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Psychological Climate and Employee Engagement at Workplace

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Abstract

Objectives: To determine the relationship between drivers of psychological climate and employee engagement considering the workforce who are a part of IT industries in Mysuru and Bengaluru region in India. **Methodology:** A cross-sectional survey method was adopted for obtaining the required data. Exploratory Factor Analysis, Confirmatory Factor Analysis, Structural Equation Modelling were adopted for examining and analyzing the data. Data was elicited through 445 respondents having their career in various IT industries in Mysuru and Bengaluru region between May 2022 to September 2022. **Findings:** Structural Equation Modelling analysis reveals that, the fit indices values were admissible. The model fit indices values that were recorded are: Chi- Square Statistics (CMIN/DF) = 2.845; Goodness of Fit index (GFI) = 0.982; Adjusted Goodness of Fit Index (AGFI) = 0.937; Incremental Fit Index (IFI) = 0.963; Tucker – Lewis's Index (TLI) = 0.900; Comparative Fit Index (CFI) = 0.962; Root Mean Square Error of Approximation (RMSEA) = 0.073. The prominent drivers of Psychological Climate were identified as - Cooperative Work Environment (CWE); Supervisor Facilitation and Support (SS); Job Training and Support (JT) and Organizational Regulations (ROP). The identified factors resulted to have a relationship with Employee Engagement. **Novelty:** The important drivers of Psychological Climate essential at workplace were identified. The research outcome provides insight for the business managers to significantly focus on the psychological climate factors perceived by employees and build a better working environment.

Keywords: Psychological Climate; Employee Engagement; Business Enterprises; Workforce; Structural Equation Modelling

1 Introduction

Employee Engagement has emerged to be a potential predictor of competitive success of the business enterprises as it administers the relationship of the workforce with the organization[1]. Employees witnessing promising workplace environment are known to put extra efforts and exhibit concern on the assigned tasks, resulting to greater involvement[2]. Employee involvement in the assigned tasks increases staff performance, enables positive attitudes and behaviors.

According to the Gallup Report[3], 36% of the total workforce is found to be engaged towards regular work. Employee Engagement is associated with many performance outcomes, and this decline in the percentage of engaged workers has a greater impact on performance outcomes of the organization. Today's business environment and the potential labor market provides a lot of emerging possibilities in career to the employees. Therefore, it is highly essential for the business managers to provide a conducive work climate to the employees in order to motivate and make them committed; engaged to their roles[4].

As opined by[5], Psychological Climate at Workplace is predominant for fostering learning among the workforce and leading to employee engagement. Openness and sense of security were enhanced through Psychological Climate drivers at workplace. According to the insights of[6], Psychological Climate positively frames an organization's culture, and also known to have an impact on the performance of employees. A workplace which is psychologically safe, enhances people skills, helps them to focus on the resources available and the expected outcomes of the assigned tasks. Psychological Climate factors generally perceived by employees which makes them to be enthusiastic in work roles are: supportive Management, flexibility in work roles, autonomy to take decisions, co-operative rule and regulations, coordinated team of people and challenging work[7]. As per the inferences drawn from[2], employees cognitive assessment of their workplace enhances their psychological well-being, motivation towards work roles and creates a positive attitude. When employees are highly involved, eventually they get committed and engaged. A clear examination of the current business scenario indicates that, employees are the key assets of a business leading to success. Therefore, it is essential to provide a conducive work environment at the best possible way, where psychological factors become significant in achieving the goals. Engaged employees are known to exhibit innovative work behaviors[8].

Understanding the inferences gathered, it is essential to understand the drivers of psychological climate having an influence on employee engagement. As per the inferences of[9], Psychological Climate driver supervisor support leads to various positive behavioral changes among the workforce. It is also evident that, research on psychological resources fostering employee engagement, considering the challenging situations faced in Information Technology Industries which is constantly innovating is unexplored[10].

The research's goal is to better understand how psychological climate and employee engagement are related.

Through the above insights gathered with the help of literature survey, the below hypothesis was formulated for the present research study.

1.1 Hypothesis

H_{01}: There is no association between perceived Cooperative Work Environment and Employee Engagement.

H_{02}: There is no association between perceived Supervisor Facilitation and Support and Employee Engagement.

H_{03}: There is no association between perceived Job Training and Support and Employee Engagement.

H_{04}: There is no association between Organizational Regulations and Employee Engagement.

2 Methodology

Cross sectional survey technique was incorporated in present study as it will be helpful in obtaining the data, and to carry further analysis of the research. The respondents for the current research selected were employees working in IT industries in Mysuru and Bangalore region in India. Simple random technique was used for gathering the required responses. Online survey method with the help of google forms was used to gather the data. 445 responses were collected and analyzed in the research work.

2.1 Measures

Self-administered questionnaire for the identified study variables was developed to elicit appropriate response from the respondents. Psychological climate variables like supervisor facilitation and support, job training support, regulations and organizational procedures, workgroup cooperation, standards and objectives with a total of 10 items and factors of employee engagement – cognitive, emotional and physical engagement with a total of 13 items were developed. The respondents were indicated to give opinions through a Likert scale with five points which varies from strongly agree – 1 to strongly disagree – 5.

2.2 Statistical Analysis

The elicited responses were tested through a software "statistical package for social sciences" (SPSS). KMO test to know the data adequacy; the structure of the factor was assessed using both confirmatory and exploratory factor analyses, Structural Equation Modelling (SEM) was utilized for analyzing structural association between the variable's psychological climate and employee engagement.

3 Results and Discussions

3.1 KMO Test for factors of Psychological Climate

For verifying sample adequacy, Kaiser-Meyer-Olkin test was adopted. It facilitates in checking the sampling adequacy for the entire model and also individual variables. KMO test was carried out for both factors of Psychological Climate and Employee Engagement separately.

The obtained KMO value for the collected data is 0.900. As per the inferences drawn from [11], the value of KMO which is higher than 0.6, reveals the gathered sample is sufficient to perform further examinations. Therefore, since the KMO value obtained is 0.900 indicating the samples are adequate for further examinations. The data is represented in Table 1.

Table 1. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.900
Bartlett's Test of Sphericity	Approx. Chi-Square	1674.479
	Df	45
	Sig.	.000

3.2 Exploratory and Confirmatory Factor Analysis for Psychological Climate Factors

Exploratory Factor Analysis (EFA) was employed to assess the factor structure through SPSS Software. The examination revealed four factors with 10 items with loadings greater than 0.553 and higher. The Psychological Climate factors extracted were Cooperative Work Environment [12], Supervisor Facilitation and Support, Job Training and Support, Organizational Regulations.

To validate the above four factors, Confirmatory Factor Analysis was adopted. To verify the factor structure, confirmatory factor analysis was used through Structural Equation Modelling. The confirmed measurement model is analyzed to elicit various model fit indices.

The data consistency is revealed with appropriate model fit indices. The model fit indices analyzed are: CMIN/DF which should be below 3 as indicated by [11], Goodness of Fit (GFI), Adjusted Goodness of Fit (AGFI), Incremental Fit Index(IFI), [11], Tucker-Lewis Index (TLI), Comparative Fit Index (CFI) need to be more than 0.9 [11]; and Root Mean Square Error of Approximation (RMSEA) essentially to be below 0.08 essential for a good model fit [11].

The model's fit indices as determined by the analysis are tabulated in Table 2

Table 2. Model Fit Summary

Chi – Square Statistic (CMIN)					
Model	NPAR	CMIN	DF	P	DMIN/DF
Default Model	26	54.823	29	0.003	1.890
Saturated model	55	.000	0		
Independence model	10	1695.132	45	.000	37.670
Baseline Comparisons					
Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.968	.950	.985	.976	.984
Root Mean Square Residual (RMR), Goodness of Fit (GFI)					
Model	RMR	GFI	AGFI	PGFI	
Default model	.023	.970	.942	.511	
Root Mean Square Error of Approximation (RMSEA)					
Model	RMSEA	LO 90	HI 90	PCLOSE	
Default model	.051	.030	.072	.440	

Chi – Square value was 54.823 with p-value of 0.003 reveals data is analytically significant. The finding is also in line with the CMIN/DF value = 1.890 lesser than 3 [11]. GFI value is 0.970 and AGFI value is 0.942 which is above 0.9 essential for a good fit [11]. The baseline comparisons, the respective values of IFI is 0.985, TLI = 0.976 and CFI = 0.984 is above 0.9 ensuring a good

fit[11]. Root Mean Square Error of Approximation value is 0.051 below 0.08 essential for a good model fit[11]. Therefore, it can be noted that the items elicited the essential information through the respondents of the research.

3.3 KMO test for factors of Employee Engagement

The KMO value for the collected data is 0.861. As per the inferences drawn from[11], the value of KMO which is higher than 0.6, reveals the sample is adequate to perform further examinations. Therefore, the KMO value obtained is 0.861 indicating the samples are adequate for further examinations. The data is represented in Table 3.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.861
	Approx. Chi-Square	1483.475
Bartlett's Test of Sphericity	Df	66
	Sig.	.000

3.4 Exploratory and Confirmatory Factor Analysis for Employee Engagement Factors

SPSS Software was used to carry out an exploratory factor analysis to ascertain the factor structure. The examination revealed three drivers with 12 items with loadings higher than 0.506.

To validate the factors, Confirmatory Factor Analysis was adopted. Using structural equation modelling and confirmatory factor analysis, the factor structure was investigated.

The consistency of the data is verified through model fit indices. Various model fit indices were examined, including: CMIN/DF which should be below 3 as indicated by[11], Goodness of Fit (GFI), Adjusted Goodness of Fit (AGFI), Incremental Fit Index (IFI)[11], Tucker-Lewis Index (TLI), Comparative Fit Index (CFI) need to be more than 0.9[11]; and Root Mean Square Error of Approximation (RMSEA) need to be below 0.08 essential for a good model fit[11].

The resulted model fit indices are indicated in Table 4:

Table 4. Model Fit Summary

Chi – Square Statistic (CMIN)					
Model	NPAR	CMIN	DF	P	DMIN/DF
Default Model	34	112.663	44	0.000	2.561
Saturated model	78	.000	0		
Independence model	12	1504.741	66	.000	22.799
Baseline Comparisons					
Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.925	.888	.953	.928	.952
Root Mean Square Residual (RMR), Goodness of Fit (GFI)					
Model	RMR	GFI	AGFI	PGFI	
Default model	.043	.950	.911	.536	
Root Mean Square Error of Approximation (RMSEA)					
Model	RMSEA	LO 90	HI 90	PCLOSE	
Default model	.068	.052	.083	.031	

The Chi – Square value was 112.663 with p-value of 0.000 revealing, the data is analytically significant. The finding is also in line with the CMIN/DF value of 2.561 which is less than 3[11]. GFI value is 0.950 and AGFI value is 0.911 which is above 0.9 essential for a good fit[11]. The baseline comparisons, the respective values of IFI is 0.953, the value of TLI is 0.928 and the value of CFI is 0.952 is above 0.9 essential to have a good fit[11]. Root Mean Square Error of Approximation value is 0.068 below 0.08 essential to have a good model fit[11]. Therefore, it is evident the items elicit the required information through the respondents of the research.

3.5 Psychological Climate and Employee Engagement

For assessing the structural associations, structural equation modelling (SEM) was taken into consideration. The insights of[11], indicates the value of CMIN/DF < 3 specifies an acceptable fit, and as per the insights of[11], CMIN/DF < 5 indicates a reasonable fit.

According to[11], the absolute fit indices to indicate the proposed conceptual theory will fit the data are: the goodness of fit statistic (GFI) need to be less than 1 and a good model fit suggests the value to be anywhere between 0.90 to 0.95[11]. Similarly, the adjusted goodness of fit index (AGFI) should also be less than 1. The incremental fit index (IFI) acceptable ranges are between 0 and 1, values higher than 0.90 indicates a good fit[11].

According to,[13], Tucker – Lewis's index (TLI) statistic value needs to be TLI ≥ 0.9 for ensuring a good fit.

The Comparative Fit Index (CFI) statistic lies between the 0.0 to 1.0 range, however, the value nearer to 1 reveals a good fit. As opined by[11], a value of CFI ≥ 0.95 indicates a good fit of the model.

As indicated by[11], the root means square error of approximation value lesser than 0.05 is good, value ranging between 0.05 and 0.08 is acceptable and the values between 0.08 and 0.1 are considered to be marginal and RMSEA values higher than 0.1 are considered to be poor.

Considering above suggestions, the study resulted in acceptable model fit indices. The fit indices values of the model obtained in the research work are: CMIN/DF = 2.845; Goodness of Fit index (GFI) = 0.982; adjusted goodness of fit index (AGFI) = 0.937; incremental fit index (IFI) = 0.963; Tucker – Lewis index (TLI) = 0.900; comparative fit index (CFI) = 0.962; root mean square error of approximation (RMSEA) = 0.073. Figure 1 represents the SEM model of the research.
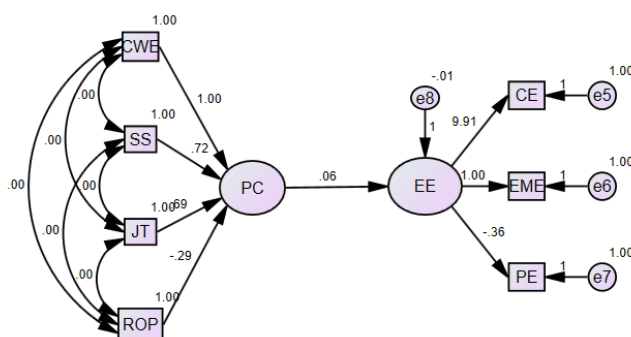

Fig 1. SEM model

As per the results of structural equation modelling analysis, the model's fit indices were good. and there lies an association among the factors of Psychological Climate and Employee Engagement.

Discussion

Employee Engagement in the current corporate environment is a primary objective of business enterprises. The degree to which the workforce is engaged towards their job highly depends on various factors present in the organizations leading to employee engagement. One of the potential indicators of employee engagement is psychological climate. Psychological climate is the level to which the workforce perceives the organizational practices and procedures to be appropriate which leads to job satisfaction, commitment and other organizational outcomes. Examining the relationship between psychological climate variables and employee engagement was the aim of the research work. The results reveal, factors of psychological climate and employee engagement were significantly related with one another. Appropriate practices and procedures implemented in the organization created a positive mindset among the workforce and enabling individuals to be highly engaged and perform significantly in the assigned tasks. The study results are also supported by the opinions and works of[14], that psychological climate parameters to ensure appropriate policies and procedures at the workplace when incorporated by the organizations leads to better employee satisfaction and engaged employees. The results of the present research indicate psychological climate factors ensuring employees to have better clarity on work roles, appropriate procedures and practices are very essential for a business enterprise for long term success and to have passionate employees who are highly engaged towards the goals.

Incorporating appropriate practices and procedures at workplace ensures the employees a better psychological climate to work. Implementing practices pertaining to positive psychological climate at workplace such as supervisory support, job training, co-operative workgroup imbibes a sense of belongingness among the workforce and makes them to be engaged [8]. Having a conducive work environment with appropriate supervisor support and facilitation, job training for employees, regulations and organizational procedures, cooperative work environment and right standards and objectives are essential parameters to make the employees have positive attitude on their jobs and be engaged to their work roles [12].

4 Conclusions

Considering the challenges faced by the business enterprises, especially Information Technology Industries which is constantly innovating, attempt was made to extract the prominent Psychological Climate factors having influence on Employee Engagement. The present research identified Psychological Climate drivers which need to be present in the business enterprises for motivating and engaging the employees. The extracted Psychological Climate factors: Cooperative Work Environment (CWE); Supervisor Facilitation and Support (SS); Job Training and Support (JT) and Organizational Regulations (ROP) were known to have significant impact with Employee Engagement through the model fit indices values obtained. The study results were also supported by [15]. The study has explored one of the prominent psychological resources that is importance of Psychological Climate factors at workplace, which is unexplored especially in Information Technology Industries in India. The outcomes of the research provide useful insights to the business managers on the prominent drivers of Psychological Climate which are essential for an organization. The present research is carried out in Mysuru and Bengaluru region and confined to Information Technology Industries. The research can be extended to other geographical areas as well as other business sectors to enumerate on the differences in the relevant Psychological Climate factors. Prominent Psychological Conditions and their impact on Employee Engagement can be considered in future works.

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