



Coping competencies for managing stress among women employees working in manufacturing industries in Bangalore

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Abstract

Stress can be defined as a combination of physiological, psychological, and behavioural responses that arise when individuals are continuously exposed to one or more stressors within an organizational environment. In workplace settings, prolonged exposure to stress can lead to physical symptoms such as muscle tension, increased heart rate, and high blood pressure. These physiological reactions may further contribute to several health complications including gastrointestinal, cardiovascular, respiratory, musculoskeletal, skin, immune, and psychological disorders. The main objectives of the study are to study the impact of organizational support mechanisms and self-motivated coping competence on stress management of women employees working in manufacturing industries in Bangalore city. 402 women respondents were targeted to collect the data from the manufacturing companies in Bangalore city. Structured questionnaire was issued to collect the required data. Both primary and secondary data was used for the study purpose. Multiple linear regression analysis was used as statistical tool with the help of SPSS. The finding revealed that, both organizational support mechanisms and self-motivated coping competence are significantly influencing managing the stress among the women employees working in manufacturing industries in Bangalore city.

Keywords: Organizational support mechanisms, self-motivated coping competence, stress management, women employees, manufacturing industries

Introduction

The word 'Stress' originally emerged in physics and then it was taken by psychology and life science. As in physics we talk about pressure, stress or forces, all these terms can be used interchangeably; however, they have different meanings (Singh, G. 2023) ^[1]. The term stress as used in physics and now in psychology basically means that human beings are inclined to resist the external forces acting upon them like other physical objects and bodies. Pressure has a positive connotation; it helps in improving performance (Elliot, M. 2003) ^[2]. The worldwide evidence shows that women have been exceedingly performing well in various circles of exercises like governmental issues, political issues, administration, social work etc. Presently, have begun diving into industry additionally and running their endeavors effectively (Selye, H. 1975) ^[3]. The prevalence of stress issues in industrial workforces is an increasingly important issue that needs to be addressed. Stress issues can be caused by a variety of factors, including long hours, inadequate infrastructure, inconsistent job roles and lack of support, which can lead to an increased risk of psychosocial difficulties amongst industrial workers (Swaminath, P., & Rajkumar S, D. 2013) ^[4]. Manufacturing industries are particularly susceptible to stress issues as women workers are often exposed to extreme stress, noise, and hazardous conditions, all of which can cause undue stress and anxiety, leading to a decreased sense of wellbeing (Krishnan, D. 2014) ^[5].

Reasons for Stress among the Women Employees

An organization with a high level of absenteeism, rapid staff turnover, deteriorating industrial and customer relations, a

worsening safety record, or poor quality control is suffering from organizational stress. Stress is the "wear and tear" our bodies experience as we adjust to our continually changing environment; it has physical and emotional effects on us and can create positive or negative feelings (Parveen, N. 2009) ^[6]. Stress in individual is defined as any interference that disturbs a persons' healthy mental and physical wellbeing. It occurs when the body is required to perform beyond its normal range of capabilities (Swathi, V., & Reddy, M. 2016) ^[7]. Stress produces numerous physical and mental symptoms which vary according to each individual's situational factors. These can include physical health decline as well as depression. (Narayan, G. 2005) ^[8] identified major factors influencing the work-life balance of women professionals in India including role conflict, lack of recognition, organizational politics, gender discrimination, caregiving responsibilities, health concerns, time management challenges, and inadequate social support (Ahmad S.and Xavier S. 2010) ^[9]. Family issues, personal issues, financial issues, family obligations, lack of family time, trouble caring for dependents, and lack of social acknowledgment are some of the work-life balance issues affecting performance (Anderson C. 1992) ^[10]. The physical factors that contribute to workplace stress include overcrowding, a lack of personal space, excessive noise, extremes of heat and cold, the pressure of radiation and harmful substances, air pollution, safety risks, and bad lighting (Das M. 2000) ^[11]. Promotion, demotion, management attitude, deficiencies of staff, long working hours and transfer have been identified as the major changes in a person's life and career that contribute to occupational stress (Ericson M. 2010) ^[12]. Stress is a critical part of a

worker's overall wellbeing, however, due to a variety of complex reasons such as a lack of awareness or a lack of priority placed on healthcare policy, it is often neglected (Frese M. *et al.* 1997) ^[13]. Companies may view the cost of providing comprehensive stress management for its employees as an unnecessary expense, overlooking the potential long-term effects on the workforce, the profitability of the company and the industry as a whole (Iyer M. R. 2016) ^[14]. The inadequate stress management can lead to higher absenteeism due to the effects of stress issues on a worker's ability to complete tasks, have a negative effect on the morale of a workforce, or result in a lack of job satisfaction, all of which can be detrimental to the productivity of a company (Jennings J. E. and McDougald M. S. 2007) ^[15]. In addition, research has also demonstrated that stress and a lack of adequate stress management can lead to an increase in accidents in the workplace, which can result in additional costs for the company (Diabah, G., & Amfo, N. A. A. 2015) ^[16]. Research also indicates that workers with stress conditions are more likely to have problems such as depression and anxiety, psychological problems, and physical health issues, all of which can lead to an increase in the cost of health care (Mukherjee, M., & Saha, B. 2009) ^[19]. Moreover, a lack of sufficient stress management may also contribute to a company's poor reputation, impacting their ability to attract new customers, and therefore profits (Mani, V. 2013) ^[17]. Due to the current economic climate, many individuals are becoming increasingly health conscious, and the lack of investment in employee stress management may not be viewed as a desirable or attractive prospect to potential customers (Morimoto, H., *et al.*, 2015) ^[18].

Stress Coping Mechanism

Stress management refers to the wide spectrum of techniques and psychotherapies aimed at controlling a person's levels of stress, especially chronic stress, usually for the purpose of improving everyday functioning (Priya, & Jacob, J. M. 2020) ^[20]. Stress produces numerous physical and mental symptoms which vary according to each individual's situational factors. These can include physical health decline as well as depression (Ravichandran and Umayal 2023) ^[21]. The process of stress management is named as one of the keys to a happy and successful life in modern society (Thirumalai Kumar, P., *et al.*, 2022) ^[22]. Although life provides numerous demands that can prove difficult to handle, stress management provides a number of ways to manage anxiety and maintain overall well-being. Despite stress often being thought of as a subjective experience, levels of stress are readily measurable, using various physiological tests, similar to those used in polygraphs (Venugopal, V., *et al.*, 2020) ^[23]. Many practical stress management techniques are available, some for use by health professionals and others, for selfhelp, which may help an individual reduce their levels of stress, provide positive feelings of control over one's life and promote general well-being (Venugopal, D., *et al.*, 2021) ^[24, 26]. Evaluating the effectiveness of various stress management techniques can be difficult, as limited research currently exists. Consequently, the amount and quality of evidence for the various techniques varies widely (Bharath, M. 2023) ^[25]. Some are accepted as effective treatments for use in psychotherapy, whilst others with less evidence favoring them are considered alternative therapies. Many

professional organizations exist to promote and provide training in conventional or alternative therapies (Omprashanth, R., *et al.*, 2021). Stress at work Change in working practices, such as the introduction of new technology or the alternation of new technology or the alternative of targets, my cause stress, or stress may be built into an organizations' structure (Hanumegowda, P. K., *et al.*, 2021) ^[27]. Organizational stress can be measured by absenteeism and quality of work Stress affects organisation as well as the individual working within. For effective management of stress issues in industrial workforces, it is essential that employers take a proactive approach to identify and address potential risk factors in the workplace (Dutta, M. 2021) ^[28]. Ideally, manufacturers should create a comprehensive stress management program that focuses on eight key elements: education and training, wellness programming, emotional health monitoring, flexible work arrangements, health and safety protocols, counselling and psychological services, and health care benefits (Chaudhuri, S., *et al.*, 2020) ^[29]. Education and training should provide employees with a greater understanding of stress issues and the importance of stress management. Wellness programming should be designed to offer emotional and physical activities, such as yoga or stress reducing exercises, that enable individuals to manage their stress (Rawal, D. M. 2023) ^[30]. Emotional health monitoring should involve ongoing assessments of the employees' emotional states, attitudes, and general wellbeing (Nanjunda, D. C. 2021) ^[31]. Flexible work arrangements should be created that provide employees with the ability to manage their workloads in a way that best fits their individual physiology and lifestyle. Health and safety protocols should be established to ensure a protective, safe environment that minimizes health risks for employees (Chakraborty, T., *et al.*, 2020) ^[32]. Counselling and psychological services should be made available to employees with stress concerns, and healthcare benefits should address any financial barriers to access these services (Yuan, D., *et al.*, 2022) ^[33]. These measures will help to promote stress in industrial workers. However, in order to be effective, employers must ensure that the implementation of such measures is comprehensive, consistent, and universal across the entire workforce, regardless of demography, as this will ensure a safe and supportive working environment for all staff (Mayya, S. S., *et al.*, 2021) ^[34]. Stress issues within the industrial workforce of manufacturing industries is an increasing problem, yet one that is often overlooked and neglected by employers when drawing up healthcare policies (Banu, J., & Baral, R. 2022) ^[36]. Most significantly, an effective stress management program includes comprehensive training for supervisors and employees concerning how to recognize and respond to the signs of stress issues, providing access to resources such as counseling or referrals, and addressing existing stress issues in a timely manner (Menon, A., & Schmidt-Vogt, D. 2022) ^[37]. Such a program can ensure that employees feel supported, enabling individuals to have better control over their stress and allowing them to reach their full potential. The sufficient stress management for workers in manufacturing industries is essential for ensuring the productivity of a workforce, and the profitability and reputation of a company (Basak, S. 2021) ^[38]. While it may be viewed as an extra expense in the short-term, the potential long-term benefits for workers, companies and the industry, warrant further consideration and investment

toward comprehensive stress management programs (Menon, A., & Schmidt-Vogt, D. 2022) ^[37]. The novelty of the proposed research work has the management of stress in the industrial workforce has been a growing area of concern and is gaining increasing attention from employers due to the significant costs associated with stress issues in the workplace (Singh, G. 2023) ^[1]. A key development in this area is the increasing focus on proactive strategies for managing stress in order to reduce the likelihood of illness or injury and improve job performance (Elliot, M. 2003) ^[2]. Additionally, there has been an increased recognition of the importance of stress promotion and culture-change initiatives designed to reduce stigma, provide access to help when needed, create supportive work environments and promote general wellbeing (Selye, H. 1975) ^[3]. Through a combination of targeted education, policy and procedure implementation, and implementation of stress interventions and supports, employers are able to build and maintain a mentally healthy workforce (Swaminath, P., & Rajkumar S, D. 2013) ^[4]. Finally, advances in technology have allowed for the development of user-friendly digital wellness platforms and tools that can be used to monitor, assess, and manage stress in the workplace (Krishnan, D. 2014) ^[5].

Literature Review

Stress has become a critical concern for both employees and organizations, particularly in labour-intensive sectors such as manufacturing industries where employees are exposed to demanding work conditions (Parveen, N. 2009) ^[6]. To effectively manage workplace stress, organizations must implement structured coping mechanisms and encourage continuous employee development (Swathi, V., & Reddy, M. 2016) ^[7]. Training interventions related to organizational policies, work procedures, and stress management techniques play an important role in helping employees adapt to workplace challenges (Narayan, G. 2005) ^[8]. Organizations that provide regular training programmes and skill development initiatives enable employees to better understand their job responsibilities and reduce uncertainty, which in turn lowers work-related stress (Ahmad S. and Xavier S. 2010) ^[9]. Work stress also arises from excessive workload, time pressure, and the difficulty of maintaining work-life balance. This situation is particularly evident among women employees who are often required to balance professional responsibilities along with family roles (Anderson C. 1992) ^[10]. When organizations recognize these challenges and encourage supportive practices such as flexible work arrangements and role clarity, employees are better able to balance their professional and personal commitments (Das M. 2000) ^[11]. Consequently, employee performance can be influenced by stress in both positive and negative ways. While moderate levels of stress may motivate employees to perform efficiently, excessive stress can negatively affect productivity, health, and job satisfaction (Ericson M. 2010) ^[12]. Organizational factors such as bureaucratic procedures, organizational politics, and lack of participation in decision-making are also significant contributors to workplace stress (Frese M. *et al.* 1997) ^[13]. Stress management techniques therefore become essential in enabling employees to identify potential stressors and minimize their impact. Effective stress management includes several components such as cognitive-behavioural strategies, meditation, relaxation techniques, mind-body practices, and time management skills (Iyer M. R. 2016) ^[14]. These approaches help employees regulate emotional

responses and improve their ability to cope with workplace pressures. Research indicates that stress management strategies can generally be categorized into action-oriented, emotion-oriented, and acceptance-oriented approaches (Jennings J. E. and McDougald M. S. 2007) ^[15]. Women employees often rely on self-motivated coping strategies such as seeking social support, improving time management practices, and engaging in relaxation activities to manage workplace stress (Diabah, G., & Amfo, N. A. A. 2015) ^[16]. At the same time, organizational support mechanisms such as flexible working arrangements, employee assistance programmes, counselling services, and supportive leadership significantly contribute to reducing stress levels among employees (Mani, V. 2013) ^[17]. With the advancement of technology, organizations are increasingly integrating digital tools to support employee well-being. For instance, AI-based systems and chatbots can analyse workplace communication patterns and identify potential stress-inducing factors such as negative feedback, workplace conflicts, harassment, or gender bias (Morimoto, H., *et al.*, 2015) ^[18]. Similarly, time management tools such as Google Calendar and Asana assist employees in organizing tasks and prioritizing work responsibilities. Wellness applications like Calm and Headspace provide guided meditation and stress relief exercises, while fitness trackers such as Fitbit help monitor physical activity, sleep patterns, and stress levels, thereby promoting overall well-being (Mukherjee, M., & Saha, B. 2009) ^[19]. Effective coping mechanisms are often considered one of the most practical ways to manage workplace stress in modern organizations (Priya, & Jacob, J. M. 2020) ^[20]. Women employees frequently face additional challenges due to cultural expectations and limited participation in decision-making processes both at the household and workplace levels. Furthermore, women are often expected to perform multiple roles simultaneously, leading to role overload, fatigue, and emotional exhaustion (Ravichandran and Umayal 2023) ^[21]. Such conditions can significantly affect job satisfaction and overall well-being if appropriate coping strategies are not adopted. Understanding the physiological, psychological, and behavioural dimensions of stress is therefore essential for developing effective stress management strategies (Thirumalai Kumar, P., *et al.*, 2022) ^[22]. Since stress cannot be completely eliminated from everyday life, organizations must focus on managing it effectively through strategic human resource management practices. Human resource departments should regularly measure stress levels among employees and implement appropriate interventions to reduce its impact (Venugopal, V., *et al.*, 2020) ^[23]. Organizations can adopt several measures to reduce stress among women employees in manufacturing industries (Venugopal, D., *et al.*, 2021) ^[24, 26]. These include promoting decentralized and participative decision-making structures, improving communication channels, clarifying job roles and responsibilities, and providing employees with greater job control. A positive organizational culture that encourages innovation, learning, and open communication can also significantly reduce stress levels (Bharath, M. 2023) ^[25]. Improving workplace infrastructure and providing modern equipment can further enhance employee efficiency and reduce frustration. Regular training in the use of technological tools and software can help employees adapt to changing work environments (Omprashanth, R., *et al.*, 2021). In addition, organizations can offer counselling services to assist

employees in dealing with work-related and personal challenges that contribute to stress. Career development programmes, educational opportunities, and skill enhancement initiatives are also important in empowering women employees (Hanumegowda, P. K., *et al.*, 2021) ^[27]. Wellness initiatives such as yoga sessions, relaxation exercises, and lifestyle modification programmes can further support employees in managing stress in a constructive manner (Dutta, M. 2021) ^[28]. Informal social gatherings and team-building activities can strengthen interpersonal relationships among employees and contribute to a more supportive work environment. Another important organizational strategy is conducting stress audits to identify the major sources of stress and assess their impact on employees (Chaudhuri, S., *et al.*, 2020) ^[29]. Based on these findings, organizations can design suitable stress management strategies tailored to the needs of their workforce. Several companies in India have already introduced work–life balance initiatives such as flexible working hours, job sharing, telecommuting, and childcare support to assist employees in balancing professional and personal responsibilities (Rawal, D. M. 2023) ^[30]. In addition, effective job design, realistic organizational goals, fair incentive systems, job rotation, and job enrichment programmes can significantly enhance employee motivation and reduce stress (Basak, S. 2021) ^[31]. Organizations should also ensure safe and unbiased work environments, effective hiring and orientation processes, and regular appreciation of employee achievements (Nanjunda, D. C. 2021) ^[31]. Encouraging social interaction and teamwork among employees can further strengthen workplace relationships and improve morale. Ultimately, successful stress management requires a culture of openness, honesty, and mutual respect between employees and management (Chakraborty, T., *et al.*, 2020) ^[32]. When organizations actively support both organizational coping mechanisms and self-motivated stress management strategies, women employees in manufacturing industries are better equipped to manage workplace challenges (Yuan, D., *et al.*, 2022) ^[33]. Failure to address workplace stress can lead to negative outcomes such as absenteeism, health problems, workplace accidents, and employee burnout (Mayya, S. S., *et al.*, 2021) ^[34]. Therefore, integrating organizational support systems with individual coping strategies is essential for improving employee well-being, job satisfaction, and organizational productivity (Banu, J., & Baral, R. 2022) ^[36].

Research Problem

In recent years, women employees working in manufacturing industries in Bangalore have been experiencing increasing levels of job stress due to demanding work schedules, production targets, workplace safety concerns, role conflict, gender-based challenges, and work–life imbalance. Although manufacturing industries play a vital role in economic development, limited attention has been given to understanding how women employees cope with occupational stress within this sector. While various coping mechanisms—such as organizational support systems and self-motivated strategies—are believed to reduce stress, there is insufficient empirical evidence examining their effectiveness among women employees in manufacturing industries in Bangalore. Furthermore, the relationship between different coping mechanisms and the level of stress remains unclear. Therefore, the core research problem is to identify and analyze the coping mechanisms

adopted by women employees in manufacturing industries in Bangalore and to examine how these mechanisms influence and manage their level of job stress.

Need for the Study

In modern society, stress management has become essential for leading a healthy, balanced, and productive life. Women employees in manufacturing industries face multiple occupational and personal challenges that increase their stress levels. The manufacturing sector in Bangalore is rapidly expanding, leading to increased workload, production pressure, shift duties, and work–life imbalance, which significantly affect women employees. High stress levels among women employees may result in reduced productivity, absenteeism, low job satisfaction, and poor organizational performance. Therefore, addressing stress is important not only for individuals but also for industries. Although stress is a common issue in industrial environments, limited research has specifically focused on coping mechanisms adopted by women employees in manufacturing industries in Bangalore. Identifying effective coping strategies—both organizational and self-motivated—can help in reducing anxiety, improving mental well-being, and enhancing work performance. Linking coping strategies with stress levels will provide empirical evidence on which methods are more effective in managing job stress. The findings of the study can help management formulate supportive policies, welfare measures, and stress management programs specifically designed for women employees. Therefore, the study is necessary to understand the stress levels of women employees and to examine the coping mechanisms that can effectively manage and reduce stress in manufacturing industries in Bangalore.

Research Objectives

1. To explore the impact of organizational support mechanisms on managing women employees Stress in manufacturing industries in Bangalore city.
2. To examine the influence of impact of self-motivated coping competence on managing women employees stress in manufacturing industries Bangalore city.
3. To provide the suitable recommendation and suggestions for managing the women employees Stress in manufacturing industries.

Hypothesis

H₀: There is no significant impact of organizational support mechanisms on managing women employees Stress in manufacturing industries in Bangalore city.

H₁: There is a significant impact of organizational support mechanisms on managing women employees Stress in manufacturing industries in Bangalore city.

H₀: There is no significant influence of impact of self-motivated coping competence on managing women employees stress in manufacturing industries Bangalore city.

H₂: There is a significant influence of impact of self-motivated coping competence on managing women employees stress in manufacturing industries Bangalore city.

Research Methodology

The present study adopts a descriptive research design to examine the coping competencies used for managing stress among women employees working in manufacturing

industries in Bangalore city. Both primary and secondary data were used for the study. Primary data were collected through a structured questionnaire administered to women employees. The survey was conducted using both online and offline modes to ensure better response and coverage. In addition, personal interviews were conducted with the management of manufacturing companies and women employees to gain deeper insights into workplace stress and coping practices. The research objectives were formulated based on organizational stress management mechanisms and self-motivated coping strategies adopted by women employees. The data were measured using a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) to capture respondents' perceptions.

Sample Design

Bengaluru is a major manufacturing hub with over 315 large-scale and 211 medium-scale industries in the urban district, covering sectors like aerospace, biotech, and IT. There are thousands of manufacturers in the region, with databases listing over 7,650 companies in Bangalore/Karnataka and over 670 specifically highlighted in top company lists. The study covered the Major Industrial Areas such as Significant manufacturing activity is concentrated in areas like Peenya Industrial Area, Bommasandra Industrial Area, and Bidadi Industrial Area. The Key Sectors focused for the study purpose such as Aerospace, Electronics, Biotechnology, Food Processing, Machine Tools, and Pharmaceuticals are dominant. The companies that are targeted to collect the data such as Major firms include Hindustan Aeronautics Limited (HAL), Bosch Limited, Titan Company Limited, Bharat Electronics Limited (BEL). For the study purpose 402 respondents were targeted including employees at top level middle and lower level. Yeamne sample method was used for determining the sample size.

Scope of the Study

The present study focuses on examining the role of organizational support mechanisms and self-motivated coping competencies in managing stress among women

employees working in manufacturing industries in Bangalore city. The study primarily covers women employees working in selected manufacturing organizations and analyses how organizational practices such as flexible work arrangements, health and safety measures, recreation facilities, and wellness programs influence stress management. In addition, the research evaluates the effectiveness of individual coping strategies such as maintaining social relationships with colleagues, simplifying work tasks, practicing meditation and yoga, and engaging in social interactions. The study is limited to manufacturing industries and considers only women employees as respondents to understand their stress management practices in the workplace. The findings of the study provide insights for organizational managers, HR professionals, and policymakers to develop effective stress management programs and supportive workplace policies that enhance the well-being, productivity, and overall job satisfaction of women employees in industrial sectors.

Data Analysis

The data collected from women employees working in manufacturing industries in Bangalore city were analyzed using regression analysis with the help of SPSS statistical software. Regression analysis was applied to examine the relationship between the independent variables—organizational support mechanisms and self-motivated coping competencies—and the dependent variable, women employees' stress management. This statistical technique helps to determine the significance and strength of the impact of these coping factors on stress levels and to identify which variables contribute significantly to managing stress among women employees.

H₀: There is no significant impact of organizational support mechanisms on managing women employees stress in manufacturing industries in Bangalore city.

H₁: There is a significant impact of organizational support mechanisms on managing women employees stress in manufacturing industries in Bangalore city.

Table 1: Organizational support mechanisms for managing women employees Stress

Model Summary						
Model	R	R Square	Adjusted R Square		Std. Error of the Estimate	
1	.942 ^a	.886	.883		.38874	
ANOVA ^b						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	458.810	12	38.234	253.008	.000 ^a
	Residual	58.785	389	.151		
	Total	517.595	401			
Coefficients ^a						
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.256	.099		-2.578	.010
	Promote general well-being/ Wellness programming	.203	.041	-.193	-4.982	.000
	Counselling and psychological services	.017	.038	.020	.453	.651
	Flexible work arrangements	.271	.033	.324	8.088	.000
	Ensure multiple roles with equal commitment	.400	.037	.426	10.757	.000
	Implement workplace communications	.052	.049	.050	1.052	.293
	Provide Job Security	.022	.044	.023	.506	.613
	Clarifying job roles/ distributing responsibilities.	.070	.036	.077	1.928	.055
Healthy & Safe work environment	.136	.030	.147	4.537	.000	

	Providing recreation hours.	.107	.045	.091	2.365	.019
	Education and training	.007	.030	.007	.231	.817
	Emotional health monitoring	-.103	.028	-.100	-3.688	.000
	Health and safety protocols/ Medical check-up	.230	.023	.235	9.816	.000
a. Dependent Variable: Women Employees stress Management						

1. Model Summary

The R value (0.942) indicates a very strong relationship between organizational support mechanisms and stress management among women employees. The R Square value (0.886) shows that 88.6% of the variation in women employees' stress management is explained by the organizational coping competency variables included in the model. The Adjusted R Square (0.883) confirms that the model remains highly reliable even after adjusting for the number of predictors. The standard error of estimate (0.38874) is low, indicating that the regression model provides a good fit to the data.

2. ANOVA (Model Significance)

The ANOVA results indicate that the regression model is statistically significant. The F value (253.008) with p-value (0.000) is less than the significance level of 0.05. This confirms that the independent variables jointly have a significant effect on stress management. Hence, the null hypothesis (H0) stating that there is no significant impact of organizational support mechanisms on managing women employees' stress is rejected, and the alternative hypothesis (H1) is accepted.

3. Coefficient Analysis

The coefficient table explains the individual contribution of each organizational coping competency variable. Significant positive predictors (p < 0.05): Flexible work arrangements ($\beta = 0.324$, p = 0.000) significantly help in managing stress among women employees. Ensuring multiple roles with equal commitment ($\beta = 0.426$, p = 0.000) has the strongest positive influence on stress management. Healthy and safe work environment ($\beta = 0.147$, p = 0.000) significantly reduces stress. Providing recreation hours ($\beta = 0.091$, p = 0.019) positively contributes to stress management. Health and safety protocols/medical check-ups ($\beta = 0.235$, p = 0.000) significantly help in controlling employee stress.

Negative but significant predictors:

Promoting general well-being/wellness programs ($\beta = -0.193$, p = 0.000) and emotional health monitoring ($\beta = -0.100$, p = 0.000) show a significant negative relationship, indicating that ineffective or insufficient implementation of these programs may not adequately reduce stress. Insignificant predictors (p > 0.05): Counselling and psychological services, implementing workplace

communication, providing job security, clarifying job roles and distributing responsibilities, Education and training, these variables do not show a statistically significant impact on managing stress among women employees in the present model.

Overall, the regression results reveal that organizational support mechanisms play a significant role in managing stress among women employees in manufacturing industries in Bangalore city. Among the various strategies, ensuring balanced role commitments, flexible work arrangements, health and safety measures, recreation opportunities, and a safe work environment are the most influential factors in reducing stress levels.

Self-motivated Coping Competence

H₀: There is no significant influence of impact of self-motivated coping competence on managing women employees stress in manufacturing industries Bangalore city.

H₂: There is a significant influence of impact of self-motivated coping competence on managing women employees stress in manufacturing industries Bangalore city.

1. Model Summary

The R value (0.859) indicates a strong relationship between self-motivated coping competencies and stress management among women employees. The R Square value (0.738) shows that 73.8% of the variation in women employees' stress management is explained by the self-motivated coping competency variables included in the model. The Adjusted R Square (0.729) indicates that the model remains reliable after adjusting for the number of predictors. The standard error of estimate (0.64005) suggests a reasonable level of prediction accuracy of the regression model.

2. ANOVA (Model Significance)

The ANOVA results indicate that the regression model is statistically significant. The F value (91.105) with p-value (0.000) is less than the significance level of 0.05. This confirms that the independent variables collectively have a significant influence on stress management. Therefore, the null hypothesis (H0) stating that there is no significant influence of self-motivated coping competence on managing women employees' stress is rejected, and the alternative hypothesis (H2) is accepted.

Table 2: Self-motivated Coping Competence for managing women employees Stress

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.859 ^a	.738	.729	.64005		
ANOVA ^b						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	447.875	12	37.323	91.105	.000 ^a
	Residual	159.361	389	.410		
	Total	607.236	401			
Coefficients ^a						

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.646	.161		4.000	.000
Find Social Security/relationship with colleagues	.369	.081	.341	4.537	.000
Involving in creative activity	.105	.069	.092	1.516	.130
Figure out ways to simplify things	.381	.060	.409	6.349	.000
Task prioritization and reminders	.032	.060	.035	.536	.592
Use time management tools	.051	.070	.050	.736	.462
Guided meditation/ yoga and breathing exercises.	.283	.080	.251	3.538	.000
Use AI-driven fitness trackers.	.089	.073	-.084	-1.228	.220
Make sure to have adequate hours of sleep	.166	.059	-.168	-2.792	.005
Consistent Work-life balance	.295	.073	-.233	-4.029	.000
Get together and Fun/ social interaction	.224	.049	.201	4.593	.000
Plan and develop career	.067	.047	.060	1.430	.154
Maintain Quality in life style	.161	.042	-.152	-3.798	.000

a. Dependent Variable: Women Employees stress Management

3. Coefficient Analysis

The coefficient table shows the individual contribution of each self-motivated coping competency. Significant positive predictors ($p < 0.05$): Finding social security/relationships with colleagues ($\beta = 0.341$, $p = 0.000$) significantly helps women employees manage stress. Figuring out ways to simplify tasks ($\beta = 0.409$, $p = 0.000$) has a strong positive influence on stress management.

Guided meditation, yoga, and breathing exercises ($\beta = 0.251$, $p = 0.000$) significantly reduce stress levels. Getting together for fun and social interaction ($\beta = 0.201$, $p = 0.000$) positively contributes to stress management.

Significant but negative predictors: Adequate hours of sleep ($\beta = -0.168$, $p = 0.005$), Consistent work-life balance ($\beta = -0.233$, $p = 0.000$) and Maintaining quality lifestyle ($\beta = -0.152$, $p = 0.000$). These variables are statistically significant but show a negative relationship, indicating variations in perception or implementation among respondents.

Insignificant predictors ($p > 0.05$): Involving in creative activity, Task prioritization and reminders, Use of time management tools, Use of AI-driven fitness trackers, Planning and developing career these factors do not show a statistically significant influence on managing stress among women employees in the present model.

The regression results reveal that self-motivated coping competencies significantly influence stress management among women employees in manufacturing industries in Bangalore city. Factors such as maintaining good relationships with colleagues, simplifying tasks, practicing meditation and yoga, and engaging in social interactions play an important role in reducing stress levels. Therefore, strengthening self-motivated coping strategies can help women employees effectively manage workplace stress.

Findings

The regression results reveal a strong relationship between organizational support mechanisms and stress management, with an R value of 0.942, indicating a very high level of association. The R^2 value of 0.886 shows that 88.6% of the variation in women employees' stress management is explained by organizational coping competency factors, demonstrating the strong explanatory power of the model. The ANOVA results ($F = 253.008$, $p < 0.05$) confirm that organizational support mechanisms have a statistically significant impact on managing stress, leading to the rejection of the null hypothesis. Among organizational

coping strategies, ensuring multiple roles with equal commitment, flexible work arrangements, health and safety protocols, a healthy work environment, and recreation facilities were found to have a significant positive influence on stress management among women employees. The analysis also indicates that counselling services, workplace communication, job security, education and training, and role clarification did not show a statistically significant influence on stress management in the present model.

The regression analysis of self-motivated coping competencies indicates a strong relationship ($R = 0.859$) between personal coping strategies and stress management among women employees. The R^2 value of 0.738 shows that 73.8% of the variation in stress management is explained by self-motivated coping competency factors, indicating substantial explanatory power. The ANOVA results ($F = 91.105$, $p < 0.05$) confirm that self-motivated coping competencies significantly influence stress management, leading to the rejection of the null hypothesis. Important self-motivated coping strategies that significantly reduce stress include maintaining good relationships with colleagues, simplifying work tasks, practicing meditation/yoga and breathing exercises, and engaging in social interactions and recreational activities. Some personal coping factors such as creative activities, time management tools, AI-driven fitness trackers, task prioritization, and career planning did not show a significant influence on stress management among the respondents. It is understood that, both organizational support mechanisms and individual coping strategies play a vital role in managing stress among women employees in manufacturing industries, with organizational competencies having a relatively stronger explanatory influence.

Suggestions

1. Manufacturing organizations should provide flexible working hours, shift adjustments, and leave policies to help women employees effectively balance their professional and personal responsibilities.
2. Industries should ensure proper workplace safety measures, ergonomic working conditions, and hygienic facilities to reduce physical and psychological stress among women employees.
3. Regular medical check-ups, occupational health programs, and workplace safety training should be implemented to improve the overall well-being of women employees.

4. Management should ensure proper allocation of tasks and responsibilities so that women employees can manage multiple roles without excessive workload or pressure.
5. Organizations can introduce recreational activities, break periods, relaxation zones, and employee engagement programs to help employees reduce work-related stress.
6. Wellness initiatives such as stress management workshops, mental health awareness programs, and fitness activities should be designed and properly implemented.
7. Organizations should encourage team building, peer support, and positive relationships among colleagues to create a supportive work culture.
8. Women employees should be encouraged to practice yoga, meditation, and breathing exercises, which have been found effective in reducing stress levels.
9. Policies supporting work-life balance, such as childcare support, family-friendly policies, and adequate leave benefits, should be introduced.
10. Organizing social gatherings, cultural events, and informal team activities can help employees relax and build stronger interpersonal relationships.
11. Organizations should conduct training programs on time management, stress coping techniques, and personal development to help employees handle workplace challenges effectively.
12. Management should establish policies that focus on women employees' well-being, equality, and psychological support to ensure a stress-free and productive work environment.

Limitations of the Study

1. The study is confined to women employees working in manufacturing industries located only in Bangalore city, which may limit the generalization of the findings to other regions or industries.
2. Although the study collected responses from selected respondents, the sample size may not fully represent all women employees working in the manufacturing sector.
3. The research focuses only on manufacturing industries, and therefore the findings may not be applicable to women employees working in other sectors such as IT, services, banking, or education.
4. The study mainly relies on primary data collected through questionnaires, which may involve personal bias, perception differences, or response inaccuracies.
5. Due to limited time for data collection, the researcher could not include a larger sample or cover more organizations in the study.
6. The study mainly focuses on organizational support mechanisms and self-motivated coping competencies, while other possible stress factors such as family support, socio-economic conditions, and cultural influences were not extensively examined.
7. The research is based on data collected at a particular period of time, and therefore it does not capture changes in stress levels or coping mechanisms over a longer duration.
8. The analysis is based on self-reported perceptions of women employees, which may vary depending on their

individual experiences, attitudes, and personal circumstances.

Directions for Future Research

Future research can extend the present study by examining stress coping competencies among women employees across different industrial sectors such as IT, banking, healthcare, and service industries to enable broader comparisons. Studies can also be conducted in other metropolitan and rural regions of India to understand regional variations in stress levels and coping mechanisms. Further research may adopt longitudinal research designs to examine how coping strategies influence stress management over a longer period of time. Researchers can also explore the role of family support, socio-cultural factors, leadership style, and organizational culture in shaping stress coping behaviors among women employees. In addition, future studies may integrate advanced technologies such as digital wellness platforms, AI-based stress monitoring tools, and workplace analytics to understand their effectiveness in reducing stress. Comparative studies between male and female employees could also provide deeper insights into gender-specific coping strategies and help organizations design more inclusive and effective stress management programs.

Conclusion

Effectively managing and reducing stress among employees is paramount for any organization, as occupational stress can directly or indirectly impede organizational growth. The diminished efficiency and capabilities resulting from occupational stress have a direct impact on the organization's progress. Stress can be both positive and negative; at a moderate level, it enhances productivity, while intense and continuous stress can lead to mental and physical health issues, depression, anxiety, increased turnover and absenteeism. To combat stress, organizations should implement measures such as clarifying job roles, distributing responsibilities, maintaining a healthy work environment and providing recreation hours. Individuals can also contribute by practicing meditation, yoga and breathing exercises. Stress management is crucial for the mutual growth and development of both the organization and its employees. Transforming distress into eustress, a moderate form of stress that encourages employees to work beyond their capabilities for the organization's growth, requires motivation, guidance and a focus on maintaining a healthy work-life.

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