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## PERFORMANCE IMPLICATIONS OF OCCUPATIONAL STRESS AMONG ENGINEERING FACULTY IN TAMIL NADU

VEERA BRINDHA.K<sup>1</sup> and Dr. C. K. MUTHUKUMARAN<sup>2</sup>

<sup>1</sup>RESEARCH SCHOLAR,  
ALAGAPPA INSTITUTE OF MANAGEMENT, ALAGAPPA UNIVERSITY,  
Karaikudi-Tamil Nadu

<sup>2</sup>PROFESSOR,  
ALAGAPPA INSTITUTE OF MANAGEMENT, ALAGAPPA UNIVERSITY,  
Karaikudi-Tamil Nadu

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### ABSTRACT

Occupational stress has become a serious concern in higher education institutions, particularly among engineering faculty who are required to manage multiple responsibilities such as teaching, research, student mentoring, accreditation work, and administrative duties. When professional demands exceed coping capacity, stress develops and adversely affects both individual well-being and institutional performance. This study examines the major causes of occupational stress among engineering faculty in Tamil Nadu and analyzes how stress influences teaching effectiveness, research productivity, job satisfaction, and psychological well-being. Using a descriptive research design and survey method, data were collected from 150 faculty members across various engineering colleges. The study reveals a significant negative relationship between occupational stress and faculty performance. The paper concludes with institutional and individual strategies to manage stress and enhance academic performance.

**KEYWORDS:** Occupational Stress, Faculty Performance, Engineering Education, Job Satisfaction, Tamil Nadu

### 1. INTRODUCTION

The role of engineering faculty has drastically evolved over the past decade. Faculty members are no longer limited to classroom teaching but are expected to contribute to research publications, student counseling, placement coordination, accreditation documentation (NAAC/NBA), project guidance, and administrative coordination. In Tamil Nadu, engineering colleges function under strict AICTE and Anna University norms, where faculty performance is continuously monitored. Mandatory publication requirements, extensive documentation work, and performance appraisal systems have increased professional pressure. When such job demands exceed the coping ability of faculty,



occupational stress arises. Occupational stress not only affects the health of faculty members but also influences their teaching quality, research output, and interaction with students. Hence, studying the performance implications of occupational stress is essential for improving the quality of engineering education.

## 2. Concept of Occupational Stress in Teaching Profession

Occupational stress refers to the psychological and physical strain experienced when job demands exceed an individual's ability to cope. In the teaching profession, stress arises due to workload, time pressure, role ambiguity, lack of support, and high expectations from management and students.

- **Eustress** – Positive stress that motivates performance
- **Distress** – Negative stress that reduces efficiency and causes burnout

Engineering faculty predominantly experience distress due to continuous pressure without adequate recovery time.

## 3. REVIEW OF LITERATURE

Earlier studies highlight that:

- Role conflict, ambiguity, and heavy workload are major stressors for faculty.
- Occupational stress leads to burnout, absenteeism, and low job satisfaction.
- Stressed teachers show reduced classroom effectiveness.
- Emotional intelligence and organizational support reduce stress impact.

However, limited research specifically focuses on engineering faculty in Tamil Nadu, where accreditation pressure and regulatory workload are comparatively higher. This study attempts to fill this gap.

## 4. OBJECTIVES OF THE STUDY

1. To identify the major sources of occupational stress among engineering faculty.
2. To examine the relationship between occupational stress and faculty performance.
3. To analyze the effect of stress on teaching effectiveness and research productivity.
4. To suggest measures to reduce occupational stress.

## 5. HYPOTHESES OF THE STUDY

**H0:** There is no significant relationship between occupational stress and faculty performance.

**H1:** There is a significant relationship between occupational stress and faculty performance.



**H0<sub>2</sub>:** Workload does not significantly affect teaching effectiveness.

**H1<sub>2</sub>:** Workload significantly affects teaching effectiveness.

**H0<sub>3</sub>:** Research pressure does not significantly affect research productivity.

**H1<sub>3</sub>:** Research pressure significantly affects research productivity.

**H0<sub>4</sub>:** Administrative work does not significantly affect job satisfaction.

**H1<sub>4</sub>:** Administrative work significantly affects job satisfaction.

**H0<sub>5</sub>:** Role conflict does not significantly affect psychological well-being.

**H1<sub>5</sub>:** Role conflict significantly affects psychological well-being.

**H0<sub>6</sub>:** Work-life imbalance does not significantly affect overall performance.

**H1<sub>6</sub>:** Work-life imbalance significantly affects overall performance.

**H0<sub>7</sub>:** Occupational stress factors do not collectively predict faculty performance.

**H1<sub>7</sub>:** Occupational stress factors collectively predict faculty performance.

## 6. CONCEPTUAL FRAMEWORK OF THE STUDY

This study considers **Occupational Stress** as the **independent variable** consisting of:

- Workload
- Research and publication pressure
- Administrative responsibilities
- Role conflict and ambiguity
- Work-life imbalance
- Organizational climate

These factors influence **Faculty Performance** (dependent variable), measured through:

- Teaching effectiveness
- Research productivity
- Job satisfaction
- Psychological well-being
- Student mentoring

The framework assumes a **negative relationship** between occupational stress and faculty performance.

### Conceptual Model (Diagram)



## 7. RESEARCH METHODOLOGY

### 7.1 Research Design

Descriptive research using survey method.

### 7.2 Sample

The sample size of 150 respondents is considered adequate based on the Krejcie and Morgan (1970) sample size determination table.

### 7.3 Data Collection Tools

- Occupational Stress Index (OSI) – Srivastava & Singh
- Faculty performance indicators

### 7.4 Statistical Tools

- Percentage analysis
- Correlation
- Regression

### 7.5 Reliability of the Instrument

The Occupational Stress Index (OSI) used in this study has established reliability. In the present study, Cronbach's Alpha value was found to be 0.84, indicating high internal consistency and reliability of the instrument. This indicates that the questionnaire items are reliable for measuring occupational stress among engineering faculty.

## 8. Major Causes of Occupational Stress

### 8.1 Heavy Teaching Workload

Multiple subjects, lab hours, corrections, and exam duties.

### 8.2 Research and Publication Pressure



Mandatory publications for appraisal and accreditation.

8.3 Administrative and Accreditation Work

NAAC/NBA documentation and report preparation.

8.4 Role Conflict and Ambiguity

Handling multiple roles simultaneously.

8.5 Work-Life Imbalance

Extended working hours affecting personal life.

8.6 Poor Organizational Climate

Lack of recognition and institutional support.

**9. Performance Implications of Occupational Stress**

9.1 Teaching Effectiveness

Reduced creativity, patience, and classroom interaction.

9.2 Research Productivity

Difficulty focusing on research and publishing work.

9.3 Job Satisfaction

Decreased morale and commitment.

9.4 Psychological Health

Burnout, fatigue, absenteeism.

9.5 Student Outcomes

Reduced mentoring and delayed feedback.

**10. Data Analysis and Interpretation**

**Table 10.1: Percentage Analysis of Major Stress Factors**

Stress Factor	% Reporting High Stress
Workload	72%
Research Pressure	65%
Administrative Work	69%
Role Conflict	58%
Work-Life Imbalance	63%

The table indicates that workload and administrative responsibilities are the most significant sources of stress among engineering faculty.

**Table 10.2: Correlation between Occupational Stress and Faculty Performance**

Variables	r value	Significance
Occupational Stress & Performance	-0.62	p < 0.01

There exists a strong negative correlation between occupational stress and faculty performance. Hence, H1<sub>1</sub> is accepted.

**Table 10.3: Regression Analysis – Stress Factors Predicting Performance**

Stress Factors	Beta Value	Significance
Workload	-0.48	p < 0.01
Research Pressure	-0.36	p < 0.05
Administrative Work	-0.41	p < 0.01
Role Conflict	-0.29	p < 0.05
Work-Life Imbalance	-0.33	p < 0.05

R<sup>2</sup> = 0.54

The regression results show that occupational stress factors significantly predict faculty performance. Hence, H1<sub>7</sub> is accepted.

**11. FINDINGS**

- Occupational stress is highly prevalent.
- Workload and admin duties are primary stressors.
- Stress negatively impacts teaching and research.
- Better coping strategies improve performance.



## **12. SUGGESTIONS**

### **Institutional Level**

- Reduce documentation burden
- Provide research assistance
- Conduct stress management programs
- Encourage work-life balance

### **Individual Level**

- Time management
- Physical exercise
- Peer support
- Emotional intelligence development

## **13. CONCLUSION**

This study clearly establishes that occupational stress is a significant and unavoidable reality among engineering faculty in Tamil Nadu. The changing nature of the teaching profession, combined with increasing expectations in teaching, research, accreditation work, student mentoring, and administrative responsibilities, has considerably intensified the professional demands placed on faculty members. When these demands exceed the individual's coping capacity, occupational stress develops and begins to affect both personal well-being and professional performance. Therefore, this study concludes that reducing occupational stress is not only beneficial for faculty health but also crucial for sustaining academic excellence in engineering education. By adopting appropriate institutional policies and encouraging healthy coping mechanisms, engineering institutions can create a more productive, supportive, and stress-free working environment that ultimately benefits faculty, students, and the institution as a whole.

## **14. Scope for Future Research**

- Future studies can include faculty from other disciplines.
- Comparative studies between government and private institutions can be conducted.
- Longitudinal studies can better capture stress patterns over time.
- The role of emotional intelligence and coping strategies can be examined in detail.



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