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Exploring Emotional Intelligence and Workplace Environment Among Women Employees

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Abstract

This study explores the relationship between emotional intelligence (EI) and workplace environment among women employees. The research investigates emotional intelligence levels and their impact on workplace relationships. The study employs a cross-sectional survey design to collect data from female employees, focusing on self-awareness, self-regulation, motivation, empathy, and social skills. A sample of 99 women employees participated in the survey. Data analysis includes descriptive analysis, reliability analysis, chi-square test of independence, cluster analysis, linear regression, and factor analysis. Results indicate significant associations between emotional intelligence levels and workplace ratings. K-means clustering identifies three clusters based on emotional intelligence and workplace ratings, reflecting different levels of emotional intelligence and corresponding workplace ratings. However, linear regression analysis suggests that emotional intelligence does not significantly predict workplace ratings. Factor analysis reveals that while a single factor might explain a portion of the variance in emotional intelligence, there may be other factors at play as well, possibly two. These findings provide insights into the complex relationship between emotional intelligence and workplace environment among women employees, emphasizing the need for further research to understand the underlying dynamics fully.

Keywords: emotional intelligence, workplace environment, working women employees, self-awareness, self-efficacy.

Introduction:

Recent studies have made significant strides in understanding the importance of emotional intelligence (EI) in the workplace. However, there is a prevalent over-reliance on expert opinion, anecdotes, case studies, and unpublished proprietary surveys in the literature, leading to a high ratio of hyperbole to actual data (Zeidner et al., 2004). The review's conclusion offers valuable recommendations for creating and applying EI measures in professional contexts.

Studies have shown a negative relationship between work stress and emotional intelligence, indicating that individuals with higher emotional intelligence experience less stress in their work environments. Additionally, there is a positive association between organizational commitment and emotional intelligence. According to the ASSET model, organizational commitment is influenced by stress, implying that emotional intelligence may play a new role in determining employee loyalty to organizations (Nikolaou & Tsaousis, 2002).

The workplace is dynamic and unpredictable, with constant changes and a diverse workforce in terms of nationality and age. Employers increasingly demand extraordinary dedication and harmonious working relationships from their staff. Emotional intelligence, the ability to perceive, understand, and manage emotions effectively, is crucial in navigating these complexities. Additionally, spiritual intelligence, embodying spiritual resources in daily functioning, contributes to a positive work environment. An improved workplace is associated with the presence of both emotional and spiritual intelligence (Chin et al., 2011).

Emotional intelligence, a pivotal factor influencing psychological well-being and life achievements, significantly shapes individuals' interactions within their workplaces. This study explores the connection between emotional intelligence and perceived occupational stress among human service workers and its implications for their health. The findings suggest that while emotional intelligence plays a crucial albeit weak role in mitigating occupational stress and safeguarding workers' health, stress management training should prioritize enhancing employees' emotional coping skills. Ogińska-Bulik (2005) utilized social anthropology and psychology tools to investigate the significance of non-cognitive aspects, particularly emotional intelligence, in workplace success and its indirect impact on effective business communication. The study supports the theory suggesting that an individual's ability to adapt to the work environment, or EQ, is more influential on career success than IQ. Dumbravă (2011) corroborates this, drawing from decades of research in the field.

Objectives

To explore emotional intelligence and workplace relationships among working women employees.

Hypothesis:

- (H0): No significant relationship exists between emotional intelligence and workplace ratings among working women employees.
- (H1): A significant relationship exists between emotional intelligence and workplace ratings among working women employees.
- (H0): Emotional intelligence among women employees in the workplace is unidimensional, consisting of a single underlying factor.
- (H2): Emotional intelligence among women employees in the workplace is multidimensional, consisting of multiple underlying factors.
- H0: There is no significant relationship between emotional intelligence and workplace ratings among different clusters of working women employees.
- H3: There is a significant relationship between emotional intelligence and workplace ratings among different clusters of working women employees.
- H0: Emotional intelligence does not significantly predict workplace ratings among working women employees.
- H4: Emotional intelligence significantly predicts workplace ratings among working women employees.

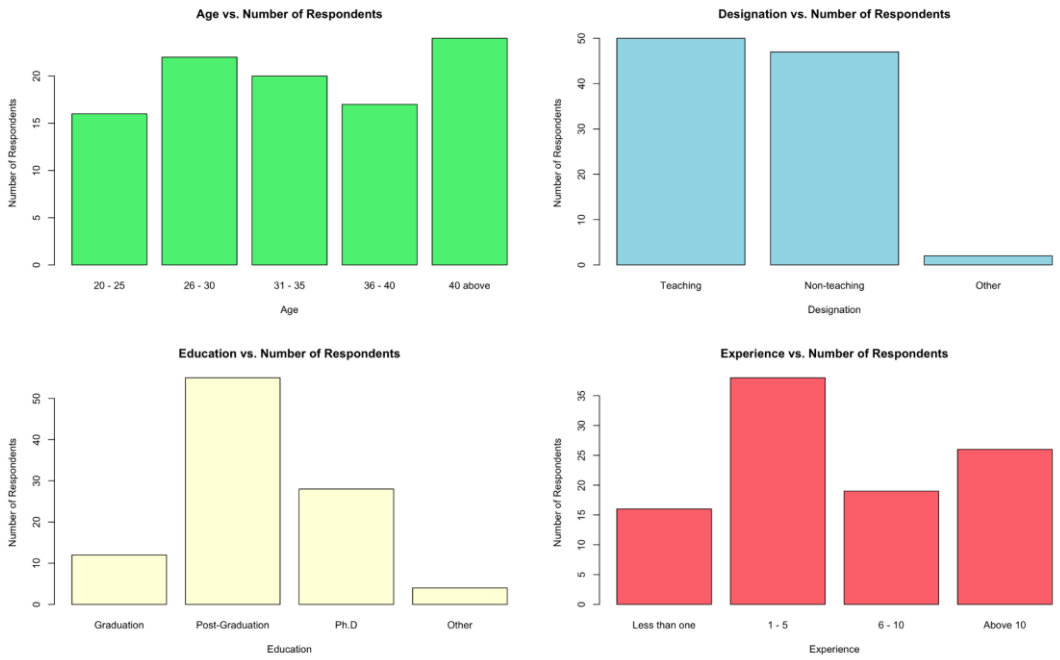
Research Methodology

Study Design The study's design involves a cross-sectional survey to collect data from female employees. Sampling Strategy is the method used to select participants, such as random, stratified, or convenience.

Data Collection Instrument: the questionnaire or survey used to collect data, focusing on emotional intelligence and workplace environment-related questions. 99 Data Collection Samples and Procedure Outlining data were collected, including the administration of surveys, any ethical considerations, and obtaining informed consent from participants.Data Analysis Methods: Descriptive Analysis: Analyzing demographic data to understand the characteristics of the sample. Reliability Analysis: Assessing the reliability of the questionnaire using Cronbach's Alpha. Chi-square Test of Independence the association between emotional intelligence and workplace ratings. Cluster Analysis (K-means): Identifying clusters of participants based on emotional intelligence and workplace ratings. Linear Regression: Investigating the relationship between emotional intelligence and workplace ratings. Factor Analysis: Exploring the underlying structure of emotional intelligence. Analysis: Calculating correlation coefficients to examine relationships between variables. Scatter Plot: Visualizing the relationship between emotional intelligence and workplace ratings.

Results

Demographic data



(Figure 1)

Age

Age	N. of Respondents	percentage %
20 25	16	16.20%
26 30	22	22.20%
31 35	20	20.20%
36 40	17	17.20%
40 above	24	24.20%

(Table 1) Table 1 provides information about the distribution of respondents' ages in different age groups. Here's an explanation:

Age Groups: The table categorizes respondents into different age groups:
20 25
26 30
31 35
36 40
40 above
Number of Respondents: This column shows the count of respondents falling into each age group. There are 16 respondents in the age group 20 to 25, 22 in the age group 26 to 30, and so on. This table helps understand the respondents' age distribution and provides insights into the demographics of the surveyed population.

Designation

Designation	N. of Respondents	percentage %
Teaching	50	50.50%
Nonteaching	47	47.50%
other	2	2.00%

(Table 2) Table 2 provides information about the distribution of respondents' designations into different categories. Here's an explanation:

Designation Categories:
Teaching: Refers to respondents who hold teaching positions.
Nonteaching: Refers to respondents who hold non-teaching positions.
Other: This category likely includes respondents with designations not explicitly mentioned as teaching or non-teaching. It could consist of administrative positions, research positions, or different roles.
Number of Respondents: This column shows the count of respondents falling into each designation category. Fifty respondents are in the teaching category, 47 in the non-teaching category, and 2 in the "other" category. This table provides insights into the distribution of respondents based on their designations. It helps understand the sample's composition in terms of the roles and responsibilities of the respondents.

Educational Qualification

Education	N. of Respondents	percentage %
Graduation	12	12.10%
Post Graduation	55	55.60%
Ph.d	28	28.30%
Other	4	4%

(Table 3) Table 3 presents information about the respondents' educational qualifications distribution across different categories. Here's an explanation of the table:

Educational Qualification Categories:
Graduation: Refers to respondents who have completed their undergraduate (Bachelor's) degree.
Post Graduation: Refers to respondents who have completed their postgraduate (Master's) degree.
Ph.D.: Refers to respondents who have completed their doctoral (Ph.D.) degree.

Other: This category likely includes respondents with educational qualifications not explicitly mentioned as graduation, post-graduation, or Ph.D. It could consist of diplomas, certifications, or other qualifications.
Number of Respondents: This column shows the count of respondents falling into each educational qualification category. , there are 12 respondents with graduation qualifications, 55 with post-graduation qualifications, 28 with Ph.D. qualifications, and four with other qualifications.
This table provides insights into the distribution of respondents based on their educational qualifications. It helps in understanding the academic background of the surveyed population.

Work experience of working women's

Workplace experience	N. of Respondents	percentage %
Less than one	16	16%
1 5	38	38%
6 10	19	19.20%
Above 10	26	26.30%

(Table 4) Table 4 presents information about the work experience of working women, categorized into different ranges. Here's an explanation of the table:

Work Experience Categories:

- Less than one: Refers to respondents with less than one year of work experience.
- 1 5: Refers to respondents with between 1 and 5 years of work experience.
- 6 10: Refers to respondents with between 6 and 10 years of work experience.
- Above 10: Refers to respondents with more than ten years of work experience.

Number of Respondents: This column shows the respondents in each work experience category. , there are 16 respondents with less than one year of work experience, 38 respondents with 1 to 5 years of work experience, 19 with 6 to 10 years of work experience, and 26 with more than ten years of work experience.
This table provides insights into the distribution of work experience among working women. It helps in understanding the tenure of employment among the surveyed population.

Martial status

Martial status	N. of Respondents	percentage %
Unmarried	34	34.30%
Martial	63	64.60%
Divorced	1	1%

(Table 5) Table 5 presents information about the marital status of respondents. Here's an explanation of the table:

Marital Status Categories:

- Unmarried: Refers to respondents who are not currently married.
- Married: Refers to respondents who are currently married.
- Divorced: Refers to respondents who are divorced.

Number of Respondents: This column shows the respondents falling into each marital status category. , 34 respondents are unmarried, 63 respondents are married, and one respondent is divorced.

This table provides insights into the marital status of the surveyed population. It helps in understanding the relationship status of the respondents, which can be necessary for various sociological and demographic analyses.

Reliability analysis

Statistic	Value
Raw Alpha	0.74
Standardized Alpha	0.47
G6(SMC)	0.75
Average r	0.042
S/N	0.87
ASE Mean	0.038
SD	3.7
Median r	0.039

(Table6)

Method	Lower Alpha	Upper Alpha
Feldt	0.66	0.81
Duhachek	0.67	0.82

(Table 7)

Results:

raw_alpha: This is Cronbach's Alpha coefficient, a measure of internal consistency (0.74 in this case).

Std. alpha: This is the standardized Cronbach's Alpha, which adjusts for the number of items in the scale (0.47 in this case).

G6(smc): This value is unclear without additional context. It might be a specific test statistic or index related to the chosen reliability measure.

average_r: This is the average inter-item correlation (0.042). It indicates a low correlation between individual items in the scale.

S/N: This could represent a signal-to-noise ratio, but its meaning depends on the specific analysis.

Ase mean: This might be the average standard error of measurement (0.038).

Sd: This is the standard deviation of the scores (3.7 in this case).

median_r: This is the median inter-item correlation (0.039).

Confidence Intervals:

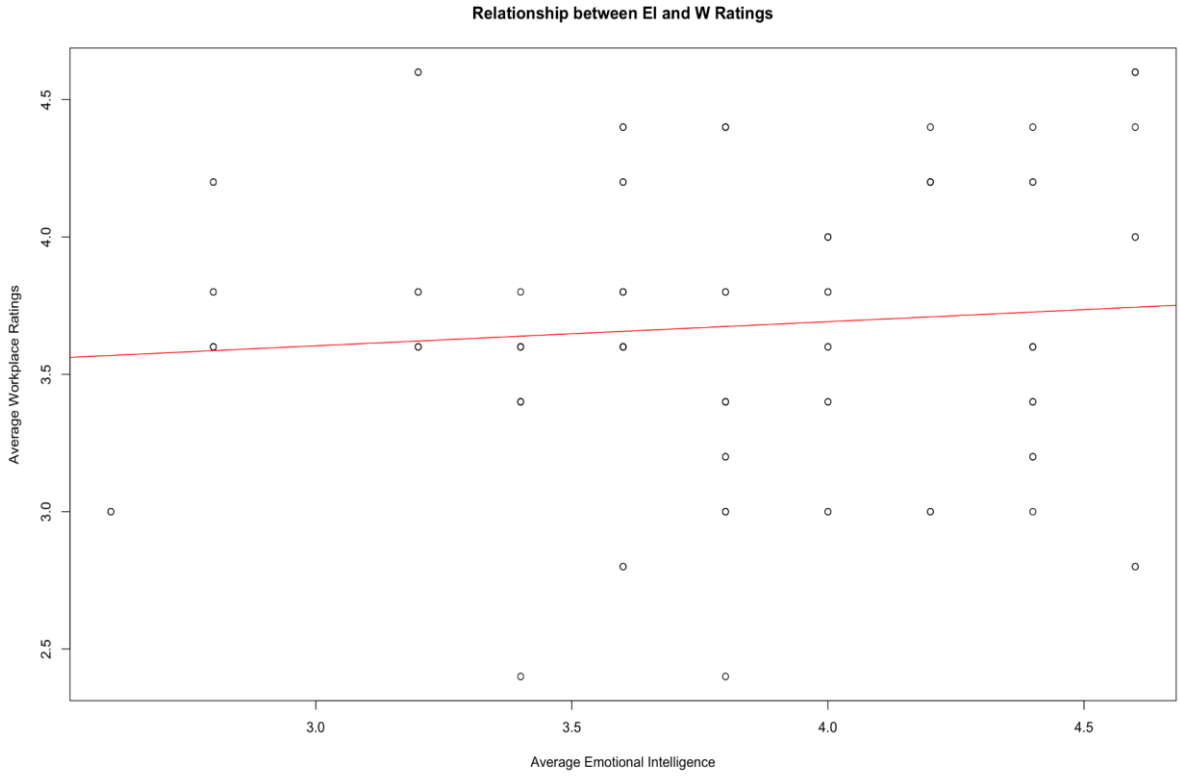
The analysis provides confidence intervals for Cronbach's Alpha using two methods (Feldt and Duhachek). These intervals indicate the range within which the true population alpha will likely fall with 95% confidence.

Interpretation:

The raw Cronbach's alpha (0.74) suggests acceptable internal consistency, but the standardized alpha

(0.47) is lower, indicating the reliability might be inflated due to the number of items.
The low average and median inter-item correlations suggest that individual items might not measure the same underlying construct well.

We can create a scatter plot and calculate the correlation coefficient to explore the relationship between emotional intelligence (EI) and workplace (W) ratings.



(Figure 2)

A scatter plot showing the relationship between average emotional intelligence and workplace ratings, with a trend line indicating the direction of the relationship. It also calculates the correlation coefficient, which measures the strength and direction of the relationship between the two variables.
"Chi-square Test of Independence for Emotional Intelligence and Workplace Ratings:"
[1] "Chi-square Test of Independence for Emotional Intelligence and Workplace Ratings:"
> print(chisq_ei_w)

Pearson's Chi-squared test

data: ei_w_table
X-squared = 173, df = 90, p-value = 3.444e-07

The results of the Chi-square Test of Independence for Emotional Intelligence and Workplace Ratings are as follows:

Pearson's Chi-squared test
X-squared = 173

Degrees of freedom (df) = 90
p-value < 0.001 (p < 0.001)

This indicates a significant association between emotional intelligence levels and workplace ratings, as the p-value is less than the chosen significance level (typically 0.05).

It is a good result. A low p-value (in this case, much smaller than 0.001) indicates a significant association between emotional intelligence levels and workplace ratings. This suggests that employees with different levels of emotional intelligence tend to receive different ratings in the workplace.

This result emphasizes the significance of this finding and discusses its implications. Emotional intelligence impacts workplace performance, such as teamwork, leadership, and conflict resolution.

Overall, this result provides valuable insights into the relationship between emotional intelligence and workplace ratings, contributing to our understanding of how emotional intelligence affects professional success.

"Cluster Centers:"
[1] "Cluster Centers:"
> print(kmeans_result$centers)
avg_ei avg_w
1 4.056250 3.175000
2 4.103448 4.213793
3 3.242105 3.673684

Cluster 1: Average emotional intelligence (avg_ei) of approximately 4.06 and average workplace ratings (avg_w) of approximately 3.18.

Cluster 2: Average emotional intelligence (avg_ei) of approximately 4.10 and average workplace ratings (avg_w) of approximately 4.21.

Cluster 3: Average emotional intelligence (avg_ei) of approximately 3.24 and average workplace ratings (avg_w) of approximately 3.67.

In k-means clustering, the algorithm assigns each data point to one of the K clusters based on its features. The centroids of these clusters are calculated iteratively to minimize the within-cluster sum of squares, effectively grouping similar data points.

The output means:
Cluster Centers: This section of the output shows the calculated centroids of each cluster. Each row represents a cluster, and the columns represent the centroid coordinates in the feature space.
avg_ei: This column represents each cluster's average emotional intelligence (EI) rating.

avg_w: This column represents each cluster's average workplace rating (W).

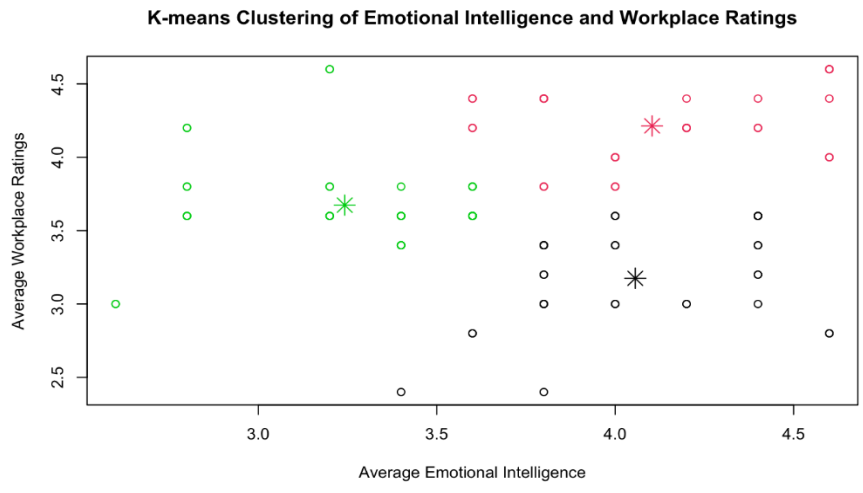
Interpretation of each cluster:

Cluster 1:
avg_ei: Approximately 4.06
avg_w: Approximately 3.18
This cluster has an average emotional intelligence rating of around 4.06 and an average workplace rating of around 3.18. It seems to represent individuals with moderately high emotional intelligence and moderate workplace ratings.

Cluster 2:
avg_ei: Approximately 4.10
avg_w: Approximately 4.21
This cluster has an average emotional intelligence rating of approximately 4.10 and an average workplace rating of roughly 4.21. It represents individuals with high emotional intelligence and high workplace ratings.

Cluster 3:
avg_ei: Approximately 3.24
avg_w: Approximately 3.67
This cluster has an average emotional intelligence rating of approximately 3.24 and an average workplace rating of roughly 3.67. It seems to represent individuals with lower emotional intelligence and moderate workplace ratings.

These interpretations give an idea of the characteristics of individuals within each cluster. Cluster 2 represents individuals with high emotional intelligence and workplace ratings, while Cluster 3 represents individuals with lower emotional intelligence and moderate workplace ratings. This information can help understand different population segments and tailor interventions or strategies accordingly.



(Figure 3)

```
> summary(lm_model)

Call:
lm(formula = data$tw ~ data$tei, data = data)

Residuals:
Min     1Q Median     3Q    Max
-6.3721.3720.196  1.540  4.892

Coefficients:
Estimate Std. Error t value Pr(>|t|)
(Intercept) 16.69841    1.85741    8.99 2.03e-14 *
data$tei     0.08810    0.09792    0.90    0.371
---
Signif. codes:  0 ‘*’ 0.001 ‘’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 2.543 on 97 degrees of freedom
Multiple R-squared:  0.008275,         Adjusted R-squared: 0.001949
F-statistic: 0.8094 on 1 and 97 DF,  p-value: 0.3705
```

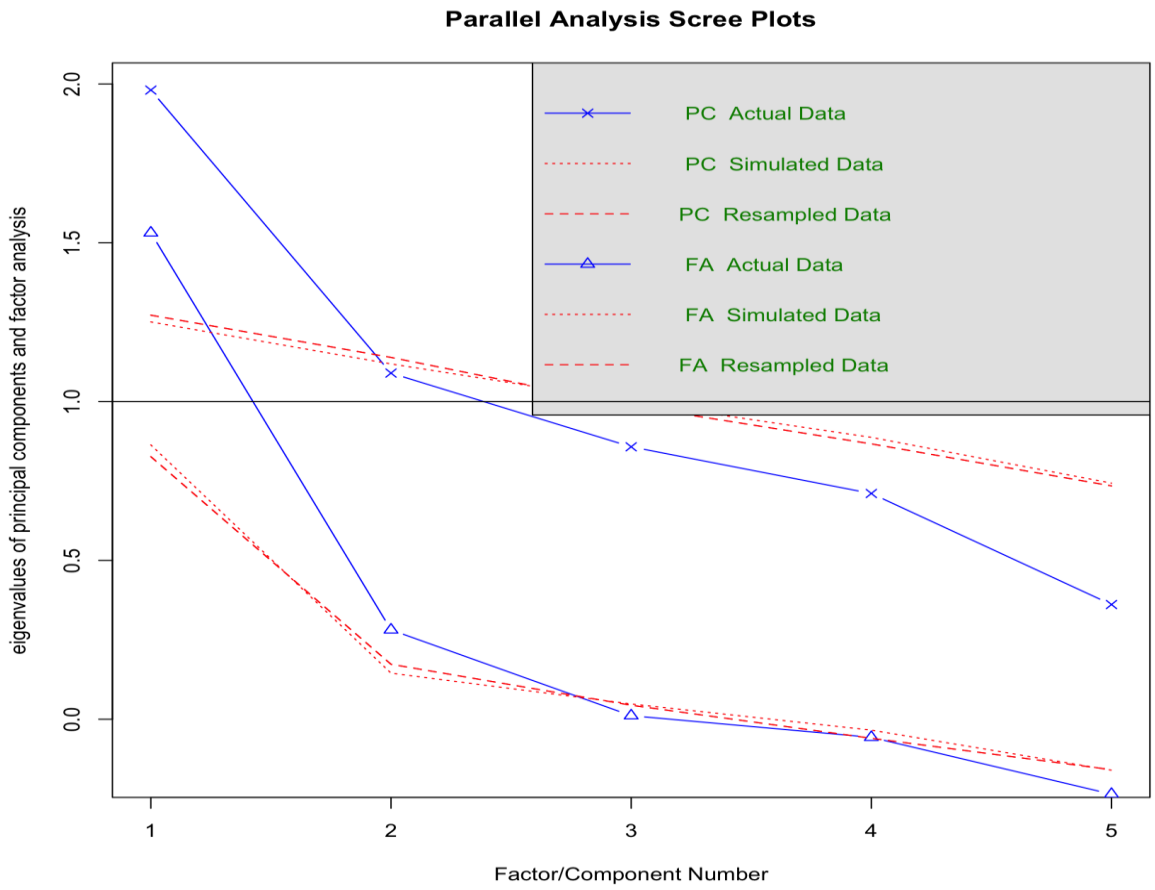
The linear regression model results show:

Coefficients:
The intercept (16.698) represents the average workplace rating when emotional intelligence (EI) is zero.

The coefficient for emotional intelligence (EI) is 0.08810. This indicates that for every one-unit increase in EI, there's an expected increase of 0.08810 units in the workplace rating, holding all other variables constant.

Significance:
The p-value for the coefficient of EI is 0.371, which is greater than the typical significance level of 0.05. This means that the coefficient for EI is not statistically significant. In other words, insufficient evidence exists to conclude that EI significantly predicts workplace ratings.

Model Fit:
The R-squared value is 0.008275, indicating that only about 0.83% of the variance in workplace ratings is explained by the predictor variable (EI).
The adjusted R-squared is negative, which suggests that adding EI as a predictor did not improve the model fit.
In summary, according to this regression analysis, emotional intelligence (EI) does not significantly predict workplace ratings in this dataset. The model explains minimal variance in workplace ratings, and the coefficient for EI is not statistically significant.



(Figure 4)

> factor_model <factanal(~ ei1 + ei2 + ei3 + ei4 + ei5, factors = 1, data = a)
> print(factor_model)

Call:
factanal(x = ~ei1 + ei2 + ei3 + ei4 + ei5, factors = 1, data = a)

Uniquenesses:
ei1 ei2 ei3 ei4 ei5
0.926 0.669 0.918 0.005 0.923

Loadings:
Factor1
ei1 0.273
ei2 0.575
ei3 0.286
ei4 0.997
ei5 0.278

Factor1

SS loadings 1.559
Proportion Var 0.312

Test of the hypothesis that 1 factor is sufficient.
The chi-square statistic is 9.74 on 5 degrees of freedom.
The p-value is 0.0831
> parallel_model <fa.parallel(a[, c("ei1", "ei2", "ei3", "ei4", "ei5")])
Parallel analysis suggests that the number of factors = 2 and the number of components = 1

> # Print the results
> print(parallel_model)
Call: fa.parallel(x = a[, c("ei1", "ei2", "ei3", "ei4", "ei5")])
Parallel analysis suggests that the number of factors = 2 and the number of components = 1

Eigen Values of
Original factors Resampled data Simulated data Original components
1 1.53 0.83 0.86 1.98
2 0.28 0.17 0.15 1.09
Resampled components Simulated components
1 1.27 1.25
2 1.14 1.12

Based on the factor analysis results:

Factor Loadings:
The loadings represent the relationship between each item (emotional intelligence questions: ei1, ei2, ei3, ei4, and ei5) and the extracted factor (Factor 1).

Higher loadings indicate stronger relationships between the items and the factor.

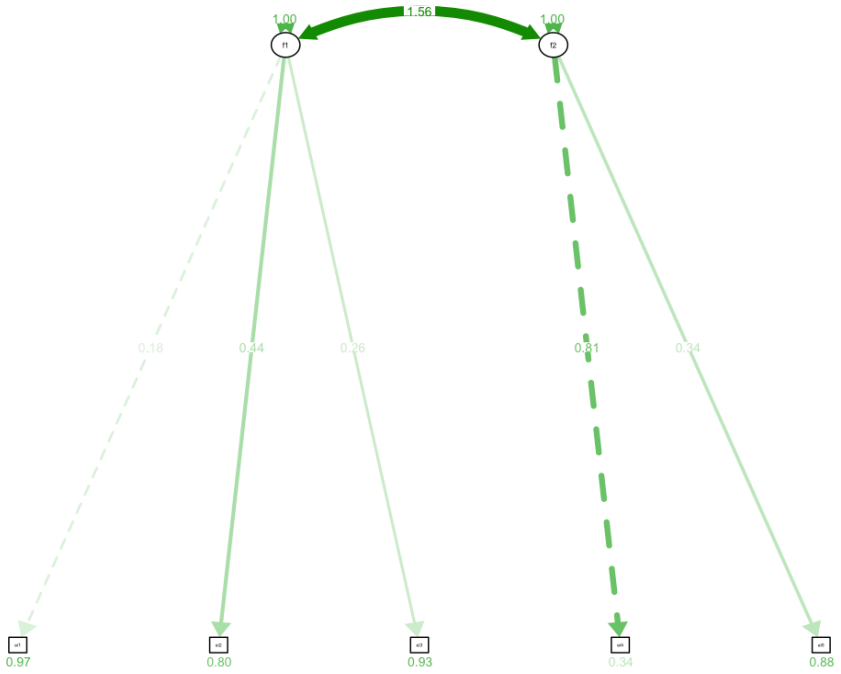
All items except ei4 have relatively low loadings on the extracted factor.
Uniquenesses:
These values represent the uniqueness of each item, indicating the proportion of the item's variance that is not accounted for by the factor.
Low uniqueness values suggest that the factor explains most of the item's variance.
Here, ei4 has a deficient uniqueness value, indicating that the factor explains most of its variance.
Test of Hypothesis:
The chi-square statistic tests the hypothesis that only one factor can explain the correlations among the items.
The p-value associated with this test is 0.0831, above the typical significance level of 0.05. This suggests that there might be more than one underlying factor.

Parallel Analysis:
Parallel analysis compares the eigenvalues obtained from the actual data with those obtained from random data.

Based on the results, the parallel analysis suggests that the number of factors could be 2, as the eigenvalue for the second factor is above the average eigenvalue obtained from random data. However, the number of components is suggested to be 1.

Overall, the results indicate that while a single factor might explain a portion of the variance in the emotional intelligence questions, there may be other factors at play as well, possibly two.

Factor loading
Latent Variable Covariance:



(Figure 4)

> lavInspect(fit, "cov.lv")
f1 f2
f1 0.053
f2 0.203 0.320

The covariance matrix of the latent variables f1 and f2 is as follows:
This matrix shows the covariance between the latent variables. the covariance between f1 and f2 is 0.203, and the variances of f1 and f2 are 0.053 and 0.320, respectively.

Factor Analysis:

Factor Analysis to explore the underlying structure of emotional intelligence. The presentation of loadings and uniquenesses is clear.

The loadings indicate the relationship between each item (emotional intelligence questions: ei1, ei2, ei3, ei4, and ei5) and the extracted factor (Factor 1). Each item represents (e.g., ei1: self-awareness, ei2: self-regulation, etc.).

The uniqueness values represent the proportion of the item's variance that is not accounted for by the factor. The interpretation of these values is clear.

Hypothesis to determine whether one factor is sufficient to explain the correlations among the items. The p-value suggests that there might be more than one underlying factor.

The Parallel Analysis results suggest that the number of factors could be 2, as the eigenvalue for the second factor is above the average eigenvalue obtained from random data. However, the number of components is suggested to be 1.

Overall, your Factor Analysis section clearly explains the methodology and results. d the factor loadings, uniqueness values, and test of hypothesis results. The inclusion of Parallel Analysis adds robustness to your findings by suggesting the number of factors that may adequately explain the data. It's a comprehensive analysis that contributes to understanding the structure of emotional intelligence among women employees in the workplace.

ei1: This variable represents self-awareness. Self-awareness refers to recognizing and understanding one's emotions, strengths, weaknesses, values, and motivations.

ei2: This variable represents self-regulation. Self-regulation involves managing emotions, impulses, and behaviors in various situations. It includes aspects like emotional control, adaptability, and resilience.

ei3: This variable represents motivation. Motivation refers to the drive to achieve goals, persist in facing challenges, and maintain optimism and enthusiasm. It involves setting and pursuing meaningful objectives.

ei4: This variable represents empathy. Empathy is the ability to understand and share the feelings, perspectives, and experiences of others. It involves attuning to others' emotions and responding with sensitivity and compassion.

ei5: This variable represents social skills. Social skills encompass navigating social interactions effectively, building and maintaining relationships, and communicating assertively and empathetically.

These variables collectively measure different aspects of emotional intelligence, which is crucial in determining individuals' success in various aspects of life, including personal relationships and professional settings. In the factor analysis, these variables are examined to understand the underlying structure of emotional intelligence among women employees in the workplace.

Conclusion:

This study explored emotional intelligence and its relationship with the workplace environment among women employees. Emotional Intelligence and Workplace Environment: Emotional intelligence (EI) and its impact on workplace relationships were explored. The chi-square test indicated a significant association between emotional intelligence levels and workplace ratings, emphasizing the importance of emotional intelligence in professional success. K-means clustering identified three distinct clusters based on emotional intelligence and workplace ratings. These clusters represented different levels of emotional intelligence and corresponding workplace ratings. However, the linear regression analysis suggested that

emotional intelligence did not significantly predict workplace ratings. The model explained minimal variance in workplace ratings, and the coefficient for emotional intelligence was not statistically significant. Factor analysis revealed that while a single factor (emotional intelligence) might explain a portion of the variance in emotional intelligence, there may be other factors at play, possibly two. Further investigation or analysis may be needed to understand the underlying structure of the data better. Overall, the study provides valuable insights into the complex relationship between emotional intelligence and workplace environment among women employees. While emotional intelligence plays a role in workplace ratings, its predictive power may vary depending on other factors not captured in this analysis. Further research is recommended to delve deeper into these dynamics and their implications for professional development and organizational management. The results indicate that while a single factor might explain a portion of the variance in emotional intelligence, there may be other factors at play as well, possibly two. Further investigation or analysis may be needed to understand the underlying structure of the data better.

Reference:

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