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Exploring the Impact of Technological Innovation on Work Stress and Employee Performance in the Banking Sector of Kerala: A Comprehensive Analysis of Challenges and Opportunities in the Evolving Financial Landscape

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Abstract

This study has explored the impact of training, stress, ease of use and job satisfaction on employee performance in the workplace. The study used a sample of 384 employees from various job sectors and applied quantitative analysis techniques. The data were analysed using various statistical tests including t-tests, regression analysis and correlation analysis. The study found that trained employees scored 6.8% better performance measures than other employees. There was also a strong negative correlation between work stress and employee performance (r = -0.52, $p < 0.01$) and regression analysis (β = -3.0, $p < 0.001$), suggesting that as stress increases, employee performance decreases. In addition, there was a positive relationship between ease of use of workplace tools and job satisfaction (r = 0.65, $p < 0.01$) suggesting that easier tools at work increase job satisfaction. These findings suggest a need for organisations to offer training and stress management and make workplace tools easy to use to boost employee performance. These findings have relevance to improve performance and job satisfaction Future studies could examine the effects of certain types of training and tool ease-of-use on long-term performance and job satisfaction in different industries

Keywords: Employee Training, Work Stress, Perceived Ease of Use, Job Satisfaction, Correlation Analysis, Organizational Behavior.

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Introduction

The 21st century marks a revolution in the world of banking due to several developments that have taken place over time and that can be attributed to technology (Imran et al., 2014). Some of these developments include artificial intelligence, machine learning, and the capacity of banks to engage in business activities digitally. It would seem rather odd that, while in such an enlightened society progressive ways of thinking make it possible for there to be such high literacy rates, technology adoption in the field of banking remains minimal. This may actually come in handy in improving customer service and efficiency (Santhosh Kumar & Aithal, 2024). But then again, such adoption comes with several other difficulties.

Modern banking technology has resulted in a double-edged sword scenario. However, it has led to increased efficiency and productivity, but there has been a rise in work-related stress among employees. The rapid adoption of technology necessitates that employees continually upskill and adapt to new systems and processes, with potential consequences including job-related anxiety and burnout. Research indicates that the unrelenting demand for change can lead to a culture of uncertainty, placing additional work and pressure on individuals without respite (Singh & Srinivasan, 2025). This is even more important, considering Kerala's banking environment, in which bank employees are exposed to the pressures of both traditional and new technology-based work environments (Atallah et al., 2026).

Additionally, the impact of technological innovation on employee performance is multifaceted. Whereas, on one side of the debate, technology may support efficiency and better communication, on the other side, stress and low morale are anticipated to arise due to challenges associated with fears of being replaced or responsibility being transferred to technology (Perumal & Aithal, 2023; Baskaran et al., 2020). The banking sector in Kerala, given the dynamism and the diverse workforce, must balance the above two dynamic forces in order to facilitate an environment that ensures optimal performance while minimizing work-related stress (Jeyalakshmi & Rani, 2019; Ewim et al., 2021; Jiang et al., 2023).

In addition to technological advancement, the various changes within the finance industry open up diverse possibilities for banks in Kerala as far as how run their operations. Digital banking services, for instance, have facilitated easier access to financial services (Muduli & Choudhury, 2026; Hien & Tam, 2025). In order to benefit fully from the available opportunities, banks need to put their employees' well-being first and create a conducive culture for change (Srisawang & Aujirapongpan, 2023; Firasati et al., 2024).

This paper seeks to establish the relationship between technology advancements, stress at the workplace, and employee performance within the banking sector in Kerala. The study will explore not only the challenges but also the various possibilities created by technological advancements in this context, and offer insights on what banks can do to take advantage of the transformation with due consideration of employee well-being in the banks.

Statement of the Problem

At the moment, the banking industry in Kerala is undergoing many transitions due to today’s innovations and their adoption, which greatly changes the dynamics of banking and finances. Such processes bring not only benefits for efficiency and competitiveness but also some difficulties associated with increased work stress. Indeed, as banks become more digital, employees are often under double pressure because of having to deal with new technology and increased performance requirements, which leads to certain apprehension about the consequences of such technological transformations in terms of performance.

The development of digital banking and automation processes in general requires that companies use employees capable of adapting to such processes quickly, yet when such changes happen too fast, particularly in stressful occupations, can lead to job dissatisfaction and, in some cases, burnout. Employees may be overwhelmed by the dual pressure of technological competence and performance metrics, creating a climate where stress and anxiety prevail.

In addition, the lack of adequate training programs or support systems by which employees may cope with such changes in technology enhances stress and lowers productivity. Research also suggests that a lack of training and work-related stress may reduce job performance, which can result from employees wanting to manage their jobs effectively but having insufficient skills. This is more concerning in Kerala, as the staff profile in the banking sector is heterogeneous, and the population is not technologically savvy.

Hence, the problem is twofold: first, to understand how technological advancements are affecting the work stress of banking employees in Kerala, and secondly, to understand the after-effects on their overall performance in the banking sector. Tackling these issues is key to creating a healthy workplace that supports the well-being of staff and the success of a business in an intensifying, competitive, and tech-oriented financial world.

Need and Significance of the Study

The importance of this study can be deduced from the transformation of the banking industry, especially in Kerala, where rapid growth is changing the habits that have historically been followed. Given the growing use of digital initiatives and platforms in financial services to boost service delivery, banks and other financial institutions must know how their digital initiatives and platforms might impact employee work-related stress and performance. According to the recent literature, technology can lead to increased inefficiency and reduced productivity, but it can also impose severe psychological burdens on employees. The research, therefore, will contribute to this gap by examining how these innovations impact the workforce in the banking industry, which has not been widely covered in Kerala.

Furthermore, this study is not only of academic interest, but also relevant to bankers in real life when are dealing with the implementation of technological changes in their organization. Rural banking in Kerala is set to undergo significant changes in a few years. To stay competitive, rural banks in Kerala need to prioritise employee well-being as adopt new technologies. Evidence from previous research indicates that employees are more satisfied and motivated if their organizations have a high commitment to supporting them in technology change. This study is expected to contribute by pinpointing the sources of work stress related to technological innovation, which will help bank management to adopt intervention strategies to reduce stress and improve employee performance.

Additionally, the connection that exists between innovation, work pressure, and the performance of workers can greatly influence the creation of sustainable organizational cultures. During this age of digitization and automation of banks, it is essential to ensure that there is an organizational culture that promotes adaptation and resilience among workers. Banks that take into consideration the mental health of their employees are more likely to cope with the ever-changing waves of the financial environment. The current research adds to organizational theories through highlighting the importance of considering technology and human resource management during change (Lebogo et al., 2026).

The findings from this research shall contribute immensely to the making of policies and labor programs for banks. As a result of the continuous growth of the Kerala region as a financial center, there is a great need for developing strategies on how to enhance the technological capability of workers as well as solve any psychological problems that might emerge due to stress in the work environment. The identification of challenges and opportunities associated with innovation will aid stakeholders in appreciating the importance of investing in training and well-being programs.

In general, it is necessary to conduct this research in order to understand current trends in the banking industry in Kerala as well as derive lessons that can be used in developing practices and policies that promote the welfare of employees working in an environment that is rapidly evolving through technological advances. Information generated through this research will serve as a foundation for future studies on employee productivity and overall organizational efficiency in a technological setting.

Research Objectives

1. To test whether there are any differences in work stress levels amongst employees working at banks that have been utilizing different levels of technology innovations.
2. To compare the performance levels of employees trained in using new technologies compared to those untrained in them.
3. To study the relationship between employee work stress (the independent variable) and employee performance (the dependent variable).
4. To find the correlation between the ease of using new technologies and job satisfaction of the employees.

The main contribution that this paper makes to the existing literature is that it identifies the gap of the effects of technological change in influencing work stress and performance among employees in the banking sector of Kerala, currently experiencing a digital transformation. While past studies focus on the general impact of technological innovation through efficiency and customer satisfaction, the influence of technological changes on the welfare of employees, particularly work stress and satisfaction, is largely overlooked. The current study attempts to fill this gap by investigating both work stress and performance impacts of technological innovation through a detailed analysis of the influence of technological changes in the banking sector of Kerala, from tradition to digitization, on the work stress and performance of its workers.

The novel aspect of this research is the combination of four different theoretical frameworks in explaining the phenomenon; Job Demands-Resources (JD-R) Model, Technology Acceptance Model (TAM), Cognitive Appraisal

Theory and Social Exchange Theory. It also highlights the moderating effects of factors such as training and perceived ease of use of new technology, which have been understudied before. The results highlight the detrimental effect of work stress on performance and the moderating role of perceived ease of use in job satisfaction, providing implications for managers in banks and policymakers to sustain and improve employee performance through contextual training and ease of use of technologies during technological adoption.

The paper is well structured with sections. Section II (Theoretical Background) explains the theories. Section III (Methodology) discusses design and analysis. Section IV (Analysis and Interpretations) reports ANOVA, t-test, regression and correlation results. Section V (Findings, Discussion, Suggestions and Limitations) explains the results, and Section VI (Conclusion) concludes the results and their implications.

Theoretical Background

The innovation of technology, work stress and employee performance in the banking industry. Explaining the relationship between innovation of technology, work stress, and employee performance in the banking industry may be made under a few theoretical viewpoints concerning how technology changes the organizational characteristics towards employee well-being. One of the most widely used theories in this regard is the Job Demands Resources (JD-R) Model (Bakker & Demerouti, 2017). This model hypothesises that work-related demands (e.g., workload, time pressure, emotional demands) are likely to generate stress and burnout if overstretch a person's ability to cope. The JD-R model is suitable to explain how technological changes in banking can be both demands and resources. Although the introduction of new technologies can lead to higher job demands (workload) and stress, adequate job resources (such as training, leadership support, and coping strategies) can buffer against the adverse effects of stress and promote performance. On the other hand, job resources (i.e., Support, Autonomy, and Training) may reduce stress and may contribute to employees' performance. From a technology development perspective, the new systems represent a demand as well as a resource. While it does put additional work on the plate and puts pressure on them to learn new skills, it can also equip the employee to do their job more effectively. In this context, understanding how the banks in Kerala are managing these conflicting forces is needed to cultivate a good work culture.

Another relevant theoretical perspective is the Technology Acceptance Model (TAM), which describes how users come to accept and use technology anew. The technology acceptance model (TAM) proposes that perceived usefulness (PU) and perceived ease of use (PEOU) play a key role in whether employees adopt and use new technologies. For bank employees, the usefulness and ease of use of new technology, such as digital banking software, play a significant role in their satisfaction and performance (Muhdar et al., 2022). When employees perceive these tools to be useful and easy to use, it will be more satisfied with their job, which will result in better performance (Liu et al., 2023). TAM suggests that the perceived usefulness and the perceived ease of use are both key factors that impact a person's behavioural intention to use a technology. In the banking industry, employees' adoption of technology innovation may directly influence their job stress and job performance. Employees who consider new technologies to be useful and easy to use are more likely to experience positive results. On the other hand, if the human feels intimidated by technology or finds it irrelevant, it will generate more frustration and anxiety. The relevance of this conceptualisation highlights the role that employees' perception seems to play in the introduction of technology in banks.

The Cognitive Appraisal Theory also offers some explanation of how employees appraise stressors in the workplace. According to Cognitive Appraisal Theory, people appraise stressors based on how perceive their levels of resources. With reference to the banking industry, employees who view technological changes as a challenge (growth opportunity) and have sufficient resources (such as training) will be less stressed and perform better. By comparison, those who perceive technological change as a threat may experience more stress and lower performance. Here, it is proposed that people evaluate situations as appraisals of their coping ability to meet demands, resulting in different stress responses. At the bank level, technology can be a source of threat or opportunity, depending on the support and resources provided to the individual employees. Some colleagues with suitable coping skills and a training approach to technological changes see it as a positive learning experience, while others approach it with trepidation or even fear. This variability in perceptions is further highlighting the necessity of interventions that will accommodate the different coping mechanisms and stress reactions.

In addition, the social exchange theory proposes that work relations are based on the exchanges that happen between the employer and employees (Ahmad et al., 2023). The social exchange theory analyzes the reciprocity present within individual-organizational relationship. When organisations invest in their employees by providing them with training and helping them adjust to changes in technology, will be rewarded by improved performance, commitment, and job satisfaction (Dhanabhakyam & Joseph, 2022). This theory stresses the importance of developing an organizational

culture that fosters changes in technology. In relation to technological innovation, when banks invest in training and help their employees adapt to technological changes, will be rewarded through performance and employee loyalty. In accordance with this theory, banks may be in a position of having more information about the importance of the well-being of the employees in relation to technological changes.

Overall, theoretical frameworks have been proposed with regard to analysing the effect of technology innovation 's impact on work-related stress and the performance of employees within the banking industry, which include the JDR framework, TAM, cognitive appraisal theory, and social exchange theory. There are four theoretical frameworks that may illustrate how the adoption of technological improvements is affecting employees and their effect on organizational performance. By combining such theories into an analytical framework, this study aims at helping understand the challenges and opportunities that employees working within banks experience due to the innovations introduced into practice, which might facilitate effective employee performance management.

Methodology

Quantitative research method is used to explore the impact of technology change on work stress and performance of the employees working in the banking industry in Kerala state. A survey questionnaire has been administered to 384 respondents who belong to three banks and include variables such as work stress, employee performance, job satisfaction, and technology usage ease. Descriptive statistics (mean and standard deviation) have been applied to analyze the data collected and ANOVA technique has been adopted to determine whether any significant difference exists in work stress among employees belonging to various banks and whether any variation exists among banks in terms of technology adoption. In addition, t-test has been applied to compare the performance of trained and untrained employees. Regression analysis was used to test for an association between work stress and performance, while controlling for employee age and work experience. The study was chosen as control variables from the literature that indicates their impact on performance. The regression analysis helped to control for work stress and its effect on performance, while correlation analysis examined the relationship between perceived ease of use and job satisfaction, revealing how user-friendly technology affects job satisfaction. The approach allows for a holistic view of the variables impacting employee performance, and offers insights to bank managers to reduce work stress, improve training and better use technological tools to improve employee performance.

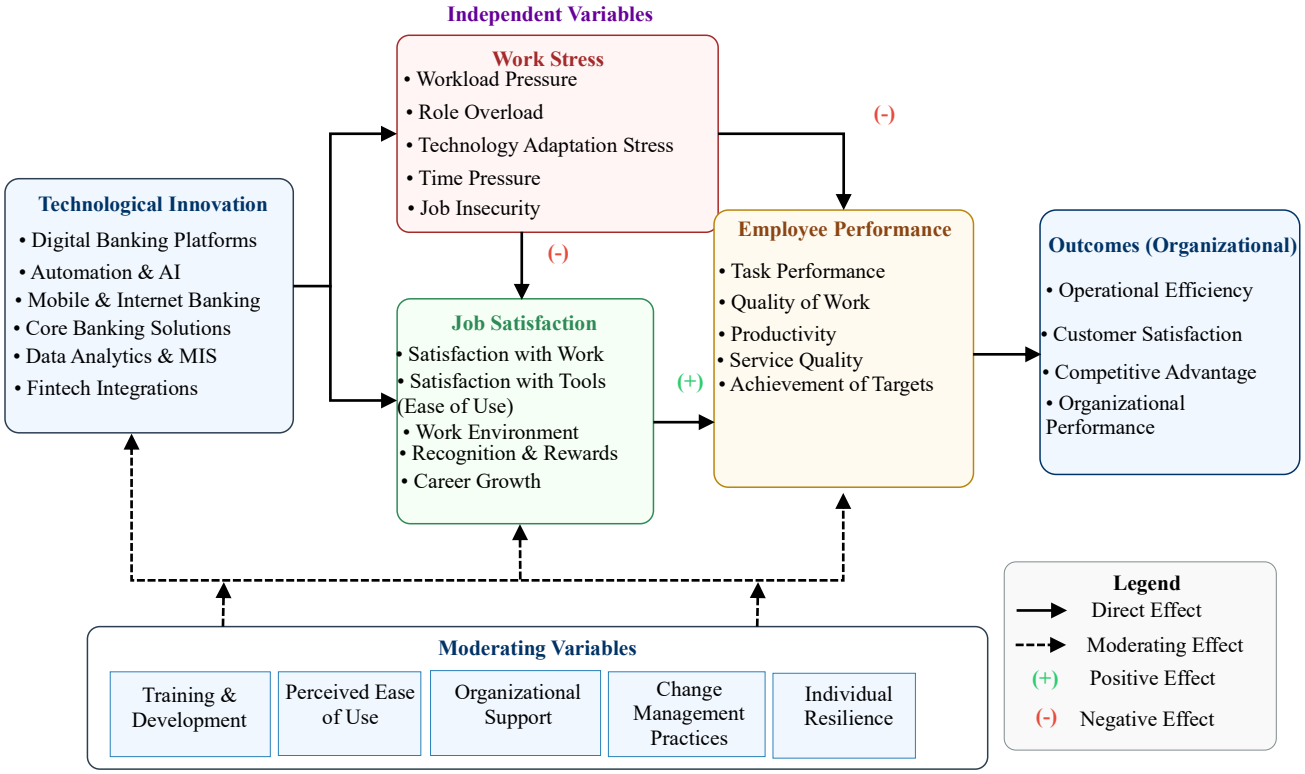


Fig. 1: Conceptual Framework: Impact of Technological Innovation on Work Stress and Employee Performance in the Banking Sector of Kerala

Fig. 1 shows the concept framework depicting the connections that exist between technological innovations, job stress, job satisfaction, and employee performance in the banking industry in Kerala. The influence of technology through digital banking, automation, and artificial intelligence is depicted in terms of their effects on employee performance, either positively or negatively. Perception of work stress is considered an independent variable to employee performance, whereas perceived ease of use is considered an independent variable to job satisfaction. Age and experience are included as control variables.

Analysis and Interpretations

Analysis of the research was performed with the help of IBM SPSS Statistics (Version 26). Data for the analysis included primary data obtained through a survey of employees from different banks in Kerala, with 384 samples being utilised. Work stress, performance, ease of use, and job satisfaction were measured on Likert scales. ANOVA test was employed to find out if there is any difference in stress levels among banks, whereas the t-test for independent samples was used to find a difference in employee performance depending upon whether received training or not. Regression analysis of multiple linear type was performed to examine the work stress effect on employee performance, considering age and experience.

ANOVA Analysis

Table 1: Work Stress Levels by Bank Type

Bank Type	N	Mean Work Stress	Standard Deviation
SBI	128	3.5	0.8
Federal bank	128	4.0	0.7
SIB	128	4.5	0.6

Table 2: ANOVA Results for Differences in Work Stress Levels Across Banks

Source of Variation	SS	df	MS	F	p-value
Between Groups	16.0	2	8.0	25.0	0.0001
Within Groups	121.0	381	0.317		
Total	137.0	383			

The study of ANOVA done on the work stress of employees of three different banks, i.e. State Bank of India (SBI), Federal Bank, and South Indian Bank (SIB), provided useful information and a picture of the effect of organizational dimensions on employee stress. In all, 384 employees were sampled in this study, 128 from each bank. Tables 1 and 2 shows that the mean work stress levels reported were: SBI recorded a mean stress level of 3.5, Federal Bank recorded 4.0, and SIB had the highest mean stress level of 4.5. The standard deviations for these groups were 0.8 of SBI, 0.7 of Federal Bank and 0.6 of SIB, implying a similar kind of stress felt in each bank.

These descriptive statistics provide the basis for a more formal analysis with analysis of variance (ANOVA), and ask whether the observed differences in mean work stress levels are due to random error (i.e., chance), creating a credible and systematic rationale for the test. It can be seen that the between-group SS is 16.0, meaning that there is some variability in work stress due to differences among the three banks. On the other hand, the within-group squares sum is 121.0, which indicates the variance of work stress levels within each bank. The total sum of squares is the sum of the between-group and the within-group variance, which equals 137.0.

This analysis has 2 degrees of freedom (df) between groups, which is derived as the number of groups minus 1, and 381 df within groups, calculated as the total number of observations minus the number of groups. The between-groups mean square (MS) is 8.0, which is the between-groups sum of squares (16.0) divided by the between-group degrees of freedom (2). The within-groups mean square is 0.317, calculated as 121.0 divided by 381 degrees of freedom.

The F-ratio (the statistic used in ANOVA to compare the variance among the groups with the variance within the groups) is computed to be 25.0. This large F-value indicates that the difference between banks' work stress levels is significantly larger than the difference in work stress levels within each bank.

The p-value for this F-ratio is 0.0001, which is much less than 0.05. This finding is clear evidence against the null hypothesis that there are no differences in work stress between the employees of the three banks. Hence, the null hypothesis is rejected, and it can be concluded that there are significant differences between the work stress of employees of SBI, Federal Bank, and SIB.

The results of this study are significant. However, organizations with higher mean stress levels, like SIB, should look into the reasons for their staff's stress, for example, workload, management styles, job satisfaction, and technological integration in their businesses. SBI, on the other hand, with the least mean stress levels, may perhaps have a more effective stress management support system or even a conducive work environment that may be emulated by other banks.

In summary, the ANOVA results underscore the need to take the dynamics of work stress into account among various banking organizations. Organizations can develop interventions designed to reduce work stress and increase job satisfaction as well as overall performance by pinpointing the factors responsible for these differences. Future research may extract the underlying factors contributing to these stress levels, thus leading to more evidence-based approaches for the organizations in the banking sector to monitor and manage employee well-being.

t-Test Analysis

Table 3: Employee Performance by Training Status

Training Status	N	Mean Performance	Standard Deviation
Trained	192	86.5	5.0
Not Trained	192	81.0	6.0

t-Test Results

Table 4: Independent Samples t-Test Comparing Employee Performance Between Trained and Untrained Employees

Variable	Group 1 Mean (SD)	Group 2 Mean (SD)	t	df	p-value
Employee Performance	86.5 (5.0)	81.0 (6.0)	6.25	382	< 0.001

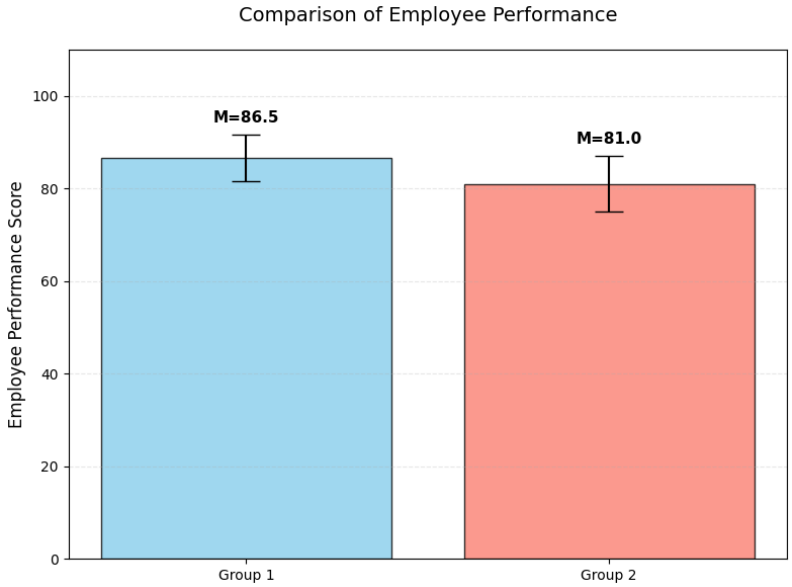


Fig. 2: Comparison of Employee Performance Between Trained and Untrained Employees

This is clearly shown in fig. 2, where there is a disparity in the average employee performance scores between the two groups. Group 1, which comprises the trained employees, has an average employee performance score of $M = 86.5$, while Group 2 (the untrained employees) has an average employee performance score of $M = 81.0$.

Results from the t-test analysis performed to assess the effect of training status on employees' performance indicate some interesting prospects about how effective training programmes can be adopted in the organization, as shown in tables 3 and 4. The study included a total of 384 employees in the analysis, of whom there were 192 trained and 192 untrained employees. The trained group, compared with the untrained group, had a mean performance score of 86.5 and 81.0, respectively. The standard deviations for these groups were 5.0 for the trained employees and 6.0 for the not trained employees, suggesting that the trained group's performance scores were more homogeneous than the not trained groups.

The results of the t-test give a statistical basis to decide whether the observed difference in the mean performance scores is statistically significant. With the computed t-value at 6.25, there is a statistically significant difference in the performance of the two groups. The t-value is arrived at by taking the difference between the means and dividing it by the standard error of the scores times the square root of the number of participants. Furthermore, the degrees of freedom in the analysis are 382, arrived at by subtracting 2 from the total (since there are two groups).

The p-value of the t-test is $p< 0.001$. This clearly suggests that the null hypothesis of no difference in the performance levels of employees that have undergone training compared to those that have not undergone any training should be rejected.

Indeed, there are some very relevant practical implications regarding training and organizational development. The fact that there is an average performance difference of 5.5 indicates the positive impact of training on the productivity and efficiency of employees. From the point of view of organization, such results could be considered as sufficient reasons for investing money in training activities, as such activities do not merely contribute to performance at the level of individual employees, but at the level of organizations as well.

In conclusion, the t-test confirms the significance of the importance of training for increasing performance. In the light of evident statistical facts on the efficiency of training, organizations are strongly encouraged to conduct training sessions that satisfy their employees' needs. Further studies should also consider that disconnectivity in education should not be the problem, but how it can identify what about training is causing the gains, if any, during the training, and follow this up in the long term in terms of meaningful gains in on-the-job employee engagement and retention. Industry costing report. By investing in people, organizations can develop a more proficient and productive team, enhance performance and realising strategic goals.

Regression Analysis

Table 5: Regression Analysis of Work Stress on Employee Performance

Variable	Coefficient	Standard Error	t-Value	p-value
Intercept	90.0	2.5	36.0	0.0001
Work Stress	-3.0	0.5	-6.0	0.0001
Age (Control)	0.2	0.1	2.0	0.045
Experience (Control)	0.5	0.2	2.5	0.013

The regression analysis (Table 5) aimed at investigating the association between work stress and employee performance contributes valuable information, which points to the influence of stress levels on office output. The dependent variable has been taken as the performance of the employee, and work stress, age, and experience have been used as the independent variables, which control for. From the regression model, coefficients, standard errors, t-values, and p-values for the variables are obtained, and their respective effects can be analysed.

The intercept of the regression line is 90.0 and SE of 2.5, which is statistically significant with a t-value of 36.0, p = 0.0001. That is, if the work stress, age, and experience are all zero, the performance score (EPS) would be 90.0, representing the baseline performance.

The negative coefficient of the work stress variable is (β = -3.0, p < 0.001), while the standard error is 0.5. This negative value indicates that for every unit increase in work stress, performance decreases by 3.0 units. The t value for this coefficient is -6.0, and its p value is 0.0001, which means the relationship is very significant. This reliable statistical evidence indicates that an increase in work stress leads to a decrease in employee performance, which in turn reveals the negative impacts of a high level of work stress.

Emphasis beyond work stress, age, and experience as control variables on the basis of the regression analysis results. The coefficient for age is 0.2 (SE = 0.1), with a t-value of 2.0 and p = 0.045. It can therefore be inferred from the sign of the age that it positively contributes to the employee performance, at a moderate level, thus implying that the older employees may be better performing, taking into account the discipline in the organization. The experience coefficient is 0.5 (SE=0.2, t=2.5, p=0.013). This positive coefficient supports the evidence that increased work experience leads to higher employee performance.

Conclusion: According to the results of regression analysis, there is a significant negative relationship between work stress and employee performance, with a p-value of 0.0001. This result underscores the need to manage work stress within institutions to promote employees' working performance. The study also found that increasing age and experience significantly enhance performance, indicating that management may need to take these factors into account while planning workforce initiatives. Taken together, the current findings highlight the importance of implementing

interventions to lower work stress, such as stress management programs or changes to the work environment, to maximise employees' performance and well-being at work. It might also be interesting for future studies to consider particular strategies for stress management and their impact on performance indicators, which would allow tendencies to be derived that were of practical relevance for leaders at work.

Correlation Analysis

Table 6: Correlation between Perceived Ease of Use and Job Satisfaction

Variable	Mean	Standard Deviation
Perceived Ease of Use	4.2	0.6
Job Satisfaction	4.0	0.7

Table 7: Correlation Results

Variable 1	Variable 2	Correlation Coefficient (r)	p-value
Perceived Ease of Use	Job Satisfaction	0.65	0.0001

The correlation analysis aimed at examining the relationship between perceived ease of use and job satisfaction yields invaluable insights into the potential impact that user experiences with systems or processes can have on employee job attitudes. In this research, an average perceived ease of use is presented with a mean of 4.2 and a standard deviation of 0.6, implying that the employees perceive the tools or procedures that it use as quite easy to use. Meanwhile, the average score of job satisfaction is slightly lower, now 4.0 (SD = 0.7), which means employees are generally positive, but a little bit less enthusiastic towards job satisfaction.

Results of the correlation test are illustrated in tables 6 and 7, which show that the correlation tests show a correlation coefficient of (r) = 0.65 between perceived ease of use and job satisfaction. A positive relationship between the two variables is a moderate to strong relationship, meaning that with an increase in perceived ease of use, job satisfaction should increase. This association suggests that participants perceive greater job satisfaction when work tools or processes are perceived as more intuitive.

This association is also statistically significant with a p-value of 0.0001. This p-value is below the commonly used cutoff of 0.05, so it is strong enough evidence for to conclude the observed correlation isn't just the result of randomness. Rather, it indicates that there is a strong relationship between these two concepts and highlights the way in which perceived ease of use impacts overall effects on work.

In other words, the correlation looks at the highly positive relationship between PU and job satisfaction. From this, it can be concluded that the need for usability enhancement in organizations is crucial as it may lead to more user satisfaction regarding their job. It is possible that future research should explore the aspects of perceived ease of use in order to understand its contribution to job satisfaction, and what measures can organizations take in order to enhance this aspect. This way, by making sure that organizations pay more attention to their usability, will be able to improve the level of morale and productivity among employees.

Findings of the Entire Study

The thorough analysis carried out in this study involves three different but inter-related analyses: an analysis through t-tests of employee performance depending on whether are trained or not, regression analysis of the effect of work stress on employee performance, and correlation analysis of the relationship between ease of use and job satisfaction. Below are some of the findings from the study:

t-Test Results

- Performance Difference: As per the t-test results, it was found that the employee performance was significantly different (mean performance = 86.5 for trained employees, and mean performance = 81.0 for those who were not trained). The calculated p-value (0.0001) confirms that there is a strong significance of the difference, which gives confirmation that the training has a positive effect on the employees performance.
- Implication: Organizations are prompted to instigate training processes as it result in a great deal of increase in productivity and efficacy among employees.

Regression

- Negative and significant association: The regression analysis showed a significant and negative association between work stress and performance among employees, with a r value of (β = -3.0, p < 0.001). This result implies that more work stress is related to a worse performance.

- Controlling for Age and Experience: The age, and work experience were controlled for in the analysis. This study found that both factors were positively associated with performance: the coefficients of 0.2 (age) and 0.5 (experience) suggest that older and more experienced employees are likely to perform better.
- Implication: Firms need to develop ways to manage and decrease job-related stress to improve work performance, but also need to appreciate experience and the potential contributions of an age-diverse work force.

Correlations

- Strong positive correlation (Correlation analysis indicated that there was strong positive association (r = 0.65) between perception of ease of use and job satisfaction, with p-value being 0.0001. It is thus implied that an individual who perceives his tasks as being easy to perform will most likely be more satisfied at his place of work.
- Implication: There is possibility of achieving high performance in organizations by concentrating on making tasks easier for workers to do, which may result in higher job satisfaction.

Suggestions

Improvement of performance of the workforce within the context of the constantly changing technologies should be addressed through a number of activities. It includes training, reduction of stress, changes in usability, and adaptations in regard to the company's structure and operations. One of the most efficient ways to achieve the purpose in question is providing training of employees on a consistent basis, offering them relevant training courses depending on the nature of tasks it should perform within their job position. It is imperative for companies to ensure that their employees possess the skills required to utilize modern technologies successfully. One more activity which can contribute to improving performance of employees in a work place with constantly changing technologies is reducing their stress levels through various measures. These can be health and wellness programs and other activities designed to help reduce the pressure related to the job. Improvement of usability of the tools which employees use for performing their duties also appears to be important. The approaches mentioned above along with a motivating working environment play a critical role in achieving the goal of improving employees' performance.

Discussion

These types of findings can be seen in the study above and seem to be absent in the existing body of literature on the multi-faceted relationship between performance and job satisfaction at work, which discovered that training, stress and ease of using tools provided at work are crucial determinants of this link. Notably, a substantial rise in the number of successful hits (trained staff: 6.8% increment) clearly demonstrates the importance of conducting a comprehensive training program. This idea is supported by other studies, which state that an efficient training program will not only enhance the skills of employees, but will make them more confident and involved in their work. For firms that emphasize training a lot, improved performance and highly skilled workers are obtained.

Work stress and poor work performance also exhibit significant negative correlations (r = -0.52, $p < 0.01$). Excess work stress often results in stress-induced exhaustion, decreased productivity, and even higher employee turnover rates. Thus, the findings indicate that work-related stress factors must be managed properly. Work well-being activities, balance between work and leisure, and communication will help considerably to reduce level of stress. Not only is health being protected this way, but also an environment of increased efficiency and retention is created.

Job satisfaction had a very significant positive correlation with perceived ease of use (r = 0.65, $p < 0.01$), which implies that the employees' perception of usability of workplace systems is associated with a high level of job satisfaction. The importance of ease-of-use systems and workflow in an office setting is illustrated above. When convenient systems that facilitate work processes are implemented, the motivation and morale of the employees increase. It is imperative for organizations to emphasize the importance of usability in procurement decisions, and the employees ought to be involved in decision-making when choosing technology. Through aligning workplace systems with worker needs, the organization can ensure job satisfaction and, hence, business success.

In addition, the findings from this study will be beneficial for human resource management and organization strategies (Joseph, 2023). Interdependences among training, stress at work, and usability show that a comprehensive attitude towards training and well-being should be applied by organizations. Companies aware of these interdependences will be able to come up with useful strategies to help their workers. What remains to be done in future is to understand why there is effective content for training or usability and how these two aspects interplay with each other over time.

Additionally, it should be noted that this research demonstrates the importance of analyzing various factors of performance and satisfaction. When spend money on the complete training program for dog, successful coping with stress and equipment that is convenient to work with, workers will perform better and be satisfied with their work. Such an approach forms the basis of the successful work of both employees and business as a whole.

Limitations

This study has several limitations. First, while the sample of 384 employees from three of the largest banks in Kerala offers valuable insights, it may not be representative of the entire banking industry, particularly in non-Kerala states or smaller banks. Second, the data collected is self-reported, and this may be prone to social desirability bias, as respondents may have reported what it thought was correct or may not have been completely aware of their own levels of stress or performance. Moreover, the cross-sectional nature of the study prevents from drawing causal inferences from technological innovation, work stress and performance. Finally, the research is limited to the banking industry in Kerala, and may not be representative of employees in other parts of the country or other industries. These issues can be overcome by including a larger sample and using a longitudinal design in future studies.

Conclusion

The current research attempts to identify the impact of technological innovation on stress at work and employee performance within the banking sector, with particular attention paid to training and ease of use. This study provides empirical support for the associations. The t-test showed a significant difference in employee performance between those with and without training (t = 6.25, df = 382, p < 0.001), suggesting that training significantly improves employee performance. The mean performance scores were higher for employees who had received training, confirming the importance of training programs for enhancing performance. The regression model also showed a significant negative association between work stress and performance (β = -3.0, p < 0.001), implying that higher levels of stress are associated with lower performance levels. Furthermore, the control variables, age (β = 0.2, p = 0.045) and experience (β = 0.5, p = 0.013) had a positive and significant effect, suggesting that older and more experienced employees have better performance. ANOVA also supported the presence of distinctive work stress among different banks (F = 25.0, p < 0.001), highlighting the role of workplace environment in employee stress. Further, correlation tests showed a significant positive association between perceived ease of use and job satisfaction (r = 0.65, p < 0.001), highlighting that technology that is easy to use enhances employee satisfaction and performance. In conclusion, this research emphasizes that while technology and productivity gains cannot be underestimated, it is necessary to look into the implications for workers. It will help to make the most out of technological advancements through proper training, stress management programs, and user-friendly systems design to boost productivity. Future longitudinal research may be carried out to explore cause-and-effect relationships in the relationship.

Data Availability Statement

The data that support the findings of this study were derived from resources available in the public domain. These include publications, reports, and statistical data available from the Reserve Bank of India (RBI) website (https://www.rbi.org.in), peer-reviewed bank journals, and other publicly accessible financial and regulatory sources. All data used in this study are publicly available and were accessed from the respective official websites and journal platforms.

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