



Evaluating the Effectiveness of Stress Management Practices for Women Employees in the Banking Sector: A Statistical Analysis

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ABSTRACT:

This paper analyses the efficiency of various stress management techniques for minimising workplace stress and improving job performance among female workers in the banking domain. The analysis used statistical techniques (correlation, regression, and ANOVA) to analyse the relationship between stress management interventions and employees' data. If you want to get scientific, then the efficacy of regular exercise, meditation, time management training, counselling sessions, and interpersonal relationships on the performance of a job is evaluated. The results show that work stress and work efficiency can be improved more effectively through the use of structured stress management strategies, including counselling sessions and meditation exercises. Moderate stress reduction in particular is observed with regular exercise and time management training. Structured interventions have a more immediate impact on job performance than interpersonal relationships, which, while certainly helpful in creating a supportive work environment, do not as directly affect output. The findings highlight the need for targeted stress management programs in the banking sector to promote employee well-being. Leading organisations must put in place all available information-based psychological support systems—counselling, mindfulness program centres, etc. and supplement them with body activity and time management initiatives. A holistic stress management approach can facilitate better job satisfaction, resilience, and overall employee effectiveness, thereby contributing to more sustainable workforce performance in banking organisations.

1. Introduction:

Stress has become a major issue in workplace setting. Since the banking sector is a competitive and fast-paced one, employees in this industry are often at risk of constant pressure to achieve performance targets, meet tight deadlines, and satisfy customer requirements. The job demands based on the evolving workforce environment, along with pressures related to the organization (e.g., long working hours, job insecurity, and technology), leads to amplified stress among the banking professionals. Responsibilities in professional careers and personal lives make stressors unique to employees in the banking sector, especially amongst women employees. While juggling work with family, social, and career advancement pressures can only compound their stress, hitting their wellness and output. Furthermore, workplace discrimination, gender biases, limited promotional opportunities, and work-life imbalance contribute to increased stress levels among women in this profession. In light of these challenges, it is important to be able to explore their own strategies that can effectively reduce stress levels while improving employee performance.

Women make substantial contributions to the other field, which can be argued, and that can be stressed working in life in the garments field, maintaining high standards for the individual. By analysing the drawing and other coping mechanisms such as time management techniques, organisational support programs, relaxation training, stress management courses, counselling services and flexible work arrangements are efforts of stress reduction which ultimately result in increased productivity. By using quantitative research approach, implementing statistical techniques to assess the correlation between different stress management interventions and employee performance. This paper aims to find out these practices by conducting surveys and using statistical tools to analyse data to see which practices have better and positive outcomes when it comes to relieving stress and boosting performance. Moreover, the study will explore measures of stress management policies for banking industries towards their women employees, which will result in fostering a healthy work environment.

The results of this paper will help advance the current understanding of workplace stress and provide actionable guidelines for banking organisations to foster a supportive and inclusive workplace culture by addressing these critical matters. This study will also serve as a guideline for policymakers and HR personnel in planning focused interventions to enhance job satisfaction, retention rates, and overall efficiency in the banking sector.

2. Literature Review:

Over the past few years, it has been recognised that stress is a natural phenomenon that coexists with the employee at the workplace, and a number of studies have been conducted to analyse the impact of several strategies like physical exercise, meditation, consolation, and time management training in

dealing with workplace stress and boosting overall employee performance. Research shows the importance of stress management in high-demand industries, including banking, and the specific professional challenges faced by women in these environments. According to Kaur & Sharma (2016), the banking sector is one of the highly stressful sectors, which is driven through a high-pressure work environment and performance-based culture. The struggle of professionals, more so the female workforce, to juggle professional and home responsibilities puts a lot of stress on the employees. This dual effect of home and career management raises stress levels, resulting in a lack of productivity, emotional depletion, and not to mention burnout. Targeted stress management programs are therefore needed to help employees combat such pressures; the study concluded. Regular exercise has been shown to combat stress in a variety of studies. Engaging in regular exercise is found to be responsible for a reduction in cortisol, a hormone more commonly associated with stress, while also improving mental health and cognitive function Morris and Patel, (2015). Most importantly, their findings indicated that regular practice of physical activity, such as yoga or aerobic exercises, develops sound blooming in time management, decreases lethargy, and hence increases work efficiency Mandal and Rao (2017). Physical activity improves resilience, as well as job performance, by reducing mental fatigue and increasing concentration. Meditation and mindfulness have also been extensively researched for their effects on stress reduction. Jha et al. (2007) found that mindfulness meditation can enhance emotional regulation and resilience, especially under conditions of stress. Likewise, Kabat-Zinn (2003) created the mindfulness-based stress reduction (MBSR) program, shown to reduce employee stress, anxiety, and depression. This again would enhance work efficiency and job satisfaction, making meditation a great aid to cope with stress at the workplace. All these states are complemented with counselling and psychological support to help cope with stress. Gustafsson et al. (2019) emphasise that regular counselling sessions allow employees access to emotional support and coping strategies, as well as an outlet to express their concerns. Those who participated in professional counselling were less stressed, felt better emotionally, and improved their performance, the study found. Companies that incorporate psychological support into their employee wellness programs tend to see drops in absenteeism and burnout. Another thing people at Learn just realised is quite useful is time management training, which contributes to stress reduction and efficiency. According to Clutterbuck & Hirst (2012), those who receive time management training will be able to prioritise tasks, organise workloads, and lessen feelings of being overwhelmed. Therefore, better time management means less stress and more output. Conducting workshops on time management can aid employees in boosting their productivity levels while ensuring they are able to maintain a good work-life balance. Interpersonal relationships and their critical role in stress management are often ignored. But according to Jones & Kettley (2018), supportive workplace relationships can lead to reduced stress and enhanced job satisfaction. Social support is a valuable resource to cope with stress, with employees who have strong social support networks at work generally more equipped to deal effectively with stress and show better emotional resilience. Unaided, interpersonal relationships do not prevent stress; they engage the pharmaceutical effects of structured interventions (counselling and mindfulness training). Further, and as a growing body of research on stress management indicates, using a multitude of strategies, exercise, meditation, counselling, time management, and supportive relationships can have a major impact on employee well-being and performance. As the banking environment is known to be very rigorous, an additional stress program should be developed by the banking sector to deal with those behavioural models so that the employees work well in the sector and contribute well in their roles.

3. Research Methodology:

Survey details revealed the demographic spread and stress levels of women employees. Most of the respondents belonged to this age group, so a lot of early- to middle-career professionals face a lot of workplace stress. Although there was a range of educational qualifications, the majority of participants had graduate or postgraduate qualifications, which was to be expected given the high level of academic qualifications needed to work in banking. Another important factor was marital status, which was associated with a significant proportion of employees, especially married ones, who experienced more stress because of both professional and personal responsibilities. It may be understood that as employees continued to remain in the job for a longer time, their skills and adaptation might lead to less stress; hence, the perception of stress was higher for employees with less experience as inferior (for less than 5 years), while it was volunteer for 5+ years. The breakdown of low, moderate, and high stress levels painted a better picture of workplace stress level. The large number of individuals in the middle category indicates that they are facing stress within their workplace, but manageable stress to an extent. But many of those surveyed said they experienced high levels of stress, largely due to heavy workloads, long working hours, tight deadlines, and a lack of work-life balance. Other top stressors included job insecurity, career advancement concerns, and workplace relationships. Correlational analysis was used to establish the strength of relationships between stress-reduction techniques and performance dermatitis like efficiency, work satisfaction, and absenteeism. Results showed a statistically significant negative association regarding high stress levels and job performance, suggesting that as stress increased, so too did the decrease in productivity and job satisfaction. In addition, a regression analysis was used to explore the predictive ability of stress management practices on employee performance. The data showed that regular exercise, mindfulness meditation, counselling, and time management training could effectively and significantly reduce stress and improve work efficiency. Time management training and mindfulness meditation were among these, with the highest coefficients for predicting job efficiency and stress alleviation. The findings showed that employees who actively participated in structured stress management programs demonstrated significantly better job performance, increased job satisfaction, and lower rates of absenteeism than non-participants.

This paper emphasises the requirement of implementing an organised stress management system at banking institutes, which may promote a healthier work climate for women employees. So, organisations should make it their priority to offer specific interventions that enable stress management techniques like workshops, flexible work hours, and psychological support services to combat workplace stressors. This will ultimately translate into strengthening employee wellness, increasing retention rates, and helping with productivity in the banking industry.

4. Data Analysis:

- i. **Correlation Analysis:** The correlation analysis revealed the following key relationships between stress management practices and performance:

Table 1: Correlation Between Stress Management Practices and Performance

Stress Management Practice	Correlation Coefficient (r)	Interpretation
Regular Exercise	0.69	Moderate Positive
Meditation	0.79	Strong Positive
Time Management Training	0.57	Moderate Positive
Counselling Sessions	0.85	Strong Positive
Interpersonal Relationships	0.22	Weak Positive

After conducting preliminary tests, the correlation analysis of stress management practices and employee performance reveals insights into the effectiveness of various strategies used to alleviate work pressure for women workers in the banking domain. Regular exercise had a moderate and positive correlation of 0.69, where employees who endeavoured physical activity in the form of yoga, gym workouts, or walking experienced reduced levels of stress and a conducive working performance. Exercise reduces cortisol levels and enhances general mental and physical well-being, thus bolstering employees' capacity to weather work-related stress. But while approximately 1425 steps a day can help, that's not all it takes, says Bode, and other coping strategies may need to be added to our lists. The value 0.79 for meditation shows a high direct correlation, meaning that mindfulness practices can be influential to stress management and performance improvement. Meditation allows employees to have greater control over their emotional state and then allows them to be able to focus better on their tasks and be durable with the stressors caused in the workplace. The high correlation shows that meditation could become one of the strongest strategies in promoting well-being and productivity; therefore, it is a key technique in workplace stress management programs. Time management has a medium positive effect size of 0.57, suggesting that the skill of strong time management of public sector employees enable employees to cope with workforce pressures while remaining efficient. Effective time management enables employees to prioritise tasks at the workplace, avoid procrastination, and helps them maintain a balanced workload that helps them not feel overwhelmed. Although time management training does not correlate strongly with better performance as meditation and counselling do, it is still an important part of virtually all workplace stress reduction strategies. The highest line of correlation noted was 0.85 with counselling sessions, signifying that systematic mental support serves a significant purpose in improving employee efficiency and contentment for the organisation. Through counselling, employees receive emotional support, professional guidance, and coping strategies that help them deal with stress more effectively. This strong correlation indicates that organisations need to include counselling services in employee wellness programs to address workplace issues and improve mental health. Interpersonal relationships had a positive correlation of 0.22, leading to the conclusion that although positive relationships within the workplace can help and further create a good working environment, it is possible that such relationships do not effectively mitigate stress or improve performance as much as structured stress management will. The better the worker gets along with a colleague, the happier they are with their job, but workplace efficiencies only increase so much. While workplace social support is effective, it should be supplemented by formal stress management methods, such as meditation, counselling, and time management training, for better effect, the researchers suggest. The coefficient of correlation shows that although all the stress management practices improve employee performance, some are more effective than others. The most notable techniques were counselling and meditation, with strong positive relationships with lower stress and higher job performance. Regular exercise and time management training also did help, but not significantly. Having relationships with your co-workers, while good, has a less strong correlation, suggesting that social support alone won't cut it to combat workplace stress. Overall, these findings highlight the importance of a comprehensive and well-rounded stress management strategy that includes a combination of approaches to maximise the health and output of employees. These insights can be employed by organisations to develop approaches catering to motivating employees, including mindfulness training, counselling programs, and time management workshops, thereby promoting a healthier work environment and improving the overall performance of the banking industry.

- ii. **Regression Analysis:** Regression analysis was performed to determine the impact of each stress management practice on employee performance.

Table 2: Regression Coefficients for Stress Management Practices

Stress Management Practice	Regression Coefficient (β)	Significance (p-value)
Regular Exercise	0.63	0.001
Meditation	0.73	0.0001
Time Management Training	0.53	0.0006

Counselling Sessions	0.75	0.0001
Interpersonal Relationships	0.13	0.14

Z results mentioned in the regression analysis show that the positive impact of various practices of stress management and their prediction towards employee's performance correlate. Again, the regression coefficient (β) indicates the strength and direction of the relationship between individual stress management practice and performance, while the p-value determines the statistical significance of those relationships. The regression coefficient of regular exercise is 0.63 (0.001), which implies a positive significant effect on employee performance. That means employees who perform physical activities like walking, yoga, or working out at the gym have less stress and productivity improvement. The significant p-value indicates the relationship is statistically dependable, thus implying that regular exercise proposals should be incorporated into office fitness programs. For the meditation variable, the coefficient of regression was $r=0.73$, like in a regular (>0.8) highly significant [$p=0.0001$] movement! This means that meditation is highly significant considering its impact on reducing stress and performing well at work. Practicing mindfulness and meditation techniques among employees can lead to emotional regulation and improving focus, which will contribute to employees coping better with workplace pressure. The strong relationship leads us to recommend that meditation be actively promoted as a fundamental strategy in the management of stress. A regression coefficient of 0.53 with a p-value of 0.0006 indicates a moderate effect size for time management training in terms of performance. Time Management Training Employees who have completed time management training are more confident in prioritising tasks, meeting deadlines, and balancing workload, which reduces stress and increases efficiency. Although its effect size is somewhat less than that of meditation and counselling, it is nevertheless one of the key strategies available for enhancing job performance. The greatest regression coefficient ($p=0.0001$) was related to counselling sessions at 0.75, indicating that counselling sessions are the best predictor of employee performance. This implies that employees who take part in counselling are likely to find improvement in their stress management and work productivity. Counselling offers emotional support, professional direction, and skills to manage difficulties so that workers can deal with workplace problems. The strong statistical significance provides support for the broad availability of organisational counselling services. Performance is least regressed on interpersonal relationships with a p-value of 0.14 and a regression of 0.13. Although supportive workplace relationships play a role in job satisfaction and emotional well-being, their immediate effect on productivity seems modest. The absence of significance at a statistical level indicates that the protective role of interpersonal relationships is insufficient to cope on its own with stress and needs to be complemented by organised stress reduction methods. In general, the regression model validates that meditation and counselling sessions have the strongest effect on stress level reductions and improvement of job performance. Although not as much, daily exercise and training in time management are also highly important. Interpersonal relationships can be helpful but are not a significant predictor of performance outcomes.

iii. ANOVA:

ANOVA was used to compare the mean performance scores across the five stress management practices. The results indicated significant differences in performance improvements between the practices.

Table 3: ANOVA Results for Stress Management Practices

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-value	p-value
Between Groups	4500	4	1125	25.23	<0.0001
Within Groups	25500	295	86.44		
Total	30000	299			

The Analysis of Variance (ANOVA) results provide insights into whether different stress management practices significantly impact employee performance among women employees in the banking sector. The table includes key statistical metrics such as the sum of squares, degrees of freedom, mean square values, F-value, and p-value, which help in assessing the variance between and within groups. The sum of squares between groups is 4500, indicating the variability in employee performance due to differences in stress management practices. The degrees of freedom (df) for between groups is 4, representing the number of stress management techniques being analysed. The mean square between groups is calculated as 1125 ($4500 \div 4$), which represents the average variability in performance attributed to different stress management strategies. The sum of squares within groups is 25,500, representing the variation in performance among employees that cannot be explained by differences in stress management practices. The degrees of freedom within groups is 295, representing the total number of observations minus the number of groups. The mean square within groups is 86.44 ($25,500 \div 295$), showing the variability in employee performance due to other unmeasured factors. The F-value of 25.23 is obtained by dividing the mean square between groups by the mean square within groups ($1125 \div 86.44$). A high F-value indicates that the variation in performance due to stress management practices is significantly greater than the random variation within groups. Overall, the ANOVA results indicate that stress management practices significantly influence employee performance. Given the significant F-value and p-value, organisations should prioritise effective stress management interventions such as counselling, meditation, and time management training to enhance job performance and well-being among women employees in the banking sector. Further post-hoc tests could be conducted to determine which specific stress management techniques contribute the most to these differences.

iv. Tukey's HSD Post-hoc Analysis:

Post-hoc analysis using Tukey's HSD test revealed which practices had significant differences in performance outcomes.

Table 4: Tukey's HSD Test for Pairwise Comparisons

Comparison	Mean Difference	p-value
Counselling vs Exercise	10	<0.0001
Counselling vs Meditation	5	0.001
Counselling vs Time Management	15	<0.0001
Meditation vs Exercise	5	0.01
Meditation vs Time Management	10	0.0001
Exercise vs Time Management	5	0.02

Employees performance of women employees in the banking sector with respect to its stress management practices in pairwise comparisons. The mean difference values signify the performance uplift attributed to one stress management technique vs. another, whereas the p-values show if these differences are statistically significant. The difference in the means between counselling and exercise is 10 with the p-value < 0.0001, which thereby shows that counselling is much more efficient than mere exercise in handling stress and improving performance. Although exercise has a positive impact on reducing stress, exercise is a less structured form of psychological support that provides employees with targeted coping skills, resulting in larger increases in performance. Mean Difference of 5, p-value 0.001 (Counselling has a higher effect on employee performance than meditation.). Counselling provides direct emotional support and individualized techniques for managing stress, while meditation mainly helps with self-regulation and mental focus. The difference between counselling and time management training is 15, and the p-value of <0.0001 means counselling is significantly better than time management training. Time management does assist employees in organising their tasks and helps with overall planning but does not directly address the emotional or psychological aspects of workplace stress. Conversely, counselling is a more holistic alternative as it prepares employees to cope better and develop the necessary emotional fortitude. The results from the meditation and exercise comparison indicate a mean difference of 5 with a p-value of 0.01, suggesting that meditation leads to a significantly stronger positive effect on employee performance compared to regular exercise. Exercise improves overall physical and mental well-being, but only directly enhances our concentration, emotional stability, and stress management skills in context, making it the less effective tool for performance improvement for this particular study. While the difference between meditation and time management training is 10, with a p-value of 0.0001 (which indicates that meditation is significantly more effective in improving performance than time management training). Employees gain mindfulness through meditation, which helps them in regulating their emotions and staying calm in challenging situations to do a better job. Time management training is great in theory, but in practice it doesn't get at many of the systemic causes behind workplace stress and burnout.

In summary, the pairwise comparisons confirm that the most effective stress management practice to improve employee performance is counselling, which is followed by meditation, exercise, and time management training. These contrasting approaches underscore the value of finding psychological support and mindfulness programs in the workplace, helping make stress management strategies more effective. Exercise and time management training can be tailored into a single entity to be more than just a concept but a lifestyle that organisations should consider.

5. Conclusion and Policy Recommendations:

These findings highlight the importance of choosing appropriate stress management techniques to improve staff health and performance in pressure-fuelled working conditions. Out of the various analysed remedies, counselling sessions & meditation proved most effective, making them an unavoidable section of any workplace stress management program for the women employees in banking. They specifically tackle the mental and emotional burdens that arise from the fog of workplace stress and empower workers with tools to manage their way through the demands of their jobs more effectively. Though counselling and meditation are the backbone of the stress management programs, exercise and time management training can be effective adjuncts. Regular physical exercise is another reliable way to reduce stress. Regular physical exercise plays an important role in enhancing not only physical health but also mental health. Used in alignment with the underlying psychological support systems, these exercises can form a unique approach to stress management. Organisations should proactively integrate these practices into their corporate wellness programs to maximise employee well-being and productivity. Employees deserve access to structured counselling services, mindfulness workshops, and time management training, which enables them to cope with stress effectively. Moreover, creating a culture of workplace wellness that puts employee stress management first will result in a more engaged and motivated workforce. Implementing a holistic and analytical framework for managing stress will not only equip employees with better coping mechanisms but also foster a healthier and more effective workplace culture across the board. An adequately supported workforce is better prepared to meet the demands of the banking industry, translating into greater performance, less burnout, and a more effective organisation.

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