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Emotional Intelligence in Technical and Non-technical Employees

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Abstract- This study was conducted to investigate the difference of emotional intelligence among technical and non-technical employees. The main purpose of this research is to increase knowledge of the relationship between emotional intelligence and employees, and highlight the need for psychosocial support for technical and non-technical employees. A total of 120 samples of technical and non-technical employees at different company, were taken from Bhavnagar city in Gujarat. Their samples were taken along with the data collected with the help of 'Emotional intelligence scale this scale was constructed by Anukool Hyde, Sanjyot Pethe & Upinder Dhar (2001). The data was used to obtain the emotional intelligence measurement of the subjects. The collected data was statistically analyzed with the help of ANOVA and LSD. The results show that there is significant difference in Emotional intelligence between technical and non-technical employees. (F=7.68). There is significant difference in Emotional intelligence between male and female employees. (F=4.57). There is significant difference in Emotional intelligence between type of employees and gender. (F=11.69). The findings show that all hypotheses rejected. According to the findings, non-technical employees have better Emotional intelligence than technical employees. Emotional intelligence of female employees is found to be better as compared to male employees. Combined effect of type of employees and gender on emotional intelligence showed a significant difference.

Key Words: Emotional intelligence, Employees, Technical, Non-Technical, Gender.

I. INTRODUCTION

Emotional Intelligence (EI) has emerged as a critical factor influencing individual performance, workplace relationships, and organizational success in today's dynamic professional environment. Beyond technical knowledge and job-specific skills, employees are increasingly required to understand, manage, and effectively express their emotions, as well as recognize and respond to the emotions of others. Emotional Intelligence encompasses key competencies such as self-awareness, self-regulation, motivation, empathy, and social skills, all of which play a vital role in teamwork, leadership, decision-making, and stress management.

In modern organizations, both technical and non-technical employees contribute uniquely to achieving organizational goals. Technical employees often focus on specialized skills, problem-solving, and analytical tasks, while non-technical employees are more involved in communication, coordination, customer interaction, and managerial responsibilities. Despite these differences in job roles, Emotional Intelligence remains equally important for both groups, as it enhances collaboration, adaptability, and overall work effectiveness. Understanding Emotional Intelligence in technical and non-technical employees helps organizations identify strengths, address gaps, and design interventions that promote a balanced, emotionally competent workforce capable of meeting complex professional challenges.

A technical employee is any employee engaged in work requiring knowledge and training in a specialized, complex procedure or operation as opposed to routine mental, manual, mechanical, or physical work. Technical jobs require specialized knowledge and skills in a particular area of technology. These jobs often involve coding, tools, engineering, or other technical tasks. Some examples of technical jobs include Software Engineer, Application Development, Web Developer, Data Scientist, Machine Learning Engineer, and Cyber security Engineer, Information Security Analyst, Computer Systems Analyst, Sales Engineer, Computer Research Scientist, Network and Systems Administrator.

Non-Technical Employees means employees who are not Technical Employees. Non-technical jobs do

not require specialized technical skills. These jobs often involve customer service, marketing, sales. Some examples of technical tech jobs include Customer Service Representative, Teachers, Social worker, Marketing Manager, Management Consultant, Investment Banker, Content Writer, Management Consultant, Business Analyst, Social Media Manager, Business Development Manager, Sales Representative, and Product Manager.

Emotional Intelligence (EI) refers to an individual's ability to perceive, understand, manage, and effectively utilize emotions in oneself and in others. In the context of psychological and organizational research, Emotional Intelligence is considered a multidimensional construct that integrates emotional awareness with cognitive processes to guide thinking, behavior, and interpersonal interactions. Unlike traditional intelligence, which emphasizes logical reasoning and technical abilities, Emotional Intelligence focuses on emotional competence and social effectiveness.

Researchers commonly define Emotional Intelligence as comprising key components such as self-awareness (recognizing one's own emotions), self-regulation (controlling and managing emotional responses), motivation (using emotions to achieve goals), empathy (understanding others' emotions), and social skills (managing relationships constructively). These components enable individuals to cope with stress, communicate effectively, resolve conflicts, and adapt to changing work environments. In organizational and workplace research, Emotional Intelligence is viewed as a significant predictor of job performance, leadership effectiveness, job satisfaction, and overall well-being. Employees with higher Emotional Intelligence are better equipped to handle interpersonal demands, collaborate within teams, and maintain emotional balance under pressure. Therefore, Emotional Intelligence is increasingly recognized as an essential psychological attribute that complements technical and cognitive skills, contributing to both individual and organizational success.

According to Daniel Goleman (1995) "Emotional intelligence refers to the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions effectively in ourselves and in our relationships." According to Mayer, Salovey & Caruso (2000) "Emotional intelligence is the ability to perceive emotions, integrate emotion into thought, understand emotions, and manage them."

Gupta, Raychaudhri & Haldar (2017). Conducted by study of Effect of Emotional Intelligence on Job Performance of IT Employees. The study showed significant gender differences in EI and job performance: female employees scored higher on emotional intelligence and performed better than male counterparts in job roles.

Farah Fida, Akhter & Bukhari (2025). Conducted by study of Role of Emotional Intelligence in Genders' Career Advancement. The results of this study show that male faculty had higher emotional Intelligence than females.

Nitima, Katoch & Pathania (2024). A Comparative Study of Assessment of Level of Emotional Intelligence and Gender Differences among Youth. The results of this study show that boys scored higher than girls in managing emotions/empathy dimensions, though both had average levels of EI overall.

Dhani & Sharma (2017). A Comparative Study of Female IT employees scored higher in emotional intelligence than male employees, and females demonstrated better job performance relative to males.

II. OBJECTIVES

The present study was, hence, undertaken with the following objectives.

1) To study of emotional intelligence among technical and non-technical employees.
2) To study of emotional intelligence among male and female employees.

III. HYPOTHESIS

To related objectives of this study, null hypothesis were as under:

1) There is no significant difference in emotional intelligence between technical and non-technical employees.
2) There is no significant difference in emotional intelligence between male and female employees.
3) There is no significant difference in emotional intelligence between type of employees and gender.

IV. METHODOLOGY

Participants

Total participants of 120 technical and non-technical employees at different company. Were randomly selected from Bhavnagar city in Gujarat. The care was taken that the socio-economic levels of all subjects remain almost the same. The average age of participants was 18-40 years.

Table No. – 1 A Table of Sample Distribution

Independent Variable	Technical	Non-technical	Total
Male	30	30	60
Female	30	30	60
Total	60	60	120

V. DESIGN

The experimental design for this study was 2 x 2 factorial designs. The first independent variable was Type of Employees (Technical & Non-technical). The second independent variable was use of Gender (Male & Female). The dependent variable was emotional intelligence score.

VI. MEASURING INSTRUMENTS

For collecting the pertinent data, the following measuring instruments were used.

(a) Personal Information Schedule

The main purpose of this schedule is to collect certain pertinent data regarding the variables of the study, the various information such as, gender, age, type of employees, work hours, work experience are collected through this schedule.

(c) Emotional intelligence Scale (EIS)

The scale was developed by Anukool Hyde, Sanjyot Pethe & Upinder Dhar (2001). To measure the Emotional intelligence. Here is the information about the scale. This scale divided in ten important areas of Emotional intelligence in this scale 34 questions. Each question has five options. It is sequence in this Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree to get target group has to choose any one option after data collection. It is analyzed and finds the solution. The reliability of Emotional intelligence scale by Split-half method is r = 0.88. The Emotional Intelligence Scale demonstrates strong validity: Validity evidence includes content validity ensured through expert evaluation, construct validity established through correlations with related psychological constructs, and criterion-related validity through associations with adjustment, personality traits, and job performance.

VII. PROCEDURE

A very smooth, cooperative and fresh environment was created for collecting the data, the investigator approached individually to all participants. The 'Emotional intelligence scale' was given to the participants when participants fill up the scale, these were collected. The scoring was done according to the manual.

The Emotional intelligence scale has ten areas (1) Self-Awareness (2) Empathy (3) Self-Motivation (4) Emotional Stability (5) Managing Relations (6) Integrity (7) Self-Development (8) Value Orientation (9) Commitment and (10) Altruistic Behavior. To ask him to tick mark (✓) before the question if they agree with this emotional intelligence scale is to measure the five options, this scale is Likert-type scale, Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. 34 questions and Positive and Negative is Questions included in the scale. Positive is to be scored 1, 2, 3, 4 and 5. Negative is to be scored as 5, 4, 3, 2 and 1. The maximum is arrived at 170 and minimum score of 34 in this scale. It is interpreted that High Score: High emotional intelligence (better emotional awareness, regulation, and social skills), Moderate Score: Average emotional intelligence, Low Score: Low emotional intelligence (difficulty in emotional regulation and social interactions) Here in this study ANOVA and LSD was conducted as a statistical technique to prove the objective.

VIII. RESULT

Table No – 2 Summary of analysis of variance for emotional intelligence in technical and non-technical employees

Source of Variation	Sum of Square	df	Mean Sum of Square	'F' Ratio	Level of Significant
A (Type of Employees)	1178.13	1	1178.13	7.68	0.01
B (Gender)	700.83	1	700.83	4.57	0.05
A x B	1794.13	1	1794.13	11.69	0.01
Wss	17796.20	116	153.42		
Tss	21469.30	119			

Table No – 3 Showing the means and 'F' value of type of employees variable for emotional intelligence

Employees	N	Mean	'F' Ratio	Level of Significant
Technical	60	139.72	7.68	0.01
Non-technical	60	145.98		

Table No-4 Showing the L.S.D. difference of type of employees' variable for emotional intelligence

No	Pair	Difference of Mean	Level of Significant
1	A_1 Vs A_2	6.27	0.01

Table No – 5 Showing the means and 'F' value of gender variable for emotional intelligence

Gender	N	Mean	'F' Ratio	Level of Significant
Male	60	140.43	4.57	0.05
Female	60	145.27		

Table No-6 Showing the L.S.D. difference of gender variable for emotional intelligence

No	Pair	Difference of Mean	Level of Significant
1	B_1 Vs B_2	4.83	0.05

Table No-7 Showing the means and 'F' value of type of employees and gender variable for emotional intelligence

No	Variable	N	Mean		'F' Ratio	Level of Significant
			A_1	A_2		
1	B_1	120	133.43	147.43	11.69	0.01
2	B_2	120	146.00	144.53		

Table No-8 Showing the L.S.D. difference of type of employees and gender variable for emotional intelligence

No	Pair	Difference of Mean	Level of Significant
1	A_1 B_1 VS A_1 B_2	12.57	0.01
2	A_1 B_1 VS A_2 B_1	14.00	0.01
3	A_1 B_1 VS A_2 B_2	11.10	0.01
4	A_1 B_2 VS A_2 B_1	1.43	N.S
5	A_1 B_2 VS A_2 B_2	1.47	N.S
6	A_2 B_1 VS A_2 B_2	2.90	N.S

N.S. = Not Significant L.S.D. Level 0.01 = 8.22

0.05 = 6.2

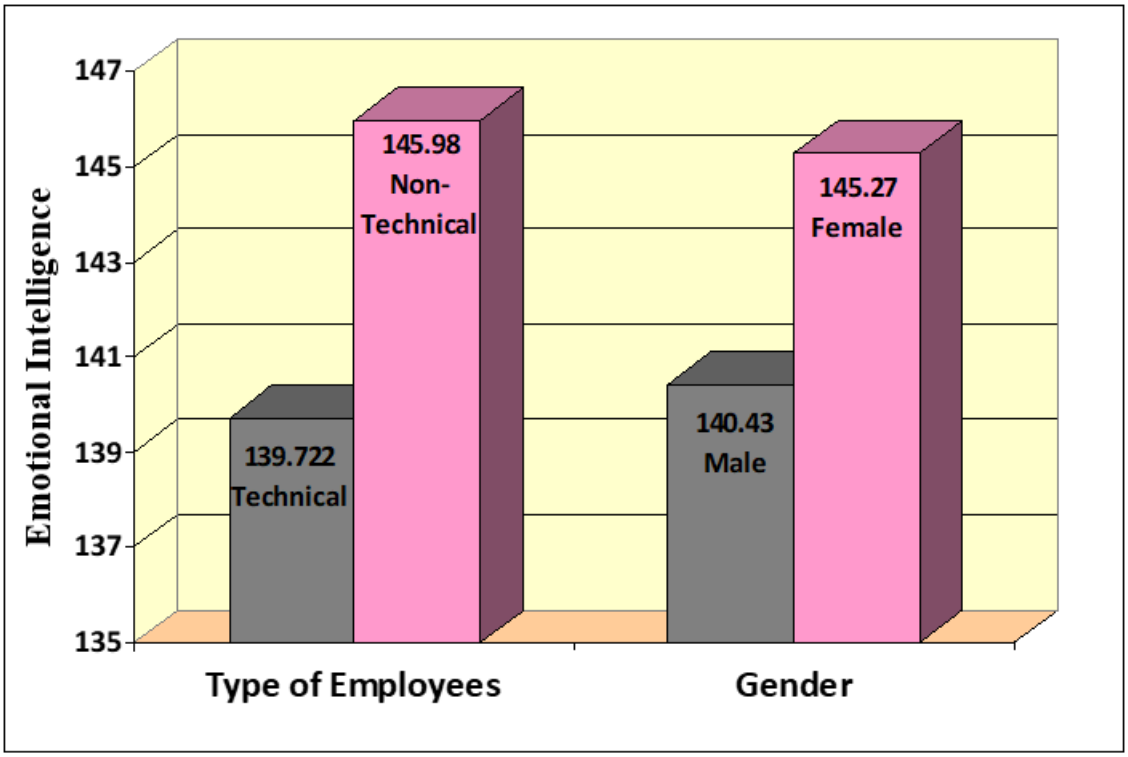

Figure – 1 Showing the mean score of type of employees and gender variable for emotional intelligence

IX. DISCUSSIONS

The chief aim of the present research was to examine emotional intelligence among technical and non-technical employees. The derived result shows that out of three hypotheses, all hypotheses are not accepted.

The difference in emotional intelligence between technical and non-technical employees was significant. Therefore, the hypothesis is not accepted. The results of Table 2 indicate a significant difference in emotional intelligence between technical and non-technical employees, with non-technical employees ($M = 145.98$) scoring higher than technical employees ($M = 139.72$), $F(1,118) = 7.68$, $p < 0.01$. This suggests that non-technical employees, whose roles often involve greater interpersonal interaction and collaboration, tend to develop stronger emotional skills compared to technical employees who focus more on task-oriented work. These findings are consistent with previous research; for instance, Goleman (1998) emphasized that roles requiring higher social engagement foster emotional intelligence, while studies by Kumar and Mohapatra (2021) and Sharma and Verma (2020) also reported higher EI scores among non-technical or customer-facing employees compared to technical staff. Overall, the present study supports the notion that the nature of job roles influences the development of emotional intelligence.

The difference in emotional intelligence between male and female employees was significant. Therefore, the hypothesis is not accepted. Table 4 shows a significant difference in emotional intelligence between male and female employees, with females ($M = 145.27$) scoring higher than males ($M = 140.43$), $F(1,118) = 4.57$, $p < 0.05$. This indicates that female employees tend to exhibit higher emotional intelligence, which may be attributed to greater empathy, social sensitivity, and interpersonal awareness often associated with women. These findings are consistent with earlier studies; for example, Bar-On (2006) and Schutte et al. (2007) reported that females generally score higher on emotional intelligence measures, particularly in areas of social skills and emotional perception. Similarly, more recent research by Singh and Sharma (2021) found that female employees demonstrate superior emotional regulation and interpersonal competencies compared to male counterparts. Overall, the results of the present study align with existing literature, highlighting gender

differences in emotional intelligence among employees.

The difference in an emotional intelligence between employees and gender was significant. Therefore, the hypothesis is not accepted. The analysis of the combined effect of employees type and gender on emotional intelligence showed a significant difference, $F(1,118) = 11.69$, $p < 0.01$, indicating that both variables jointly influence EI scores. This suggests that non-technical female employees are likely to exhibit the highest emotional intelligence, whereas technical male employees may have comparatively lower scores. These findings are in line with previous research; for example, Kumar and Mohapatra (2021) found that job type and gender together significantly affect emotional intelligence, with females in non-technical or interpersonal roles scoring higher. Similarly, studies by Bar-On (2006) and Singh & Sharma (2021) reported that females generally outperform males in EI, particularly when their roles require social interaction and emotional management. Overall, the results highlight that both job nature and gender play an important role in determining emotional intelligence among employees.

X. CONCLUSIONS

We can conclude by data analysis as follows.

The difference in emotional intelligence between technical and non-technical employees was significant. The difference in emotional intelligence between male and female employees was significant. The difference in emotional intelligence between type of employees and gender was not significant.

XI. LIMITATIONS OF STUDY

The study area is limited. That is, the sample taken in the study is limited to Bhavnagar limited to technical and non-technical employees only. Therefore, the results of this research cannot be made applicable to any other people or any other city. The average age of participants was 18-40 years. This study used a sample of 120 participants, so the results may differ if a larger or smaller sample is used. The sample size is small. In future studies larger sample size should be studied for generalizability. There may be limitations prevailing because of statistical analysis in research

XII. IMPLICATIONS FOR FURTHER RESEARCH

The present research was carried out to study the Emotional intelligence of technical and non-technical employees and to find out which elements affect their Emotional intelligence. Because of these effects, changes can be brought about through advice. The research carried out may not be a standard of evaluation. There are many aspects of it, viz., educational, family, work experience, work timing, work place, etc. The research can be carried out by selecting each aspect from different aspects. future research should consider including participants from multiple cities and diverse organizations to enhance the generalizability of findings beyond Bhavnagar. Expanding the age range and incorporating a larger and more varied sample of employees could provide a more comprehensive understanding of emotional intelligence across different demographics and professional roles. Additionally, employing advanced or alternative statistical techniques may help overcome the limitations observed in the current analysis and yield more robust and reliable results.

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