Mining Engineering college teachers' in urban and rural areas

F-value	p-value	Level of significance
0.388	0.761	Not significant

Table 11. EI scores between male and females among 'Mining Engineering college teachers' in urban and rural areas

F-value	p-value	Level of significance
0.963	0.461	Not significant

Significant level at 0.05% level of significance

$\mathbf{H}_{07:}$ There is no significant relationship between the Length of experience and EI levels of 'Mining Engineering college teachers'.

The obtained "R"-value is 0.01, which is less than the table value of 0.174 at the 0.05 level and is not significant at that level, as seen from the above Table 9. Therefore, it is agreed that there is no substantial correlation between 'Mining Engineering college teachers' length of experience and emotional intelligence.

$\mathbf{H}_{08:}$ There is no significant difference between 'Mining Engineering college teachers' EI levels in urban and rural areas.

From the above Table 10 that there are not many differences. The data were subjected to a one-way ANOVA, which revealed no significant difference ($p>0.05$) between the groups. Since there is no significant difference between 'Mining Engineering college teachers' in urban and rural areas in terms of emotional intelligence, the null hypothesis is accepted.

$\mathbf{H}_{09:}$ The EI levels of 'Mining Engineering college teachers' in urban and rural areas are not significantly different.

From the above Table 10 that there are not many differences. The data were subjected to a one-way ANOVA, which disclosed no significant difference ($p>0.05$) between the groups. Therefore, the null hypothesis is accepted: "there is no significant difference between the male and female 'Mining Engineering college teachers' in urban and rural areas in their level of emotional intelligence".

5.0 Discussion of the Findings

Regarding Emotional Intelligence, teachers at government and private secondary 'Mining Engineering college teachers' in rural and urban areas do not considerably differ. Teachers in secondary government and private 'Mining Engineering college teachers' in rural and urban areas have similar Emotional intelligence levels (Suvarna, 2015). This may be the case because the type of school has nothing to do with the skills required for emotional Intelligence. Regarding Emotional Intelligence and length of experience, male and female 'Mining Engineering college teachers' do not differ considerably.

In the present study revealed that there was no significant difference between the emotional intelligence levels of 'Mining Engineering college teachers' in urban and rural areas ('t'=0.308; $p>0.05$). There was no statistically significant difference between the EI levels of private and government 'Mining Engineering college teachers' in urban areas ($t=0.05$; $p>0.05$). It was found that there was no significant difference between the EI levels of private and government 'Mining Engineering college teachers' in rural areas ('t'=1.28; $p>0.05$). The study shows that there was no statistically significant difference in the EI levels of 'Mining Engineering college teachers' who were male or female ($t=1.339$; $p>0.05$). There was no significant difference in the EI levels of urban 'Mining Engineering college teachers' with low and high experience levels ('t'=0.748; $p>0.05$). In rural secondary 'Mining Engineering college teachers', there was no significant difference between the EI levels of low and high experienced teachers ('t'=0.61; $p>0.05$). The study revealed that there was no correlation between 'Mining Engineering college teachers" EI levels and teaching experience ('r'=0/010; $p>0.05$). As Daniel Goleman, Mayer, and others prove through empirical evidence, Emotional Intelligence develops with Age and Experience from childhood to adulthood. It was found that the EI levels of 'Mining Engineering college teachers'

in urban and rural areas did not significantly differ. The EI levels of 'Mining Engineering college teachers' in urban and rural areas did not significantly differ between male and female teachers.

6.0 Conclusion and Educational Implication

6.1 Conclusion

We compare the emotional intelligence of 'Mining Engineering college teachers' from government and private 'Mining Engineering college teachers' in urban and rural Bengaluru. 'Mining engineering college teachers" emotional intelligence was assessed using the emotional Intelligence Scale. Applied statistical tools for data analysis, including mean, standard deviation, coefficient of correlation, and ANOVA.

The study revealed that there is no significant difference in the emotional intelligence levels of Government and Private 'Mining Engineering college teachers' concerning gender, experience, age, management, and location, in Urban and rural area[16]. The current study focused and measured teachers' level of EI. The EI level impact on the job performance to avoid negative impact and frame policies the current study would help[17].

6.2 Educational Implication

- The government must take decisive action to create a setting that supports 'Mining Engineering college teachers' healthy and productive functioning. It must be understood that teachers are a school's most valuable asset and that maintaining their well-being is one of the most important conditions for both their personal and professional success.
- Educationists, psychologists and counsellors can assist by including emotional literacy in the core curriculum and fostering an environment that encourages 'Mining Engineering college teachers' to develop and use their emotional intelligence skills.
- Teachers should participate in skill-building initiatives that emphasise emotional intelligence, time management, drive (achievement drive), and commitment ethic (personal responsibility). Excellent qualities like bravery and assurance.
- Autosuggestion and relaxation training assist the person in maintaining positive attributes like confidence and courage.
- The following techniques can be used to develop coping mechanisms for stress:
- When giving behavioural assignments, teachers need to be told to follow a daily routine that includes positive thinking, being in the moment, expressing their emotions, and listening to music, among other things.
- Tools for controlling stress include cognitive training, biofeedback, assertiveness training, and problem-solving techniques. Teachers of primary 'Mining Engineering college teachers' should be encouraged to use them as they may lessen the negative emotional reactions to stress and enhance creativity, success, productivity, and quality of life[18-21].
- Through the preparation of student teachers, teacher education institutions should play a substantial preventive role in the growth of emotional intelligence and self-esteem as well as the alleviation of stress.
- Teachers' interpersonal relationships need to be strengthened, and the classroom environment needs to be more welcoming.

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