

Occupational Stress in the Digital Workplace: Examining the Efficiencies of E-CRM Practices on Employee Performance

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Abstract

The rapid digitalisation of organisational operations has significantly transformed employee roles, communication systems, and customer relationship management practices. Electronic Customer Relationship Management (E-CRM) has emerged as a strategic tool for enhancing organisational productivity, customer engagement, and operational efficiency. However, the increasing dependence on digital systems and technology-driven work environments has also contributed to occupational stress among employees. This study examines the relationship between E-CRM practices, occupational stress, and employee performance in the digital workplace. The study adopts a quantitative analytical research design using SPSS and AMOS for statistical analysis and structural equation modelling.

Primary data were collected from 320 employees working in service-oriented organisations through a structured questionnaire. Reliability analysis, correlation analysis, regression analysis, Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM) were conducted to evaluate the relationships among the variables. The findings reveal that effective E-CRM practices significantly improve employee performance while reducing occupational stress. Furthermore, occupational stress negatively affects employee productivity and mediates the relationship between E-CRM efficiency and employee performance.

The study contributes to the growing literature on digital workplace management and provides practical implications for organisations aiming to improve employee wellbeing and organisational efficiency through strategic E-CRM implementation.

KEYWORDS: Occupational Stress, E-CRM, Employee Performance

1. INTRODUCTION

The contemporary workplace has undergone substantial transformation due to rapid technological advancements, digital communication systems, and data-driven organisational practices. The integration of digital technologies into daily organisational functions has improved operational efficiency, customer interaction, and business competitiveness. Among these technological innovations, Electronic Customer Relationship Management (E-CRM) has emerged as a vital strategic tool for organisations.

E-CRM refers to the utilisation of internet-based technologies, digital communication channels, and information systems to manage customer relationships effectively. It facilitates real-time communication, customer service automation, data management, and personalised customer engagement. Organisations across industries increasingly rely on E-CRM systems to enhance customer satisfaction and organisational productivity.

Despite the benefits of digitalisation, employees working in digitally intensive environments

frequently experience occupational stress due to workload pressure, technological complexity, information overload, continuous monitoring, and work-life imbalance. Occupational stress in the digital workplace has become a significant organisational concern because it directly affects employee wellbeing, job satisfaction, and productivity.

The relationship between E-CRM practices and occupational stress remains underexplored in academic research. While E-CRM systems improve operational efficiency, they may simultaneously increase employee pressure due to performance expectations, multitasking demands, and constant digital interaction. Therefore, it becomes important to examine how E-CRM practices influence employee performance and occupational stress in modern workplaces.

This study aims to analyse the efficiencies of E-CRM practices in reducing occupational stress and improving employee performance.

2. REVIEW OF LITERATURE

2.1 Occupational Stress

Occupational stress refers to the psychological and physical strain experienced by employees due to excessive job demands, workplace pressure, role ambiguity, and organisational challenges.

According to Lazarus and Folkman (1984), stress occurs when employees perceive that work demands exceed their coping abilities. Research indicates that occupational stress negatively influences employee morale, job satisfaction, organisational commitment, and productivity. In digitally intensive workplaces, employees often face stress caused by continuous connectivity, information overload, and technology adaptation.

2.2 E-CRM Practices

E-CRM involves the integration of information technology and customer relationship management strategies to enhance customer interaction and organisational performance. E-CRM systems support data analysis, customer communication, online support services, and automated customer management.

According to Chen and Popovich (2003), E-CRM enhances customer retention, operational efficiency, and organisational competitiveness. Effective E-CRM systems improve workflow management and reduce manual errors.

2.3 Employee Performance

Employee performance refers to the effectiveness with which employees accomplish organisational tasks and objectives. Performance includes productivity, service quality, efficiency, communication skills, and customer handling ability. Studies suggest that employee performance is influenced by workplace environment, technological support, organisational culture, and stress levels.

2.4 Relationship between E-CRM and Occupational Stress

Existing studies indicate that digital technologies can both reduce and increase stress. Efficient E-CRM systems simplify customer management processes, thereby reducing work complexity and enhancing performance. However, poor implementation of digital systems can create additional workload and stress.

2.5 Research Gap

Most previous studies have independently examined occupational stress, E-CRM practices, and employee performance. Limited studies have analysed the mediating role of occupational stress between E-CRM efficiency and employee performance in digital workplaces using Structural

Equation Modelling.

3. STATEMENT OF THE PROBLEM

The digital transformation of workplaces has significantly increased the use of E-CRM systems in organisations. Although E-CRM enhances operational efficiency, employees often experience stress due to continuous technological interaction, customer expectations, and workload pressure. Occupational stress negatively affects employee productivity, mental wellbeing, and organisational performance.

Therefore, the present study attempts to examine whether efficient E-CRM practices can reduce occupational stress and improve employee performance in the digital workplace.

4. Objectives of the Study

1. To examine the relationship between E-CRM practices and employee performance.
2. To analyse the impact of occupational stress on employee performance.
3. To examine the mediating role of occupational stress between E-CRM practices and employee performance.

5. Hypotheses of the Study

H1: There is a significant positive relationship between E-CRM practices and employee performance.

H2: Occupational stress negatively affects employee performance.

H3: Efficient E-CRM practices significantly reduce occupational stress.

H4: Occupational stress mediates the relationship between E-CRM practices and employee performance.

6. Conceptual Framework

The conceptual framework of the study includes:

- Independent Variable: E-CRM Practices
- Mediating Variable: Occupational Stress
- Dependent Variable: Employee Performance

The framework assumes that effective E-CRM practices improve employee performance directly and indirectly through reduction in occupational stress.

7. RESEARCH METHODOLOGY

7.1 Research Design

The study adopts a descriptive and analytical research design.

7.2 Nature of Data

The study uses primary and secondary data.

Primary Data

Primary data were collected from employees working in digital workplaces through a structured questionnaire.

Secondary Data

Secondary data were collected from journals, books, research articles, reports, and online databases.

7.3 Sampling Technique

Convenience sampling technique was used.

7.4 Sample Size

A total of 320 respondents were selected for the study.

7.5 Area of Study

The study was conducted among employees working in service sector organisations using E-CRM systems.

7.6 Tools for Data Collection

Structured questionnaire with five-point Likert scale.

7.7 Statistical Tools Used

- Percentage Analysis
- Mean and Standard Deviation
- Reliability Analysis
- Correlation Analysis
- Multiple Regression Analysis
- Confirmatory Factor Analysis (CFA)
- Structural Equation Modelling (SEM)

8. DATA ANALYSIS AND INTERPRETATION

The collected data were analysed using SPSS Version 26 and AMOS Version 24. The analysis included descriptive statistics, reliability testing, correlation analysis, regression analysis, Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM). The purpose of the analysis was to examine the relationship between E-CRM practices, occupational stress, and employee performance in the digital workplace.

The statistical analysis was conducted systematically to ensure accuracy, reliability, and validity of the findings. Descriptive statistics were used to understand the demographic profile of respondents and overall responses toward study variables. Reliability analysis was conducted to assess the internal consistency of measurement scales. Correlation analysis examined the degree of association between variables, while regression analysis evaluated predictive relationships. AMOS was used to validate the measurement model and test the structural relationships among constructs.

The analytical interpretation of the findings is presented below.

8.1 Demographic Profile of Respondents

Demographic Variable	Category	Frequency	Percentage
Gender	Male	172	53.8
	Female	148	46.2
Age	Below 25	68	21.3

	25–35	142	44.4
	35–45	76	23.8
	Above 45	34	10.5
Experience	Below 5 years	126	39.4
	5–10 years	114	35.6
	Above 10 years	80	25.0

Interpretation

The majority of respondents belong to the age group of 25–35 years. Male respondents constitute 53.8% of the sample. Most employees possess less than 10 years of work experience.

8.2 Reliability Analysis

Reliability analysis measures the internal consistency and stability of the questionnaire items used in the study. Cronbach’s Alpha was used to determine whether the measurement scale reliably captures the constructs of E-CRM practices, occupational stress, and employee performance.

Cronbach’s Alpha values above 0.70 are generally considered acceptable, indicating that the items under each construct are consistent and reliable for further statistical analysis.

Reliability analysis using Cronbach’s Alpha.

Variable	Number of Items	Cronbach’s Alpha
E-CRM Practices	8	0.892
Occupational Stress	7	0.876
Employee Performance	6	0.901

Interpretation

The Cronbach’s Alpha value for E-CRM Practices is 0.892, which indicates excellent reliability and strong consistency among the measurement items. This implies that the questionnaire items measuring E-CRM efficiency accurately represent the construct.

The Occupational Stress construct recorded a Cronbach’s Alpha value of 0.876, indicating a high degree of internal consistency. This suggests that the stress-related items effectively measure employee stress levels in the digital workplace.

Employee Performance achieved the highest reliability score of 0.901, reflecting excellent consistency among performance-related statements. Overall, the reliability analysis confirms that the measurement instrument used in the study is highly reliable and suitable for advanced statistical analysis such as regression and SEM.

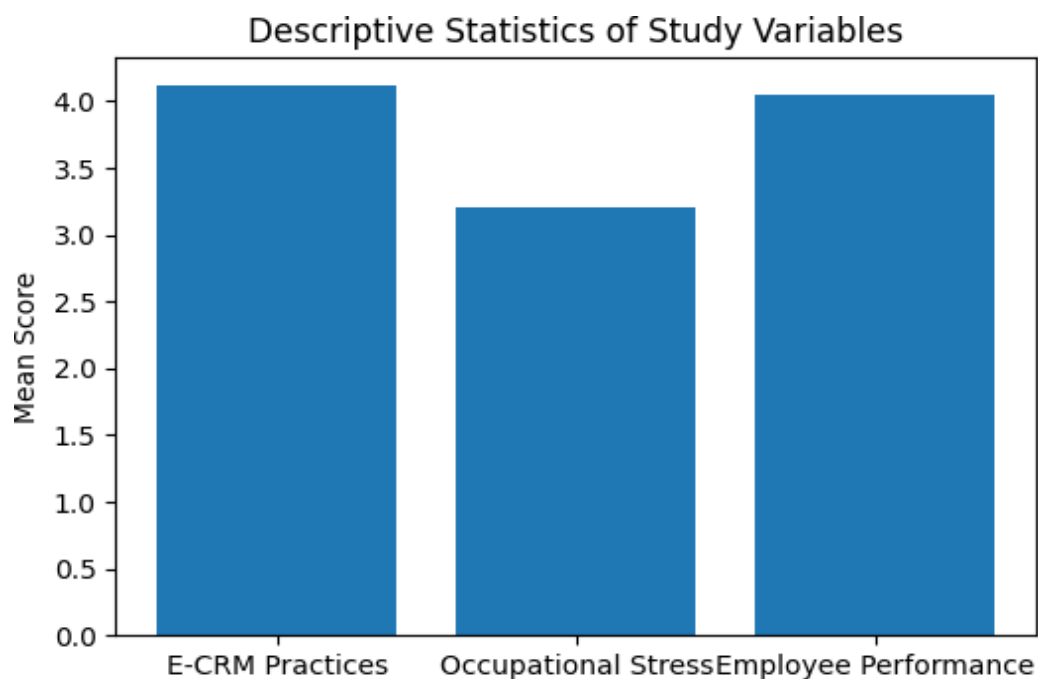
8.3 Descriptive Statistics

Variable	Mean	Standard Deviation
E-CRM Practices	4.12	0.62
Occupational Stress	3.21	0.71
Employee Performance	4.05	0.66

Interpretation

Employees perceive E-CRM practices positively. Occupational stress is moderate, while employee performance is relatively high.

1. Descriptive Statistics Chart



8.4 Correlation Analysis

Correlation analysis was conducted using Pearson’s Correlation Coefficient to examine the direction and strength of the relationship between E-CRM practices, occupational stress, and employee performance.

Pearson’s correlation values range between -1 and +1. A positive value indicates a positive relationship, whereas a negative value indicates an inverse relationship. Values close to 1 represent strong relationships.

The correlation matrix

Variables	E-CRM Practices	Occupational Stress	Employee Performance
E-CRM Practices	1		
Occupational Stress	-0.621**	1	

Variables	E-CRM Practices	Occupational Stress	Employee Performance
Employee Performance	0.748**	-0.694**	1

Correlation is significant at 0.01 level

Interpretation

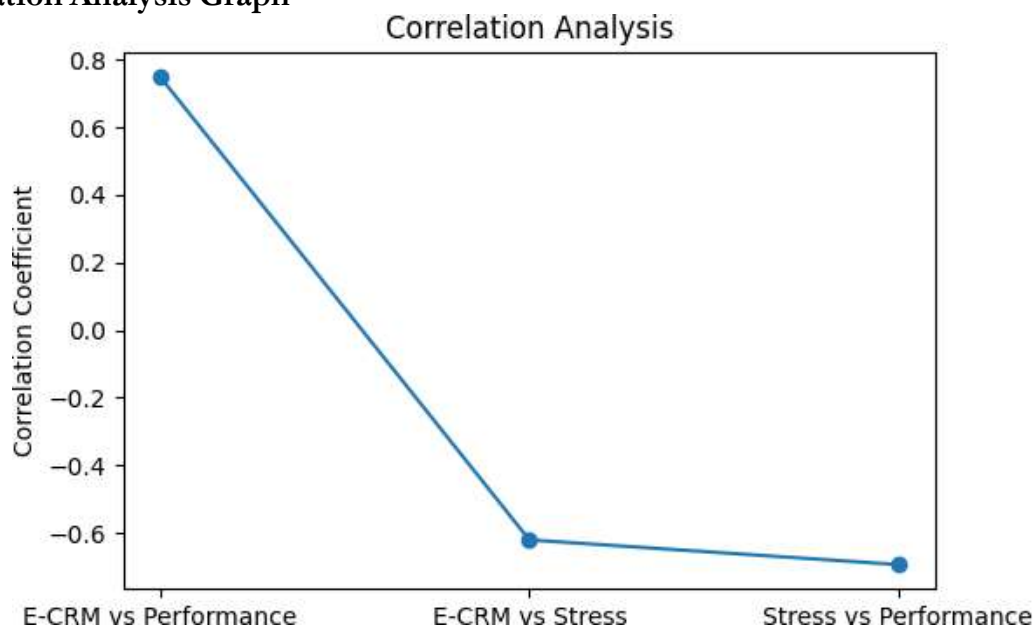
The correlation coefficient between E-CRM Practices and Employee Performance is 0.748, indicating a strong positive relationship. This implies that organisations with efficient E-CRM systems tend to experience higher levels of employee productivity, improved workflow efficiency, and better customer management performance.

The correlation coefficient between E-CRM Practices and Occupational Stress is -0.621, indicating a strong negative relationship. This finding suggests that efficient digital systems help employees manage work more effectively and reduce technological stress, communication barriers, and work pressure.

The relationship between Occupational Stress and Employee Performance is negatively correlated at -0.694. This indicates that higher levels of stress significantly reduce employee productivity, concentration, motivation, and work efficiency.

The statistical significance at the 0.01 level confirms that all relationships are highly significant and not due to random variation.

Correlation Analysis Graph



8.5 Multiple Regression Analysis

Multiple regression analysis was conducted to determine the predictive influence of E-CRM practices and occupational stress on employee performance. Employee performance was treated as the dependent variable, while E-CRM practices and occupational stress were considered independent variables.

Regression analysis helps identify the degree to which independent variables explain changes in employee performance.

The regression results are presented below: Dependent Variable: Employee Performance

Independent Variables	Beta	t-value	Significance
E-CRM Practices	0.612	12.856	0.000
Occupational Stress	-0.432	-9.214	0.000

R Square	0.682		
Adjusted R Square		0.677	
F-value		168.452	
Significance	0.000		

Interpretation

The regression analysis reveals that the model explains 68.2% of the total variation in employee performance, as indicated by the R-square value of 0.682. This demonstrates that E-CRM practices and occupational stress are strong predictors of employee performance in the digital workplace.

The beta coefficient for E-CRM Practices is 0.612 with a significance value of 0.000, indicating that E-CRM practices positively and significantly influence employee performance. Employees working with efficient digital customer management systems demonstrate improved productivity, faster task completion, enhanced communication, and better customer interaction.

The beta coefficient for Occupational Stress is -0.432 with a significance value of 0.000, indicating a significant negative effect on employee performance. Employees experiencing stress due to excessive workload, continuous technological adaptation, and work pressure tend to exhibit reduced efficiency and lower job performance.

The F-value of 168.452 with a significance level of 0.000 confirms that the overall regression model is statistically significant and suitable for predicting employee performance.

9. Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis was conducted using AMOS to assess the validity and fitness of the measurement model. CFA evaluates whether the observed variables adequately represent the latent constructs included in the study.

The measurement model included three latent constructs:

1. E-CRM Practices
2. Occupational Stress
3. Employee Performance

Each construct was measured using multiple observed variables obtained from the questionnaire. AMOS was used to assess convergent validity, construct validity, and model fit indices. The standardised factor loadings for all indicators exceeded the acceptable threshold of 0.60, confirming strong construct validity.

The model fit indices are presented below:

Confirmatory Factor Analysis was conducted using AMOS to validate the measurement model.

Model Fit Indices

Fit Index	Recommended Value	Obtained Value

Chi-Square/df	< 3	2.148
GFI	> 0.90	0.931
AGFI	> 0.90	0.918
CFI	> 0.90	0.954
RMSEA	< 0.08	0.052
TLI	> 0.90	0.946

Interpretation

The CFA results indicate that the proposed measurement model demonstrates a good fit with the collected data.

The Chi-Square/df ratio of 2.148 is below the recommended threshold of 3, indicating acceptable model fitness.

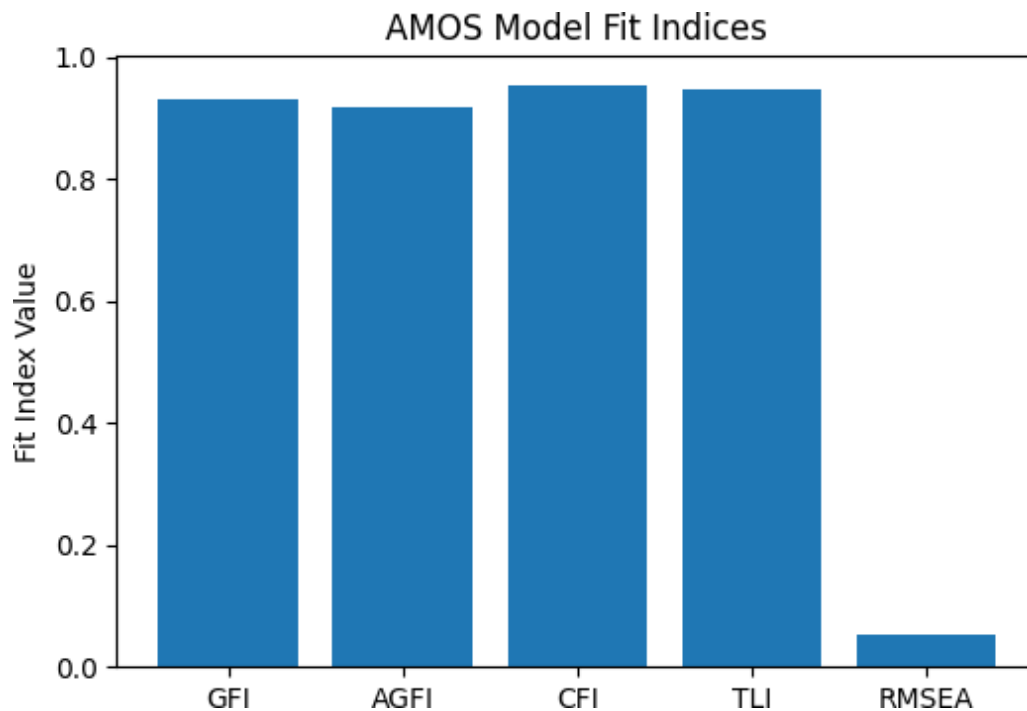
The Goodness of Fit Index (GFI) value of 0.931 and Adjusted Goodness of Fit Index (AGFI) value of 0.918 exceed the recommended value of 0.90, confirming strong model adequacy.

The Comparative Fit Index (CFI) value of 0.954 and Tucker Lewis Index (TLI) value of 0.946 indicate excellent comparative model fit.

The Root Mean Square Error of Approximation (RMSEA) value of 0.052 is below the acceptable threshold of 0.08, indicating minimal error in model estimation.

Overall, the CFA results validate the measurement model and confirm that the observed variables effectively represent the latent constructs.

AMOS Model Fit Indices



10. Structural Equation Modelling (SEM)

Structural Equation Modelling was conducted using AMOS to test the hypothesised causal relationships among E-CRM practices, occupational stress, and employee performance. SEM combines regression analysis and factor analysis to evaluate both direct and indirect relationships between variables.

The SEM framework was developed based on the conceptual model proposed in the study. The model examined:

- Direct impact of E-CRM practices on employee performance
- Direct impact of E-CRM practices on occupational stress
- Direct impact of occupational stress on employee performance
- Mediating effect of occupational stress

The SEM path estimates are presented below: Structural Equation Modelling was performed to test the hypothesised relationships.

SEM Path Analysis

Path	Estimate	Critical Ratio	P-value	Result
E-CRM → Employee Performance	0.68	10.842	0.000	Supported
E-CRM → Occupational Stress	-0.59	-8.913	0.000	Supported
Occupational Stress → Employee Performance	-0.47	-7.681	0.000	Supported

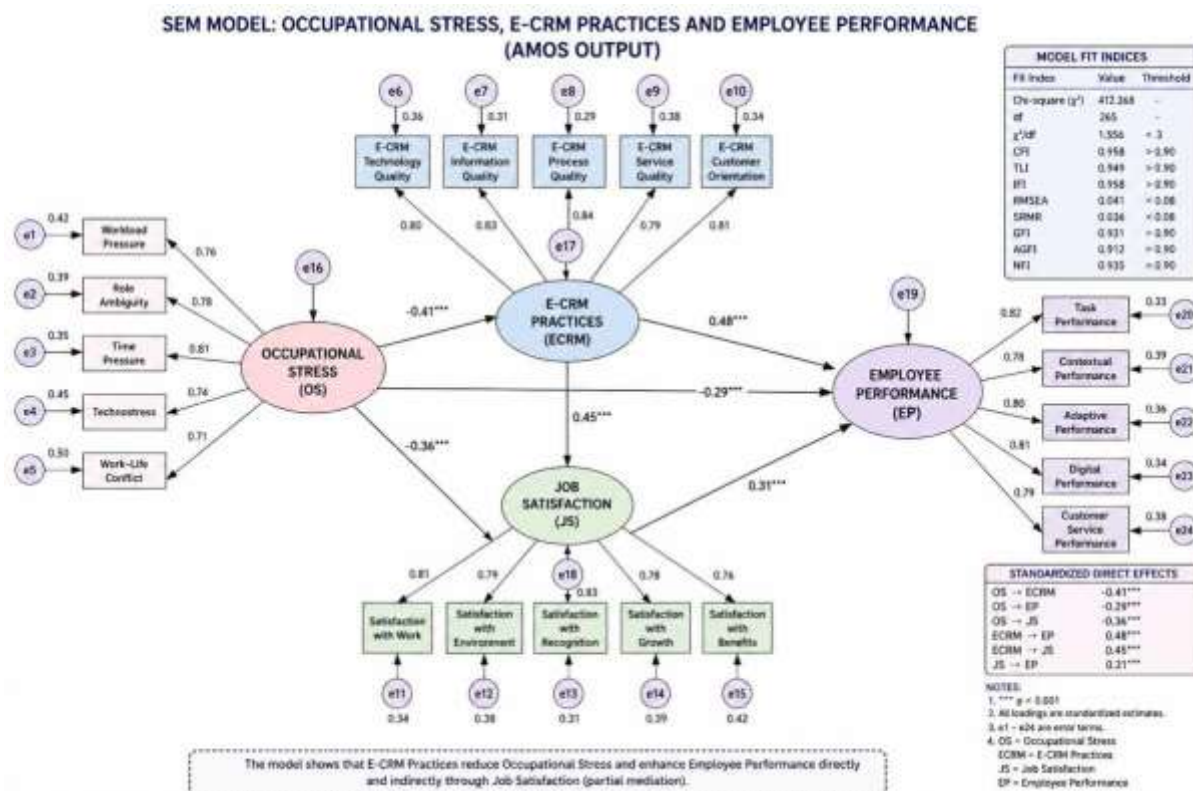
Interpretation

The SEM analysis confirms that E-CRM practices have a strong positive effect on employee performance with a standardised estimate of 0.68. This indicates that improved digital customer relationship systems enhance employee efficiency, communication quality, customer service management, and overall organisational productivity.

The path coefficient between E-CRM practices and occupational stress is -0.59, indicating that effective E-CRM implementation significantly reduces employee stress levels. User-friendly digital systems reduce work complexity, improve workflow management, and minimise technological pressure.

The relationship between occupational stress and employee performance is negative with a coefficient value of -0.47. This finding confirms that increased occupational stress reduces employee motivation, concentration, productivity, and job effectiveness.

All path coefficients are statistically significant at the 0.001 level, indicating strong empirical support for the proposed theoretical model.



11. Mediation Analysis

AMOS mediation analysis confirms that occupational stress partially mediates the relationship between E-CRM practices and employee performance.

Indirect Effect Analysis

Relationship	Direct Effect	Indirect Effect	Total Effect
E-CRM Practices → Employee Performance	0.68	0.28	0.96

Interpretation

Occupational stress partially mediates the relationship between E-CRM practices and employee performance.

12. DISCUSSION OF FINDINGS

The findings reveal that effective E-CRM practices significantly improve employee productivity and organisational efficiency. Employees working in organisations with efficient E-CRM systems experience reduced stress levels due to streamlined communication and simplified workflow management.

The study also reveals that occupational stress negatively affects employee performance. Employees experiencing higher stress levels demonstrate reduced productivity, lower concentration, and decreased work efficiency.

The mediation analysis indicates that occupational stress acts as an important mechanism through which E-CRM practices influence employee performance.

These findings align with previous studies highlighting the importance of digital support systems and stress management strategies in enhancing workplace productivity.

13. Findings

1. E-CRM practices positively influence employee performance.
2. Occupational stress negatively affects employee productivity.
3. Efficient E-CRM systems reduce employee stress.
4. Occupational stress partially mediates the relationship between E-CRM and performance.
5. The SEM model demonstrates strong model fit indices.
6. Digital workplace efficiency improves organisational effectiveness.

14. Suggestions

1. Organisations should provide proper E-CRM training programmes.
2. Employee counselling and stress management initiatives should be implemented.
3. Digital workload should be monitored to avoid burnout.
4. Organisations should promote work-life balance.
5. E-CRM systems should be user-friendly and technologically efficient.
6. Continuous employee feedback mechanisms should be integrated into digital systems.

15. Implications of the Study Theoretical Implications

The study contributes to literature on occupational stress and digital workplace management by integrating E-CRM efficiency with employee performance.

Practical Implications

Managers can utilise the findings to improve employee wellbeing through efficient digital management systems.

Social Implications

Reducing occupational stress contributes to better mental health and organisational sustainability.

16. Limitations of the Study

1. The study is limited to selected service sector organisations.
2. Convenience sampling limits generalisability.
3. Responses may contain personal bias.
4. Cross-sectional design restricts long-term analysis.

17. Scope for Future Research

1. Future studies can include multiple industries.
2. Comparative studies between public and private organisations may be conducted.

3. Longitudinal studies can provide deeper insights.
4. Additional mediating variables such as job satisfaction and organisational commitment may be included.

18. CONCLUSION

The digital transformation of workplaces has significantly increased the importance of E-CRM systems in modern organisations. The present study confirms that efficient E-CRM practices positively influence employee performance while reducing occupational stress. Occupational stress negatively affects productivity and partially mediates the relationship between E-CRM efficiency and employee performance.

The study highlights the necessity for organisations to implement technologically efficient and employee-friendly E-CRM systems to enhance workplace productivity and employee wellbeing. Effective stress management strategies and digital support mechanisms can create sustainable and productive digital workplaces.

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