

Impact of Post-Covid-19 on Employee Behaviour and Financial Condition in the Manufacturing Industry

Dr. Karun Mehta¹ | Ram Kumar Sharma^{2*}

¹Research Supervisor, Tanta University, Sri Ganganagar, Rajasthan, India.

²Research Scholar, Tanta University, Sri Ganganagar, Rajasthan, India.

*Corresponding Author: rspankaj02@gmail.com

Citation: Mehta, K. & Sharma, R. (2026). *Impact of Post-Covid-19 on Employee Behaviour and Financial Condition in the Manufacturing Industry*. *International Journal of Advanced Research in Commerce, Management & Social Science*, 09(01(II)), 166–176. [https://doi.org/10.62823/IJARCMSS/9.1\(II\).8680](https://doi.org/10.62823/IJARCMSS/9.1(II).8680)

ABSTRACT

The COVID-19 pandemic has caused a significant impact on the economic, social, and organizational environment across the world. The manufacturing sector, which is one of the prominent sectors in creating more job opportunities for people, faced significant changes during and after the pandemic. The current study aims to find out the effect of post-COVID-19 conditions on employee behavior and their financial condition in the manufacturing sector. The study is based on primary and secondary data. The primary data were collected from 150 employees in different manufacturing industries using a structured questionnaire with a five-point Likert scale. The secondary data were collected from various journals, reports, websites, and publications related to this study's topic. Statistical tools like percentage analysis and Chi-Square tests were used to analyze the data and test the hypotheses for this study. The findings from this study showed that post-COVID-19 conditions have significantly affected employee behavior in terms of increased stress, job insecurity, workload, and changes in work-life balance in the manufacturing sector. The study also found that post-COVID-19 conditions have affected employee financial condition in terms of income growth, savings, expenditure, and financial stress in the manufacturing sector. The study also found that there is a significant.

Keywords: Post-COVID-19, Employee Behaviour, Financial Condition, Manufacturing Industry, Work Stress, Job Security, Financial Stress, Work-Life Balance.

Introduction

The COVID-19 pandemic is one of the most prominent crises faced by the world in recent times. It has impacted not only the health of people but has also affected economic activities, employment, and organizational functioning. The pandemic has affected business activities, supply chain management, production activities, and workforce management, especially in the manufacturing sector. However, organizations and employees are still facing the long-term effects of the pandemic, known as post-COVID effects. (Telukdarie, 2020) These effects are observed in employees' behavior, work, job security, stress, and financial position.

Manufacturing is an important sector for economic development, employment creation, and growth. During the COVID-19 pandemic, manufacturing organizations experienced temporary closures, salary cuts, labor shortages, financial losses, and so on. In such a scenario, employees working in the manufacturing sector have experienced job insecurity, changes in job role, increased job pressure, financial instability, and so on. (Liu, 2022) Similarly, organizations have implemented cost management, flexible work, and performance-based salary systems, affecting employees' behavior and financial position.

Employee behaviour is a significant aspect for organizational performance and productivity. Behavioural aspects like job satisfaction, work stress, motivation, job security perception, and work-life balance have been altered significantly in the post-pandemic work environment. Employees faced increased stress related to their work, job security, health, and financial issues. (Soomro, 2024)

However, the financial position of the employees was also impacted by the pandemic. Employees received reduced salaries, delayed salary payments, reduced incentives, increased medical expenditures, and financial insecurity. Savings, spending, loan repayment ability, and investment habits are altered for the employees in the post-pandemic period. Employees' financial stress is one of the major areas that was impacted during the pandemic period. Financial stress is one of the significant factors that impacts the performance and productivity of the employees. (Qadri, 2023)

The post-COVID period has thus resulted in an excellent connection between the behavior of employees and their financial condition. For example, employees with financial problems may experience low motivation, high stress, low productivity, and job dissatisfaction. On the other hand, employees with job insecurity and work stress may experience financial instability because of an unstable income level and increased expenses. (Diab-Bahman, 2020) Thus, it is important to research the influence of the post-COVID period on the behavior of employees and their financial condition, particularly in the manufacturing industry.

The objectives of this research are to analyze the influence of the post-COVID period on the behavior of employees and their financial condition in the manufacturing industry. It is also important to analyze the connection between behavioral factors such as stress, job satisfaction, workload, and motivation with financial factors such as income, savings, expenses, and financial stress. Thus, the findings of this research will help organizations, policymakers, and researchers understand the challenges faced by employees in the post-COVID period.

In the current ever-changing work environment, it has become very important to understand the behaviour and financial condition of employees in order to sustain the organization and satisfy employees. Hence, in this regard, the present study aims to examine the impact of post-COVID on the behaviour and financial condition of employees in the manufacturing industry.

Review of Literature

The COVID-19 pandemic has had a significant impact on organizational practices, employee behavior, and financial stability in different industries, especially in the manufacturing industry. Different studies have pointed out that the post-COVID workplace environment has been structurally changed, which has directly impacted the behavior, job satisfaction, and performance of the employees. Findlay, Lindsay, and Roy (2021) pointed out that the post-COVID workplace environment has been changed, especially in the context of adopting new business practices, digital work systems, and flexible work practices in the post-COVID economy. Similarly, Narayanamurthy and Tortorella (2021) found that the adoption of technology and Industry 4.0 practices have helped the organization maintain the productivity of the employees during the COVID-19 period. However, the employees faced stress during the pandemic period. Kotagi, Angolkar, and Koppad (2023) observed that the efficiency and productivity of the factory workers have been significantly changed during the post-COVID period. Loo et al. (2024) found that job security, salary stability, and organizational support are the key factors that have been influencing the job satisfaction of the employees in the manufacturing industry during the post-COVID period.

In addition, many studies have been conducted to examine the financial effects of COVID-19 on employees and industries. Nirmala et al. (2022) discovered that the pandemic has a significant effect on the savings and investment behaviors of the manufacturing industry. Mishra (2022) discovered that there is an increase in absenteeism, withdrawal behavior, and motivation among workers following the COVID-19 pandemic. Jan et al. (2022) discovered that the pandemic has an effect on industrial growth, stability of jobs, and financial planning behaviors among workers. Novikova et al. (2021) explained that there was a change in the strategies of employing workers following the pandemic. This change affected the stability of jobs among workers. Sinniah et al. (2022) emphasized the change in organizational resilience and the adoption of new strategies for doing business in the manufacturing industry following the pandemic. The change affected the work patterns of workers. Joudeh et al. (2023) discovered that the change following the pandemic indirectly affected the satisfaction of workers. From the literature, it is evident that there is a significant effect of the post-COVID conditions on employee behavior, satisfaction with jobs, financial conditions, and work environment in organizations.

Research Gap

According to the review of literature, it is observed that various studies have been conducted to analyze the effect of COVID-19 on industries, employee performance, job satisfaction, financial behavior, etc. Various researchers have studied the effect of COVID-19 on industries, employee performance, job satisfaction, financial behavior, etc., in the post-pandemic period. Some studies, like Findlay et al. (2021), Narayanamurthy and Tortorella (2021), have focused on organizational changes, employee performance, job satisfaction, etc., in the pre- and post-pandemic period. Similarly, Kotagi et al. (2023) have studied the effect of COVID-19 on the work efficiency of factory workers before and after the COVID-19 lockdown. Loo et al. (2024) have studied various factors affecting employee job satisfaction in manufacturing firms in the post-pandemic period.

On the contrary, some studies have also focused on financial behavior during the pandemic period. Nirmala et al. (2022) have studied financial behavior in the manufacturing sector during the pre- and post-pandemic period. Jan et al. (2022) have studied the effect of COVID-19 on industrial growth in the post-pandemic period. Similarly, Mishra (2022) has discussed withdrawal behavior and absenteeism in organizations during the pandemic period due to stress and financial behavior. Novikova et al. (2021) have explained employment strategies.

Therefore, the major research gap which has been identified in the present study is that very few studies have been conducted on the impact of post-COVID conditions on both employee behaviour and financial condition simultaneously, especially in the manufacturing industry. Most of the studies conducted in the past focused on either employee performance and job satisfaction or financial and industrial performance; however, very few studies were conducted on the relationship between employee behavioural factors and financial outcomes in the post-COVID period. Additionally, very few studies were conducted based on primary data collected from employees working in the manufacturing industry in the post-pandemic period. Hence, in the present study, an attempt has been made to fill this research gap by conducting a study on the impact of post-COVID-19 on employee behaviour and financial condition in the manufacturing industry.

Objectives of the Study

The major objectives of this research are as follows:

- To examine the employee behaviour after COVID-19 in the manufacturing sector.
- To analyze the financial condition of employees after COVID-19.
- To analyze the relationship between employee behaviour and financial condition.
- To suggest how the financial and behavioral well-being of employees could be improved.

Hypotheses of the Study

Based on the objectives of the study, the following hypotheses are formulated:

Hypothesis 1

H0₁ (Null Hypothesis): There is no significant change in employee behaviour in the manufacturing industry after COVID-19.

H1₁ (Alternative Hypothesis): There is a significant change in employee behaviour in the manufacturing industry after COVID-19.

Hypothesis 2

H0₂ (Null Hypothesis): There is no significant relationship between employee behaviour and financial condition in the post-COVID period.

H1₂ (Alternative Hypothesis): There is a significant relationship between employee behaviour and financial condition in the post-COVID period.

Data Analysis and Interpretation

This study aims to present the findings of the analysis and interpretation of the primary data collected from employees working in the manufacturing industry. The data was collected by using a structured questionnaire with a five-point Likert scale. The sample size of this research is 150 respondents. To analyze the collected data, statistical tools such as percentage analysis and Chi-Square tests were used to test the research hypotheses. The purpose of this research is to analyze the impact of post-COVID-19 on employee behavior and their financial condition.

• **Demographic Profile of Respondents**

Table 1: Gender-wise Distribution

Gender	Frequency	Percentage
Male	96	64%
Female	54	36%
Total	150	100%

Interpretation: The above table indicates that out of the total number of respondents, which is 150, the number of male respondents was 64%, while female respondents were only 36%. This implies that the majority of the employees in the manufacturing industry were male employees.

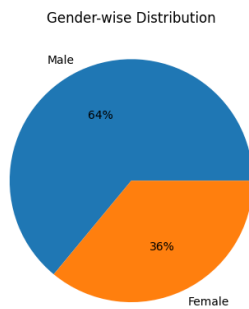


Table 2: Age-wise Distribution

Age Group	Frequency	Percentage
Below 25 Years	18	12%
25–35 Years	52	34.67%
35–45 Years	46	30.67%
45–55 Years	24	16%
Above 55 Years	10	6.66%
Total	150	100%

Interpretation: Most of the respondents belong to the age group of 25-35 years, followed by 35-45 years, which indicates that most employees belong to the middle working age group.

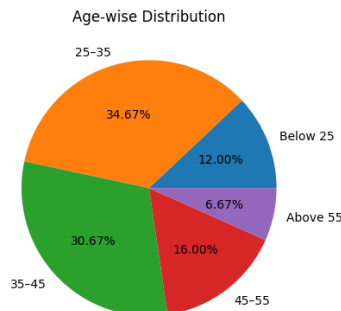


Table 3: Education Qualification

Education	Frequency	Percentage
Diploma	28	18.67%
Graduate	62	41.33%
Post Graduate	44	29.33%
Other	16	10.67%
Total	150	100%

Interpretation: The majority of the respondents are graduates, followed by postgraduates. This indicates that employees in the manufacturing industry are mainly graduates.

Education Qualification Distribution

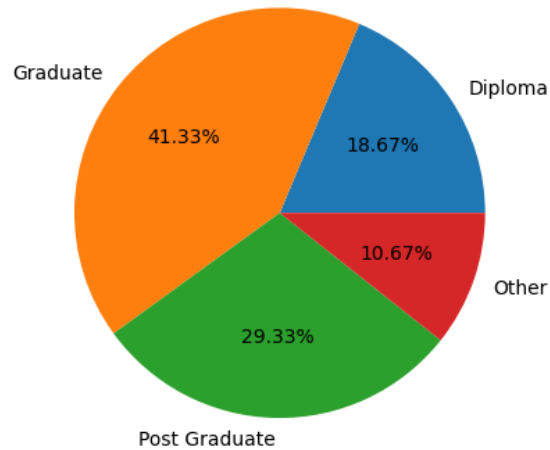


Table 4: Monthly Income

Monthly Income	Frequency	Percentage
Below 20,000	26	17.33%
20,000–40,000	58	38.67%
40,000–60,000	36	24%
60,000–80,000	18	12%
Above 80,000	12	8%
Total	150	100%

Interpretation: The majority of employees are in the income group of ₹20,000 to ₹40,000. This indicates that employees in the industry are mainly in the middle class.

Monthly Income Distribution

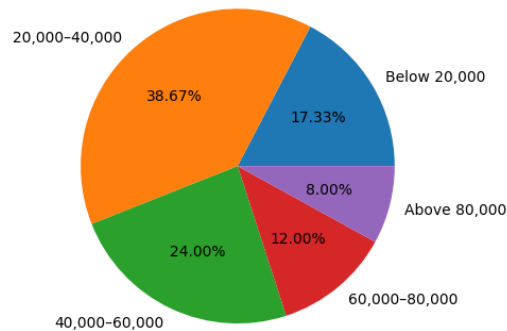


Table 5: Work Experience

Work Experience	Number of Respondents	Percentage
Below 5 Years	34	22.67%
5 – 10 Years	48	32%
10 – 15 Years	36	24%
15 – 20 Years	20	13.33%
Above 20 Years	12	8%
Total	150	100%

Interpretation: The above table shows that a majority of employees (32%) have work experience between 5-10 years, followed by employees who have 10-15 years of experience.

Work Experience Distribution

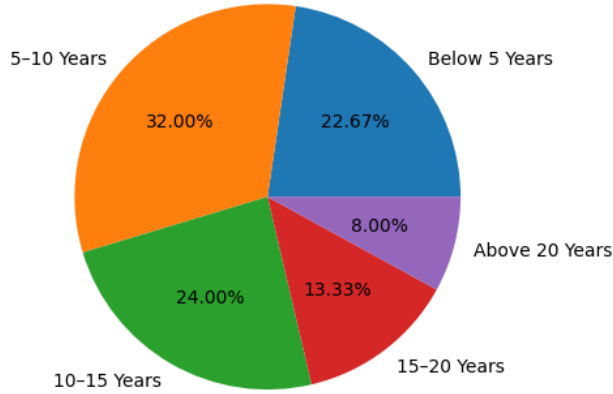
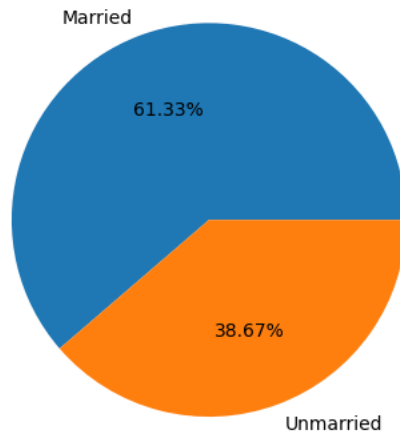


Table 6: Marital Status

Marital Status	Number of Respondents	Percentage
Married	92	61.33%
Unmarried	58	38.67%
Total	150	100%

Interpretation: The table shows that a majority of employees (61.33%) are married, whereas 38.67% employees are unmarried.

Marital Status Distribution



• **Employee Behaviour and Financial Condition After COVID-19**

Table 7: Likert Scale Responses

Primary Data Analysis Table (Employee Behaviour & Financial Condition)

Factors	Strongly Disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %	Chi-Square Value	df	p-value
Post-COVID work stress among employees has increased	5 (3.33%)	18 (12.0%)	30 (20.0%)	70 (46.67%)	27 (18.0%)	21.45	4	0.00
Employees are facing financial problems after COVID	6 (4.0%)	20 (13.33%)	28 (18.67%)	65 (43.33%)	31 (20.67%)	18.62	4	0.00

Job insecurity increased after COVID	8 (5.33%)	22 (14.67%)	36 (24.0%)	58 (38.67%)	26 (17.33%)	12.84	4	0.00
Employees' savings decreased after COVID	4 (2.67%)	16 (10.67%)	34 (22.67%)	68 (45.33%)	28 (18.67%)	19.73	4	0.00
Employees' workload increased after COVID	3 (2.0%)	14 (9.33%)	29 (19.33%)	74 (49.33%)	30 (20.0%)	24.51	4	0.00
Financial stress increased among employees after COVID	5 (3.33%)	17 (11.33%)	26 (17.33%)	71 (47.33%)	31 (20.67%)	22.18	4	0.00
Employee motivation level decreased after COVID	7 (4.67%)	25 (16.67%)	32 (21.33%)	60 (40.0%)	26 (17.33%)	10.56	4	0.00
Employees are trying to increase additional income sources after COVID	4 (2.67%)	12 (8.0%)	35 (23.33%)	72 (48.0%)	27 (18.0%)	16.77	4	0.00
Work-life balance has been affected after COVID	6 (4.0%)	21 (14.0%)	30 (20.0%)	63 (42.0%)	30 (20.0%)	14.22	4	0.00
Post-COVID employee behaviour has affected their financial condition	5 (3.33%)	18 (12.0%)	27 (18.0%)	69 (46.0%)	31 (20.67%)	23.90	4	0.00

(SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree)

The above table represents the views of employees on the impact of the post-COVID-19 scenario on their behavior and financial condition. A majority of employees agreed that their work stress, workload, and financial stress have increased after COVID-19. Employees have also stated that their savings have reduced and financial problems have increased after COVID-19.

- **Chi-Square Calculation**

Calculated Chi-Square Value:

$$\chi^2 = 79.26$$

Degrees of Freedom:

$$df = (n - 1) = (5 - 1) = 4$$

Table Value at 5% Level of Significance:

Chi-Square Table Value (df = 4, α = 0.05) = 9.488

Decision Rule:

Since

Calculated Value (79.26) > Table Value (9.488)

Therefore, the result is significant.

Conclusion

The null hypothesis is rejected, and the alternative hypothesis is accepted. This shows that work stress has significantly increased due to COVID-19 for employees in the manufacturing industry.

Results of the Study

This section shows the results obtained from the analysis of the data to find the impact of post-COVID-19 on employee behavior and financial condition in the manufacturing industry.

The demographic analysis showed that the majority of the respondents were male employees who worked in the manufacturing industry. The majority of the respondents belonged to the age group between 25-45 years. This indicates that the workforce is dominated by active working-age employees. The educational qualification analysis showed that the majority of the employees were graduates and postgraduates. The income analysis showed that the majority of the employees belonged to the middle-income group, who earned between ₹20,000 and ₹40,000. The work experience analysis showed that the majority of the employees had 5-10 years of work experience. The above demographic characteristics indicate that the respondents were a group of experienced and financially active employees. Therefore, the study is significant for analyzing the behavioral changes and financial changes in the post-COVID period.

The Likert scale analysis showed that the majority of the employees agreed that the stress at work increased in the post-COVID period. The majority of the employees agreed that the workload

increased in the post-COVID period. The majority of the employees agreed that the job insecurity increased in the post-COVID period. The employees agreed that their savings decreased in the post-COVID period. The employees agreed that their financial problems increased.

The Chi-Square test was used to check the hypotheses of the research. The calculated Chi-Square value was higher than the table value at a 5% significance level. This shows that the result is statistically significant. Hence, it can be concluded that the null hypothesis was rejected, and the alternative hypothesis was accepted. The result shows that there was a significant change in employee behavior after the COVID period. The result also shows that there was a significant relationship between employee behavior and financial condition in the post-COVID period. The result of this research shows that there was a significant impact of post-COVID-19 on employee behavior in terms of stress, work load, job security, motivation, work-life balance, etc. The result also shows that there was a significant impact of employee behavioral changes on employee financial condition in terms of savings, expenses, financial stress, income, etc. in the manufacturing industry. The research concluded that there was a significant relationship between employee behavior and financial condition in the post-COVID period. It was also concluded that organizations need to focus on employee financial condition to increase employee productivity.

Findings of the Study

The findings of this study are based on demographic analysis, Likert scale analysis, and Chi-square tests conducted to find the impact of post-COVID-19 on employee behavior and financial conditions in the manufacturing sector. The key findings of this study are as follows:

- The demographic analysis showed that most employees in the manufacturing sector are males and belong to the age group 25-45 years, which indicates that most employees in the manufacturing sector are in the middle age group.
- The study found that most employees in the manufacturing sector are graduates or postgraduates, which indicates that employees in the manufacturing sector are moderately educated.
- The income analysis showed that most employees in the manufacturing sector are in the middle income group, which indicates that financial conditions are a key concern for employees in the manufacturing sector.
- The study found that stress levels increase among employees in the post-COVID-19 scenario in the manufacturing sector.
- The study found that job insecurity increases among employees in the post-COVID-19 scenario in the manufacturing sector.
- The study found that employee savings have reduced, and their expenditure has increased after COVID-19, which impacts their financial condition.
- The study also found that financial stress is increased in employees after COVID-19, which is caused by income uncertainty, medical expenditure, and living costs.
- The study found that employees have started to look for more income sources after COVID-19 to maintain their financial stability.
- The study revealed that employee motivation is reduced, and their work-life balance is also affected after COVID-19.
- The study found through the Chi-Square test results that there is a significant change in employee behavior after COVID-19.
- The study found through the Chi-Square test that there is a significant relationship between employee behavior and financial condition after COVID-19.
- The overall finding of this study is that employee behavior is significantly affected after COVID-19, as well as their financial condition in the manufacturing industry.

Limitations of the Study

Every research study has its own limitations, and the present study is no exception. The present study is based on the impact of post-COVID-19 on the employee behavior and financial condition in the manufacturing industry. However, some limitations were observed during the study.

- **Limited Sample Size**

The present study is based on a sample size of 150 employees from the manufacturing industry. However, the sample size may not represent the total population of the employees in the manufacturing industry.

- **Geographical Limitation**

The present study is based on the geographical area under consideration. Therefore, the study results may not be applicable to the entire manufacturing industry.

- **Primary Data Limitation**

The present study is mainly based on the primary data collected from the questionnaires. The accuracy of the study depends on the honesty and understanding of the respondents. However, the respondents may not have provided the correct information.

- **Time Limitation**

The study was conducted for a specific period of time. Hence, the long-term effects of post-COVID on employees' behaviour and financial conditions could not be considered in the study.

- **Limited Variables**

The study was conducted based on a few behavioural factors such as work stress, job insecurity, motivation, workload, and work-life balance. Financial factors considered in the study were income, savings, expenses, and financial stress. Other factors such as organizational culture, management policies, and economic conditions were not considered in the study.

- **Changing Economic Conditions**

The financial conditions of employees may also be affected by factors such as inflation rates, market conditions, and economic conditions. These factors are not considered in the study.

- **Manufacturing Sector Only**

The study was conducted based on employees in the manufacturing industry alone. Employees in other sectors such as the service industry, IT industry, and others were not considered in the study.

Suggestions / Recommendations

Based on the findings of the study, the following suggestions are proposed to improve employee behaviour and financial condition in the manufacturing industry in the post-COVID period:

- **Stress Management Programs**

The organizations need to implement stress management programs, counseling sessions, and employee wellness programs to reduce work stress and improve employee mental health.

- **Job Security Policies**

The manufacturing companies need to develop stable employment policies and transparent communication systems to reduce job insecurity among employees.

- **Financial Awareness Programs**

The organizations need to implement financial planning and financial literacy programs to enhance employees' financial management skills.

- **Flexible Work Environment**

The companies need to implement flexible work arrangements, flexibility in working hours, and work-life balance to enhance employees' satisfaction and productivity.

- **Employee Motivation Programs**

The organizations need to implement performance incentives, rewards, and recognition programs to enhance employees' motivation and work performance.

- **Health and Safety Measures**

The companies need to implement health and safety measures even in the post-COVID period to ensure a safe working environment for employees.

- **Additional Income and Skill Development Programs**

The companies need to implement training and skill development programs to enhance employees' skills and income opportunities.

- **Improved Communication Between Management and Employees**

Communication between the management and the employees can reduce stress, confusion, and job insecurity.

- **Workload Management**

The organization can manage the workload to reduce stress among the employees.

Conclusion

The present study was undertaken to assess the effect of the post-COVID-19 period on the behavior of the employees and their financial condition in the manufacturing industry. The study revealed that the COVID-19 pandemic and the post-pandemic environment have a significant effect on the behavior of the employees in the following areas: work stress, workload, job insecurity, motivation, and work-life balance. The study revealed that the financial condition of the employees is also affected in the following areas: savings, expenses, financial stress, and income stability.

The study revealed that the majority of the employees fall in the middle-income group and the middle age group. Therefore, their financial stability is very important for the employees. The study revealed that the majority of the employees face increased work stress, increased workload, and financial stress using the Likert scale. The study revealed that the majority of the employees face decreased savings and increased financial problems during the post-COVID period.

The Chi-Square test results revealed that there is a significant change in employee behavior after COVID-19 and there is a significant relationship between employee behavior and financial condition in the post-COVID period. Therefore, this study concludes that post-COVID-19 conditions have significantly influenced employee behavior and financial condition in the manufacturing industry.

The study suggests that organizations should focus on employee welfare programs, financial support systems, stress management programs, and flexible work policies to improve employee well-being and organizational productivity in the post-pandemic environment.

Future Scope of the Study

- Future research can be conducted with a higher sample size to get more accurate findings.
- The research can be extended to other sectors like service sector, IT sector, banking sector, and education sector.
- Future research can be conducted to compare employee behaviour and employee financial condition before COVID and after COVID.
- Future research can be conducted using advanced statistical tools like regression analysis, factor analysis, and structural equation modeling.
- Future research can be conducted on employee mental health, job satisfaction, and organizational performance in post-COVID.
- Future research can also be conducted to compare employee behaviour between public sector employees and private sector employees.
- Future research can also be conducted to find employee financial stability in the long term after COVID-19.
- Future research can also be conducted on employee behaviour in a work-from-home environment.
- Future research can also be conducted to compare employee behaviour between different countries.
- Future research can also be conducted on the role of government policies and organizational policies to improve employee financial stability in post-COVID.

References

1. Findlay, P., Lindsay, C., & Roy, G. (2021). Business models, innovation and employees experiences in the workplace: challenges for the post-Covid-19 economy. *Productivity and the Pandemic*, 132–146.
2. Nirmala, A. R., Bhalaji, R. K. A., Kumar, S. B., Gnanaraj, S. J. P., & Appadurai, M. (2022). Study on the effect of COVID-19 pandemic on the savings and investment pattern of the manufacturing sector. *Materials Today: Proceedings*, 68, 1319–1323.
3. Joudeh, J. M., Allan, M., Abu-Loghod, N. A., Khader, J. A., & Al-Gasawneh, J. A. (2023). Are Customers Behaving Differently in the Post-COVID-19 Era, and How is this Affecting Worker Satisfaction. *International Journal of Membrane Science and Technology*, 10(3), 2727–2736.
4. Mishra, A. (2022). Withdrawal behaviours and absenteeism at work post covid-19. *Organization and Human Capital Development*, 1(2), 62–75.
5. Jan, N., Li, Z., Xiyu, L., Farhan Basheer, M., & Tongkachok, K. (2022). Pre-and post-COVID-19: The impact of the pandemic and stock market psychology on the growth and sustainability of consumer goods industries. *Frontiers in Psychology*, 13, 796287.
6. Kotagi, P., Angolkar, M., & Koppad, R. (2023). Comparison of work efficiency in factory workers: pre & post covid lockdown—a cross sectional study. *BMC Public Health*, 23(1), 939.
7. Novikova, I. V., Vartanov, S. A., & Tyshkevich, V. P. (2021). Strategising of employment in the post-COVID-19 period. In *Transformations of Regional and Local Labour Markets Across Europe in Pandemic and Post-Pandemic Times* (pp. 67–90). Rainer Hampp Verlag.
8. Narayanamurthy, G., & Tortorella, G. (2021). Impact of COVID-19 outbreak on employee performance—moderating role of industry 4.0 base technologies. *International Journal of Production Economics*, 234, 108075.
9. Loo, S. H., Wider, W., Lajuma, S., Jiang, L., Kenikasahmanworakhun, P., Tanucan, J. C. M., & Ahmad Khadri, M. W. A. (2024). Key factors affecting employee job satisfaction in Malaysian manufacturing firms post COVID-19 pandemic: a Delphi study. *Cogent Business & Management*, 11(1), 2380809.
10. Sinniah, S., Soomro, M. A., Rawshdeh, M., Rahman, M. R. C. A., Kadir, K. A., & Jamil, A. H. (2022). Post-COVID-19 Organizational Resilience in the Manufacturing and Service Industries. *Jurnal Pengurusan*, 66.
11. Telukdarie, A., Munsamy, M., & Mohlala, P. (2020). Analysis of the Impact of COVID-19 on the Food and Beverages Manufacturing Sector. *Sustainability*, 12(22), 9331.
12. Liu, J., Tong, Y., Li, S., Tian, Z., He, L., & Zheng, J. (2022). Compliance with COVID-19-preventive behaviours among employees returning to work in the post-epidemic period. *BMC Public Health*, 22(1), 369.
13. Soomro, M. A., Ali, M. H., Tan, K. H., Kumar, A., & Sinniah, S. (2024). Workforce resilience in the post-COVID-19 era: Differences based on manufacturing–service orientation and firm size. *Production Planning & Control*, 35(13), 1674-1686.
14. Qadri, S. U., Ma, Z., Raza, M., Li, M., Qadri, S., Ye, C., & Xie, H. (2023). COVID-19 and financial performance: Pre and post effect of COVID-19 on organization performance; A study based on South Asian economy. *Frontiers in public health*, 10, 1055406.
15. Diab-Bahman, R., & Al-Enzi, A. (2020). The impact of COVID-19 pandemic on conventional work settings. *International Journal of Sociology and Social Policy*, 40(9-10), 909-927.

