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**Research Article**

# Assessing the Impact of Operational Excellence and Employee Engagement on Performance in Pharmaceutical Industry

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**ABSTRACT**

The Indian pharmaceutical industry, a global player, faces challenges in balancing robust Human Resource Management (HRM) practices with operational excellence, which could hinder its growth and competitiveness. By addressing both HRM and operational excellence challenges, Indian pharmaceutical companies can create a more engaged workforce, optimize processes, and achieve sustainable growth in the competitive global market. With its significant economic expansion and worldwide funding, HRM in India has attracted substantial study focus throughout the last decade and remains to this day, although mainly regarding the pharmaceutical industry. This paper aims to assess the level of HRM and operational excellence practices in Indian pharmaceutical industry, and their impact on sustainable performance in this important service sector. The key components from current literature were combined to create an integrated investigation method with a Likert scale. A survey was used as a quantitative tool to obtain data from 765 workers of the designated pharmaceutical firms. The hypothesis was validated. The parameters' validity as well as reliability have been demonstrated. The results indicate that the implementation of operational excellence indicators, knowledge management, and talent management tools significantly impact employees' performance in the pharmaceutical industry. Trust, engagement, and psychological wellbeing also contribute to improved company representation and performance enhancement. The results of the research have the possibility of helping assist officials, clients, and pharma executives in implementing adequately stated HRD standards to improve workforce excellence and build a long-term benefit.

**Keywords:** HRM; Operational Excellence; Survey; Pharmaceutical industry; Performance Management; Likert Scale.

## 1 INTRODUCTION

The Indian government enacted several financial modifications in reaction to the detrimental effects of the Balancing of Accounts disaster of 1991 on the country's finances. Owing to the effectiveness of various policy initiatives, the economy grew by 6.8% annually in GDP during 1991 until 2008. India's economy has grown at the fastest pace in worldwide in previous times.

S&P Global Ratings projects that India's GDP would expand by 7% in the financial year 2026–2027, making it the third-biggest economy in worldwide GDP at 2030. According to estimates, S&P anticipates India being the most rapidly expanding global economy over a period of three years, with a

7.6% increase in GDP in the financial year 2023–2024 as compared to 7.0 per cent in 2022-23. According to the Department of Pharmaceuticals, the medical products sector contributes 1.72% of the economic output of India [1]. The country's economy is significantly fuelled by the pharmaceutical and information technology sectors, which together create 2.9 million new employments annually. The industry also contributes around 8% to India's total merchandise exports [2]."Medical care" and "Medicines" are India's two main businesses, behind IT.

According to IBEF, India, in 2022-23, supplying 60% of all vaccinations and 20% of all generic medications worldwide, India is a major participant in the worldwide pharmaceuticals and vaccine industries. OTC medications, generic medications, APIs, vaccinations, biosimilars, and custom research manufacturing are important market sectors [3].

The pharmaceutical sector in India is growing at an acceleration that is in step with the country's economic expansion. India continues to have a great deal of room for expansion. India is an abundance of highly skilled individuals with advanced technologies. Labor expenses for R&D and manufacturing are minimal.

With its significant economic expansion and worldwide funding, HRM in India has attracted substantial study focus throughout the last decade and remains to this day, although mainly regarding the pharmaceutical industry [4]. To fill this gap, this investigation intends to examine and analyse the features of HRM methods on workers and the problems of operational excellence for Indian pharmaceutical industry. The study addresses HRM challenges to enhance employee performance and achieve operational excellence in the pharmaceutical industry.

India's pharmaceutical sector is witnessing remarkable growth; however, significant challenges in Human Resource Management (HRM) remain unaddressed. These include high employee turnover, skill gaps, inadequate training programs, and underdeveloped performance management systems. Achieving operational excellence in this sector necessitates a thorough understanding of how HRM practices influence employee performance and organizational outcomes. Despite the sector's importance, industry-specific research remains scarce, as emphasized by Kale (2009)[4].

This study investigates HRM challenges in the Indian pharmaceutical industry, focusing on operational excellence, employee performance, skill development, and retention strategies. It aims to offer actionable insights for enhancing operational efficiency through tailored HRM policies. Furthermore, it contributes to the existing literature by analysing the sector-specific impact of HRM practices on organizational outcomes.

The manuscript is structured as follows: Section 2 reviews the existing literature on HRM practices and operational challenges in the pharmaceutical industry. Section 3 outlines the research methodology employed for data collection and analysis. Section 4 presents the results and discusses the findings in light of the identified problem statements. Finally, Section 5 concludes the study, summarizing key insights, policy implications, and potential directions for future research.

## 2 THEORETICAL BACKGROUND

HRM-performance research focuses on HR-related outcomes like turnover, job satisfaction, and commitment, organizational outcomes like productivity, financial accounting outcomes like profits, and capital market outcomes like market share and growth [5], [6].

During the 1970s and 1980s, a trend emerged in which firms' personnel offices evolved into "human resources" divisions. This move recognised that workers are essential resources, not merely pieces slotted into jobs[7], [8].

Studies suggests that implementing an efficient human resources management framework may significantly improve both personal and organisational efficiency. Many scientific studies on the HRM-performance link concentrates on describing the intermediary processes by which HRM platforms improve organisational efficiency[9]. Not many studies have looked at possible outcomes in this connection. According to a survey of research conducted within 2001 and 2023, just a few of them

concentrate on the limiting circumstances that could improve or undermine the impact of HRM on staff, as well as the difficulties of achieving operational excellence for pharmaceutical industries.

Jafar Babapour et al. claimed the initial investigation, which explored HRM difficulties in the pharmaceutical business; the study's findings adds to improving awareness of HR procedures and assists pharma administrators in knowing ways to effectively apply HR procedures [10]. Frank Nana Kweku Otoo et al carried out the study for Investigate how worker efficiency influences the relationship among human resources development and organisational effectiveness to assist pharmaceutical industry officials, participants, and executives in implementing effective HRD strategies that improve workforce excellence and produce a strategic edge over time [11]. As the Indian pharma industry is booming, creating a demand for skilled professionals like researchers, chemists, and regulatory specialists, though more research is required in the field. Strong HRM practices help attract top talent through effective recruitment strategies and competitive compensation packages. Additionally, HRM can reduce employee turnover by fostering a positive work environment, offering growth opportunities, and promoting work-life balance. Pharmaceutical companies rely on HR for compliance with regulations, ensuring ethical practices, data security, and quality standards. Effective HRM fosters a culture of learning and development, empowering employees to contribute to research and discoveries[12], [13]. Performance management systems, clear career progression paths, and recognition programs keep employees engaged, leading to higher quality output and increased efficiency. The study by Marx C.K. et al. 2022 analyses the association between organizational equal opportunity and work-life variables and the gender wage gap in big German businesses [13]. The study by Zulmi M.M. et al. 2021 examines how workers with disabilities are able to engage in inclusive HRM practises at PT SAMA with a particular emphasis on how these practises are put into practise in terms of rules, guidelines, and practices [14]. The results show that the business gains from improved performance, greater teamwork, and incentive for independence. The study by Jonsson R. et al. 2023 assesses the effect of a participatory age-management intervention on line managers and HR partners in six healthcare organisations in Sweden [15]. Frontline managers (FLM) are emphasized as being critical in the implementation of HR policies and employee performance outcomes in Kilroy J. Et al.'s 2023 research[12]. Townsend K. et al. (2022), concentrating on the Asia-Pacific area, examine the development of frontline managers in human resource management. They offer a paradigm that emphasises how agency and policy implementation shape frontline management approaches. The analysis suggests more study of four different frontline management forms [16].

Strong HRM practices position Indian pharmaceutical companies to attract and hold upper ability, maintaining a viable edge in the world [13], [17]–[19]. This study focuses on the relationship between Human Resource Management (HRM) practices, staff involvement, and Operational Excellence (OE) in the pharmaceutical sector. It examines the impact of HRM methods on worker productivity, happiness, and operational efficiency and excellence. The research highlights the need for new research findings on the role of employees, the implementation of talent management and knowledge management concepts, and the effects on employee psyche. The study also highlights the need for new knowledge and approaches to address the stress and duress created by changing dynamics post-pandemic. The research highlights the importance of pursuing change and innovation in the field of research and innovation to address the challenges of operational activities in the pharmaceutical sector.

## 3. PROPOSED METHODOLOGY

### 3.1 Hypothesis

The following hypotheses are formulated based on the theoretical framework of the resource-driven perspective and a review of the relevant literature:

**Hypothesis 1.**

There is a significant impact on the employees of pharmaceutical companies in the implementation of operational excellence indicators.

**Hypothesis 2.**

There is a significant impact of implementation of various tools of the Knowledge Management, Talent Management on employees' performance in the pharmaceutical industry.

**Hypothesis 3.**

There is a significant impact of the pursuit of trust/ employees' engagement/ psychological wellbeing on field representation of the company before customers and performance enhancement.

These hypotheses aim to identify and evaluate the critical HRM factors driving employee effectiveness and operational success in the pharmaceutical industry. The findings are expected to provide actionable insights into optimizing HR practices for sustained organizational growth and competitive advantage.

### 3.2 Data Collection

The pharmaceutical companies are segregated according to turn over, the no. of employee working in the organization and position of the firm according to ORG data and ranking. The study conducted on Pharmaceutical Companies with a turnover more than 2000 crores and employs more than 500 employees and workers. The scope of the study incorporated company's which are listed in org ranking and are major player in the pharmaceutical industry.

Assael and Keon confirm that 'personal interview … with its high involvement seems to induce subjects to concentrate harder and respond more accurately'. Conscious of this fact, extraordinary lengths were ensured for high response rate as possible. A questionnaire form has been developed for response of the employees. The current information for the present research were obtained in March 2023. 765 individuals completed a closed-ended structured survey. Respondents were chosen using weighted randomised selection. Women participated and provided more details over the questionnaires. To assess the data's validity, 10% of the respondents were randomly cross-checked. Simple random sampling technique was used (Probability Sampling). To decide the sample size, the Sample Size formula given by Yamane, T. (1967), with the Confidence level at 95%, Precision level of ± 5% was used.

$$n = \frac{N}{1+n(e)^2} \quad (1)$$

n=Sample Size

N=Population Size

e=level of precision

It is observed that the sample size for the study should be more than 750. However, for the current study the sample size is taken as 765 i.e., n=765 (which will include employees at various hierarchical levels and of different genders). This sample size (n=765) gives a statistical error (Sampling Error) (e = 4.9%). Considered Level of significance a=0.05 and Level of confidence was 95%. The number of samples and errors in statistics may allow for generalisation of the findings.

### 3.3 Questionnaires

In survey, questionnaires with closed, structured queries, on Likert-type scales, were used. The questionnaire was self-administrated and followed the quality check. It included both confined and open-ended questions. The closed-ended questions covered demographic information. The open-ended questions sought the participant's thoughts on benefits problems, and recommendations for changes. The validity and reliability of study has been carried out. Questionnaires are examined by three specialists who evaluate and assess their accuracy by Index of Concordance (IOC) and appropriate language. Then modified during the actual discussion. Once the specialists provide feedback on the questionnaires, the information will be used to create the Index of Concordance to determine the correlation between the objectives and the questionnaire. The scale for IOC considered is -1 to +1. +1 for maximum correlation and -1 for no correlation. The IOC calculation formulae is as:

$$IOC = \frac{\sum R}{n} \quad (2)$$

Where, $\sum R$ sum of score from all experts and n represents the number of expert people i.e., 3.

Three different parts of questionnaires are considered as tools for study.

Part 1 General information; gender, age, status, education, and monthly income.

Part 2 Questionnaire about Employee Perceptions of HRM Practices

Part 3 Questionnaire about Operational Excellence

Detailed questionnaire given in app. 1. The questionnaires were collected and analysed, with incomplete data excluded and complete questions coded for completeness.

## 4. RESULTS

For the analysis, initially the consistency of survey is checked. Demographic analysis has been carried out. Analysis for employee perceptions of HRM practices and operational excellence are the subsequent part of the analysis.

### 4.1 Consistency of survey

Lee Cronbach (1951) developed coefficient alpha, a reliability estimate based on split-half correlations, corrected by the Spearman-Brown formula, indicating the degree of interrelation between items. Cronbach's alpha is a statistical measure of a test's internal consistency, ranging from 0 to 1, with higher values indicating closer relationships between items, indicating a shared concept or construct.

The formula used for the analysis is

$$\propto = \frac{k}{k-1}\left(1 - \frac{\sum_{i=1}^{k}\sigma_{yi}^2}{\sigma_x^2}\right) \quad (3)$$

Here $\sigma_x^2$ is the variance in total observed total test scores and $\sigma_{yi}^2$ is the variance of component i for the current sample of persons.

Table 1 Reliability result of questionnaires

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| 0.998 | 0.998 | 10 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | |
|---|---|---|---|---|---|---|---|
| Item Means | 750.123 | 701.561 | 800.911 | 99.350 | 1.142 | 1256.152 | |
| Inter-Item Correlations | .984 | .940 | .999 | .059 | 1.063 | .000 | |

The Reliability Statistics table 1 displays an excellent reliability Alpha coefficient of 0.998, indicating excellent reliability. The Summary Item Statistics display the mean and inter-item correlation of items, with an acceptable inter-item correlation mean of 0.984, indicating acceptable analysis.

### 4.2 Part 1: General Information

In this part of the results the demographic variables (age, genders etc.) considered. Table 2 shows the demographic variables.

Table 2 Demographic Variable's

| | Count | Percentage |
|---|---|---|
| **Gender** | | |
| Male | 428 | 56% |
| Female | 337 | 44% |
| **Marital Status** | | |
| Married | 551 | 72% |
| Unmarried | 214 | 28% |
| **Age** | | |
| 25 or under | 160 | 21% |
| 26-40 | 367 | 48% |
| 41-55 | 180 | 23.5% |
| 56 or Older | 58 | 7.5% |
| **Income** | | |
| Less than Rs. 2,50,000 | 114 | 15% |
| Rs. 2,50,000-Rs.5,00,000 | 311 | 40.6% |
| Rs. 5,00,000-Rs.7,50,000 | 201 | 26.27% |
| Rs.7,50,000 and above | 138 | 18.13% |
| **Education** | | |
| Bachelor's degree | 298 | 39% |
| Post-graduate degree | 206 | 27% |
| Professional degree | 206 | 27% |
| Other | 54 | 7% |

### 4.3 Part 2 Employee Perceptions of HRM Practices

#### 4.3.1 Non-parametric Correlations

Initially, Kendall's tau correlations are carried out. Kendall's tau ranges from -1 to 1, indicating a perfect positive correlation between two variables, a perfect negative correlation, or no correlation at all. Kendall's tau is a non-parametric correlation measure that indicates the direction of two variables' movement. Algorithm method is applied for the analysis. The algorithm method is generally more efficient than the direct method, especially for large datasets. App. A2 shows the results of the tests.

Considering the Kendall tau-b correlation, 0.223, 0.607, 0.438, 0.194, 0.569, 0.248, 0.195 and 0.086 are the correlation coefficients for Q.2, Q.3, Q.4, Q.5, Q.6, Q.7, Q.8 and Q.10 with Q1 respectively, which shows the positive correlation while -0.091 shows the negative correlation for Q.9. Both the analysis shows similar trends but with little bit difference in coefficients. The question 2 shows Kendall tau-b correlation with Q3-10 are 0.408, 0.32, 0.233, 0.137, 0.239, 0.153, 0.348 and 0.29 respectively. Analysis shows the positive correlations. The question 3 shows the positive correlations with all the questions from 4 to 10 with the Kendall tau-b correlation for the same are 0.514, 0.111, 0.577, 0.309, 0.347, 0.055 and 0.118 respectively. The question 4 have Kendall tau-b correlation having the value of 0.264, 0.412, 0.525, 0.404, 0.102 and 0.333 for the same. The question 5 shows the Kendall tau-b correlation having the value of 0.171, -0.037, -0.107, 0.389 and 0.588 for the same. The question 6 shows the correlation

test statics 0.331, 0.402, 0.045 and 0.082 with the questions 7,8, 9 and 10. The question 7 with the correlations with Kendall tau-b correlation statistics 0.63, 0.12, -0.081 with question 8,9 and 10. The question 8 shows the positive correlation 0.13 and -0.149 Kendall tau-b correlation statistics with questions from 9-10. The question 9 i.e. shows the positive relation of 0.403 Kendall tau-b correlation statistics with question 10. For the analysis the Employee Perceptions of HRM Practices, Recruitment and Selection and Training and Development parts of Part2 studies are considered in table App. A2: Section 1, while the next parts i.e. Performance Management, Compensation and Benefits, Employee Engagement and Leadership are considered separately (App. A2: Section 2).

For Kendall's tau-b Correlation (Part 2: Section 2), considering the Kendall tau-b correlation for the same, 0.947, 0.079, 0.053, 0.124, 0.099, 0.188, -0.015, 0.27, 0.139, -0.085, 0.021, 0.062, 0.103 and 0.002 are the correlation coefficients of Q1 with Q.2, to Q. 15 respectively. The Kendall tau-b correlation of Q2 with Q.3, to Q. 15 the same are 0.091, 0.067, 0.14, 0.115, 0.192, -0.006, 0.283, 0.152, -0.07, 0.05, 0.074, 0.119 and 0.033 respectively. The question 3 shows the correlations with all the questions from 4 to 15 are 0.222, 0.164, 0.242, 0.136, 0.069, 0.159, -0.086, 0.273, 0.28, 0.182, 0.18 and -0.048 respectively. Similarly, question 4 for Kendall tau-b correlation the coefficients having the value of 0.211, -0.04, 0.204, 0.049, -0.102, 0.322, 0.356, 0.471, 0.306, and 0.104 for the same. Question 5 shows the correlations with Q 6 to 15 for Kendall tau-b correlation the coefficients having the value of 0.123, 0.092, -0.008, -0.026, -0.064, 0.223, 0.056, -0.051 and -0.165 for the same. Question 6 shows the Kendall tau-b correlation the same are 0.123, 0.092, -0.008, -0.026, -0.064, 0.223, 0.056, -0.051 and -0.165. Kendall tau-b correlation statistics of Q 7 with Q 8-15 are -0.109, 0.253, 0.102, -0.027, 0.031, -0.007, 0.003 and 0.013. Question 8 with Q 9-15, shows the value of 0.074, 0.034, 0.159, 0.111, 0.191, 0.11 and 0.077. The question 9 shows the 0.531, -0.059, -0.301, -0.145, 0.010 and -0.198 Kendall tau-b correlation statistics with question 10-15. The question 10 with Q 11-15, -0.069, -0.35, -0.283, -0.103, -0.063, and question 11 shows the relation of 0.385, 0.445, 0.534 and 0.493 with question 12-15. Similarly, question 12 shows the Kendall tau-b correlation statistics of 0.694, 0.49 and 0.335 with question 13-15, Q 13, 0.521 and 0.443 with question 14-15 and Q14 shows the positive relation of 0.342 Kendall tau-b correlation statistics with question 15.

### 4.3.2 Analysis of Likert Data

For the analysis a five-point Likert scale has been considered. Likert scale data is ordinal. A scale is considered from 1-5 with the options of very low, low average, high and very high. Non-parametric methods adopted rank, median or mode were suitable accompanied by distribution free methods for analysis of the Likert scale data, and these procedures have been adopted for the current analysis.

Table 3 presents responses from employees, categorized as strongly disagree, disagree, and agree. Most employees are satisfied with the company's onboarding process, with 60.78% agreeing or strongly agreeing that it is effective in integrating new employees into the organization. Only 14.77% disagree or strongly disagree with this statement. Overall, the onboarding process is considered satisfactory.

The table indicates that the company's onboarding process could be improved. 24.44% of employees are uncertain about its effectiveness and 14.64% disagree with its alignment with strategic goals. However, 77.39% of employees find the process well-organized and efficient, 71.76% appreciate learning about the company's culture and values, and 65.62% believe it helps them develop necessary skills for job success.

The table indicates that most employees are satisfied with the company's HRM practices, with 68.35% agreeing or strongly agreeing that they are effective in attracting and retaining top talent and aligning with the organization's strategic goals. However, only 57.35% agree or strongly agree that the company's HRM practices are consistent with industry best practices. Additionally, 22.11% of employees are uncertain about the effectiveness of the company's HRM practices in attracting and retaining top talent, and 21.89% are uncertain about their alignment with the organization's strategic goals. The onboarding process is highly effective, with 80.92% of employees agreeing or strongly agreeing. However, only 17.12% disagree. The company provides ample training and development opportunities, with 72.81% agreeing. However, 25.23% are uncertain about the effectiveness of these opportunities. The training

programs are also highly effective, with 64.44% agreeing or strongly agreeing. However, 33.07% are uncertain and 2.48% disagree.

The company's performance expectations are clear, with 59.74% of employees agreeing. However, 36.66% are uncertain about the company's performance expectations, and 3.60% disagree. Regular feedback on performance is agreed upon by 78.95% of employees, but 14.25% are uncertain. The company's performance management system is 70.85% agreed upon, but 28.15% are uncertain. Recognition for contributions and achievements is 68.24% agreed upon, but 25.23% are uncertain, and 6.54% disagree. The company's performance management system is also uncertain.

The company offers competitive compensation and benefits, with 57.48% of employees agreeing or strongly agreeing. However, 42.52% are uncertain about the company's competitiveness. The fairness and equity of the compensation and benefits package are 61.24% and 48.24% respectively. The attractiveness of the package to potential employees is 48.24%, but 51.76% are uncertain. Overall, employees are uncertain about the company's competitiveness, fairness, and attractiveness.

The table indicates that the company's onboarding process is effective in integrating new employees, but improvements could be made by aligning it with the organization's strategic goals and reducing employees who are uncertain about its effectiveness.

Table 3 Questionnaire wise Likert Scale Count (Part 1)

| Questions | n= | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree | % Disagree | % Not Sure | % Agree |
|---|---|---|---|---|---|---|---|---|---|
| Company's HRM practices are effective in attracting and retaining top talent. | 765 | 98 | 367 | 113 | 154 | 33 | 60.78% | 14.77% | 24.44 % |
| Company's HRM practices are aligned with the organization's strategic goals. | 765 | 371 | 221 | 112 | 3 | 58 | 77.39% | 14.64% | 7.97% |
| Company's HRM practices are consistent with industry best practices. | 765 | 289 | 260 | 127 | 44 | 45 | 71.76% | 16.60% | 11.63% |
| Organization prepares process of HR demand forecasting effectively | 765 | 292 | 319 | 118 | 32 | 4 | 79.87% | 15.42% | 4.71% |
| Organization follows HR supply forecasting | 765 | 91 | 411 | 160 | 33 | 70 | 65.62% | 20.92 % | 13.46% |

| Questions | n= | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree | % Disagree | % Not Sure | % Agree |
|---|---|---|---|---|---|---|---|---|---|
| procedure effectively | | | | | | | | | |
| The company's recruitment process is fair and transparent. | 765 | 105 | 324 | 247 | 42 | 47 | 56.08% | 32.29% | 11.63% |
| The company's onboarding process is effective in integrating new employees into the organization. | 765 | 211 | 408 | 131 | 13 | 2 | 80.92% | 17.12% | 1.96% |
| The company provides employees with opportunities for training and development. | 765 | 167 | 390 | 193 | 12 | 3 | 72.81% | 25.23% | 1.96% |
| The company's training programs are effective in improving employee skills and knowledge. | 765 | 32 | 461 | 253 | 11 | 8 | 64.44% | 33.07% | 2.48% |
| The company encourages employees to take advantage of training and development opportunities. | 765 | 130 | 327 | 125 | 174 | 9 | 59.74% | 16.34% | 23.92% |
| The company sets clear performance expectations for employees. | 765 | 108 | 0 | 0 | 605 | 52 | 14.12% | 0.00% | 85.88% |
| The company provides employees | 765 | 0 | 109 | 604 | 3 | 49 | 14.25% | 78.95% | 6.80% |

| Questions | n= | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree | % Disagree | % Not Sure | % Agree |
|---|---|---|---|---|---|---|---|---|---|
| with regular feedback on their performance. | | | | | | | | | |
| The company's performance management system is fair and equitable. | 765 | 8 | 82 | 542 | 119 | 14 | 11.76% | 70.85% | 17.39% |
| Company values my contributions and recognizes my achievements. | 765 | 119 | 403 | 193 | 35 | 15 | 68.24% | 25.23% | 6.54% |
| The company offers competitive compensation and benefits. | 765 | 8 | 15 | 396 | 241 | 105 | 3.01% | 51.76% | 45.23% |
| The company's compensation and benefits package are fair and equitable. | 765 | 5 | 31 | 311 | 382 | 36 | 4.71% | 40.65% | 54.64% |
| The company's compensation and benefits package are attractive to potential employees. | 765 | 187 | 182 | 154 | 202 | 40 | 48.24% | 20.13% | 31.63% |
| Employees are engaged in their work and feel valued by the company. | 765 | 0 | 205 | 391 | 116 | 53 | 77.91% | 15.16% | 6.93% |
| Employees feel that their work is meaningful and makes a difference. | 765 | 205 | 391 | 116 | 53 | 0 | 77.91% | 15.16% | 6.93% |
| Employees are proud to work | 765 | 365 | 359 | 31 | 10 | 0 | 94.64% | 4.05% | 1.31% |

| Questions | n= | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree | % Disagree | % Not Sure | % Agree |
|---|---|---|---|---|---|---|---|---|---|
| for the company | | | | | | | | | |
| Company encourages open communication and feedback. | 765 | 0 | 3 | 159 | 192 | 411 | 0.39% | 20.78% | 78.82% |
| Previous experience of employees is not very important to achieve organizational growth | 765 | 3 | 10 | 109 | 192 | 451 | 1.70% | 14.25% | 84.05% |
| Organization does not pay overtime to employees | 765 | 11 | 6 | 127 | 251 | 370 | 2.22% | 16.60% | 81% |
| Job security provide encouragement to the employees for staying longer<br>Leadership | 765 | 5 | 17 | 166 | 245 | 332 | 2.88% | 21.70% | 75% |
| How would you rate the effectiveness of your company's leadership team? | 765 | 0 | 31 | 151 | 222 | 361 | 4.05% | 19.74% | 76% |

### 4.3.3 Tests for Normality

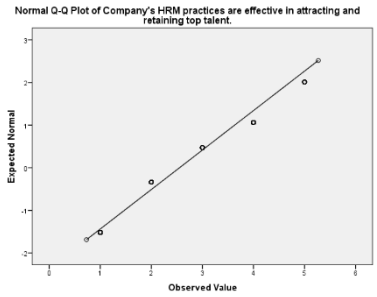
For the analysis of normality Shapiro-Wilk test has been carried out as numerical method and Histograms, Quantile–Quantile Plots has been drawn for the analysis as graphical method. Fig 1 depicts histograms, which are a single graphic approach to determine resemblance to a normal distribution.

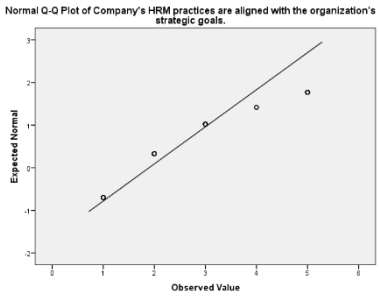
**Shapiro-Wilk Test**

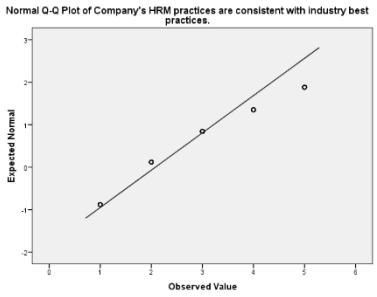
Table 4 Test of normality (Part 1)

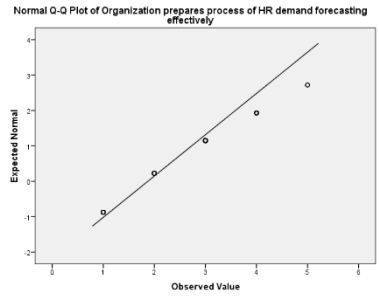
| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Company's HRM practices are effective in attracting and retaining top talent. | .303 | 765 | .000 | .857 | 765 | .000 |
| Company's HRM practices are aligned with the organization's strategic goals. | .267 | 765 | .000 | .744 | 765 | .000 |
| Company's HRM practices are consistent with industry best practices. | .246 | 765 | .000 | .820 | 765 | .000 |
| Organization prepares process of HR demand forecasting effectively | .239 | 765 | .000 | .820 | 765 | .000 |
| Organization follows HR supply forecasting procedure effectively | .321 | 765 | .000 | .801 | 765 | .000 |
| The company's recruitment process is fair and transparent. | .245 | 765 | .000 | .864 | 765 | .000 |
| The company's onboarding process is effective in integrating new employees into the organization. | .275 | 765 | .000 | .820 | 765 | .000 |
| The company provides employees with opportunities for training and development. | .269 | 765 | .000 | .836 | 765 | .000 |
| The company's training programs are effective in improving employee skills and knowledge. | .353 | 765 | .000 | .746 | 765 | .000 |
| The company encourages employees to take advantage of training and development opportunities. | .274 | 765 | .000 | .863 | 765 | .000 |
| The company sets clear performance expectations for employees. | .485 | 765 | .000 | .532 | 765 | .000 |
| The company provides employees with regular feedback on their performance. | .425 | 765 | .000 | .577 | 765 | .000 |
| The company's performance management system is fair and equitable. | .368 | 765 | .000 | .742 | 765 | .000 |
| Company values my contributions and recognizes my achievements. | .298 | 765 | .000 | .840 | 765 | .000 |
| The company offers competitive compensation and benefits. | .304 | 765 | .000 | .811 | 765 | .000 |
| The company's compensation and benefits package are fair and equitable. | .297 | 765 | .000 | .807 | 765 | .000 |
| The company's compensation and benefits package are attractive to potential employees. | .179 | 765 | .000 | .885 | 765 | .000 |

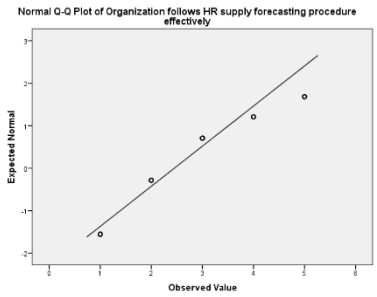
| | | | | | | |
|---|---|---|---|---|---|---|
| Employees are engaged in their work and feel valued by the company. | .215 | 765 | .000 | .848 | 765 | .000 |
| Employees feel that their work is meaningful and makes a difference. | .290 | 765 | .000 | .828 | 765 | .000 |
| Employees are proud to work for the company. | .301 | 765 | .000 | .729 | 765 | .000 |
| Company encourages open communication and feedback. | .336 | 765 | .000 | .742 | 765 | .000 |
| Previous experience of employees is not very important to achieve organizational growth | .357 | 765 | .000 | .720 | 765 | .000 |
| Organization does not pay overtime to employees | .288 | 765 | .000 | .773 | 765 | .000 |
| Job security provide encouragement to the employees for staying longer | .266 | 765 | .000 | .810 | 765 | .000 |
| How would you rate the effectiveness of your company's leadership team? | .289 | 765 | .000 | .795 | 765 | .000 |
| a. Lilliefors Significance Correction | | | | | | |

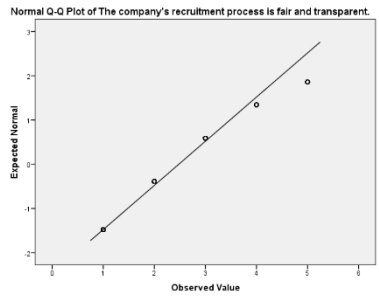


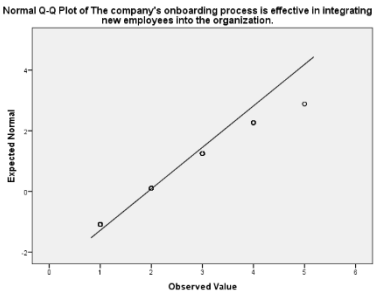



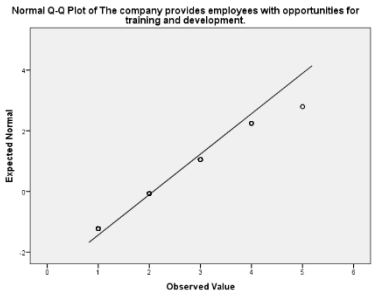



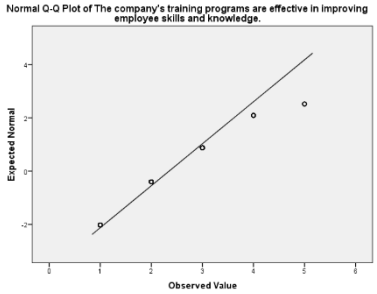



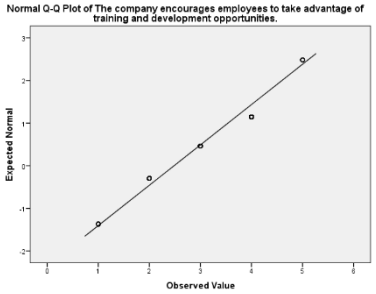



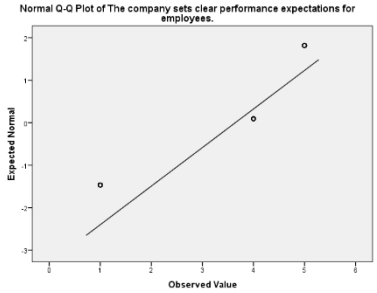



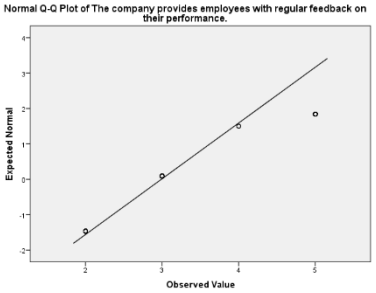

Normal Q-Q Plot of The company's onboarding process is effective in integrating new employees into the organization.
Expected Normal
Observed Value

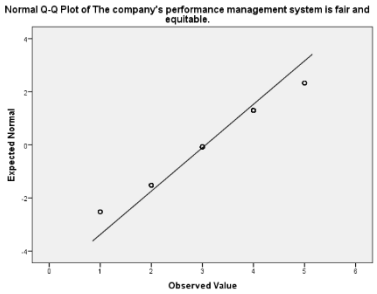

Normal Q-Q Plot of The company provides employees with opportunities for training and development.
Expected Normal
Observed Value

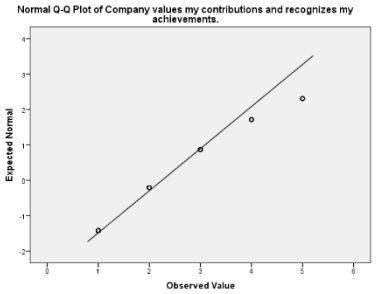

Normal Q-Q Plot of The company's training programs are effective in improving employee skills and knowledge.
Expected Normal
Observed Value

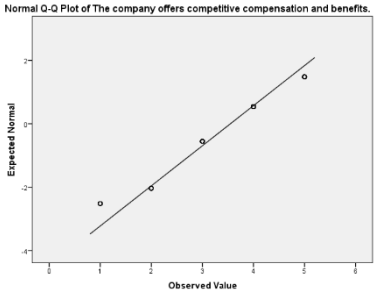

Normal Q-Q Plot of The company encourages employees to take advantage of training and development opportunities.
Expected Normal
Observed Value

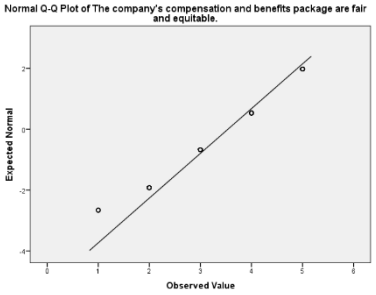

Normal Q-Q Plot of The company sets clear performance expectations for employees.
Expected Normal
Observed Value


Normal Q-Q Plot of The company provides employees with regular feedback on their performance.
Expected Normal
Observed Value


Normal Q-Q Plot of The company's performance management system is fair and equitable.
Expected Normal
Observed Value


Normal Q-Q Plot of Company values my contributions and recognizes my achievements.
Expected Normal
Observed Value


Normal Q-Q Plot of The company offers competitive compensation and benefits.
Expected Normal
Observed Value


Normal Q-Q Plot of The company's compensation and benefits package are fair and equitable.
Expected Normal
Observed Value

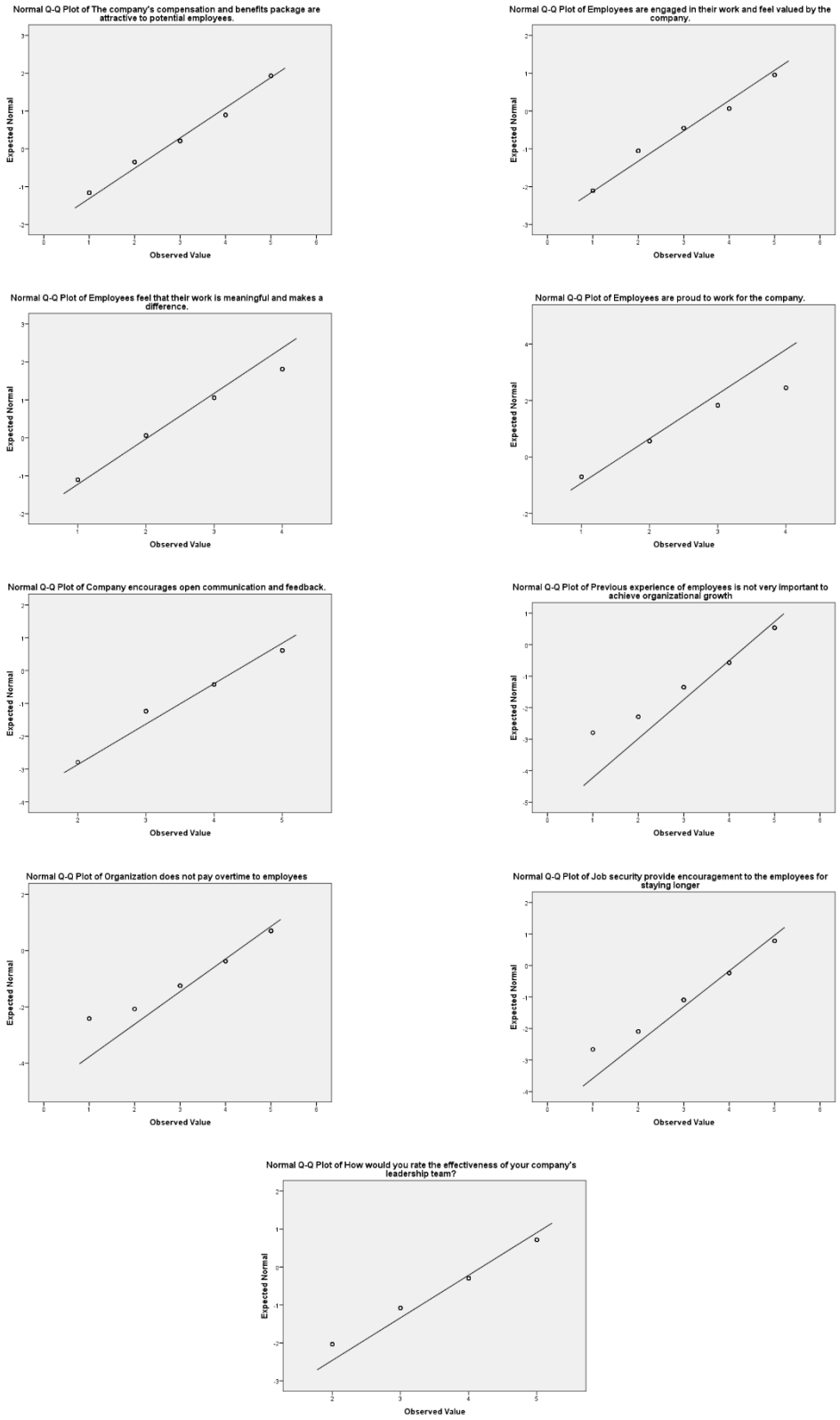



Fig 1 Quantile–Quantile Plots for People Questionnaire

The Shapiro-Wilk test is a statistical tool used to determine normality in ordinal data. It is a good-of-fit test that uses sorting and standardisation to determine how well the sample data fits a normal distribution. It is a powerful normality test and is often used in conjunction with other methods like visual inspection of histograms and quantile-quantile plots. The Shapiro-Wilk test is a statistical method used to determine the distribution of a sample. It uses a test statistic, W, to measure deviation

from normality. A close W indicates normality, while a small p-value suggests the sample is not normally distributed. Comparing data distribution with normal curves is crucial for statistical tests. From table 4 it has been estimated that the value of Shapiro Wilk W is not in the 99% critical value accepted range: [0.9903: 1.0000], thus null hypothesis (H0) is rejected and the conclusion can be made as per Ha that the observed distribution does not fit the normal distribution. The Shapiro-Wilk test statistic (W) is very low, and the p-value is less than 0.05. This indicates that the null hypothesis of normality should be rejected, and there is strong evidence that the data is not normally distributed. The Kolmogorov-Smirnov test statistic (D) is also relatively high, and the p-value is less than 0.05. This further supports the conclusion that the data is not normally distributed. If the data is not normally distributed, then this may affect the results of statistical tests that rely on the normality assumption. For example, t-tests and ANOVA tests may not be reliable if the data is not normally distributed. In this case, it may be more appropriate to use nonparametric tests, which do not rely on the normality assumption. Some examples of nonparametric tests include the Mann-Whitney U test, and the Chi-square test.

### 4.4 Part 3 Operational Excellence

#### 4.4.1 Non-parametric Correlations

App. A4 shows the Kendall's tau-b Correlation for the Likert Scale data for part 3 operational excellence. The Kendall tau-b correlation test statistic summarized that the question 1 for “Quality Improvement”, shows the 0.996, -0.005, -0.021 and 0.054 correlation coefficients for Q.2, Q.3, Q.4, and Q.5 respectively. The question 2 i.e., “Cost Reduction.”, shows Kendall tau-b correlation for the same are -0.005, -0.017 and 0.060 respectively. The question 3 i.e., “Productivity Improvement”, shows the correlations with both the questions 4 and 5 0.147 and 0.081 respectively similarly, question 4 i.e., “Timely Delivery”, shows the positive correlations having the value of 0.132 with the question 5.

#### 4.4.2 Analysis of Likert Data

Table 5 Questionnaire wise Likert Scale Count (part 2)

| Questions | n= | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree | % Disagree | % Not Sure | % Agree |
|---|---|---|---|---|---|---|---|---|---|
| Quality Improvement | 765 | 108 | 0 | 0 | 605 | 52 | 14% | 0% | 86% |
| Cost Reduction | 765 | 0 | 109 | 604 | 3 | 49 | 14% | 79% | 7% |
| Productivity Improvement | 765 | 8 | 82 | 542 | 119 | 14 | 12% | 71% | 17% |
| Timely Delivery | 765 | 119 | 403 | 193 | 35 | 15 | 68% | 25% | 7% |
| Waste Reduction | 765 | 8 | 15 | 396 | 241 | 105 | 3% | 52% | 45% |

Table 5 presents the results of a Likert scale survey of 765 employees regarding their satisfaction with the company's operational excellence efforts. Most employees, 75.78%, agree or strongly agree that the company is actively working to enhance operational excellence, with only 9.32% disagreeing or strongly disagreeing. The company is demonstrating strong commitment to quality improvement, cost reduction, productivity improvement, timely delivery, and waste reduction, with 86.54% of employees stating they are actively working towards these goals. Additionally, 79.74% of employees believe the company is making efforts to reduce costs, while 68.35% of employees believe the company is making significant efforts to improve delivery times.

### 4.4.3 Tests for Normality

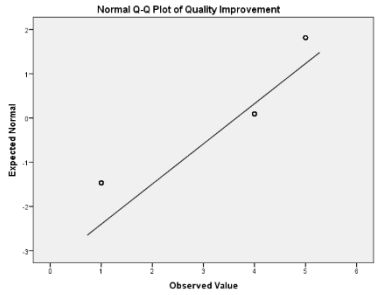
For the analysis of normality Shapiro-Wilk test has been carried out as numerical method and Histograms, Quantile–Quantile Plots has been drawn for the analysis as graphical method.

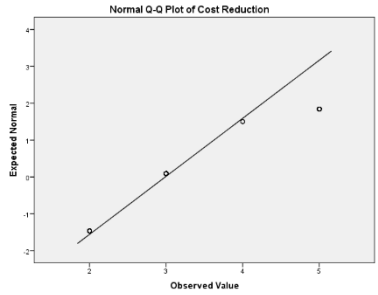
**Shapiro-Wilk Test**

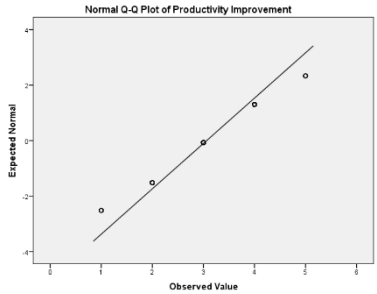
The Kolmogorov-Smirnov test statistic (D) is a measure of the maximum difference between the cumulative distribution functions (CDFs) of the sample and a reference distribution. The closer D is to 0, the more similar the two distributions are. The p-value is the probability of obtaining a test statistic as extreme or more extreme than the observed D, assuming the null hypothesis is true. A small p-value (typically less than 0.05) indicates that the null hypothesis should be rejected, and there is evidence that the two distributions are not the same (Fig 2, table 6). Based on the Shapiro-Wilk and Kolmogorov-Smirnov test results, all five variables are not normally distributed. This is supported by the low W values and p-values for all the variables.

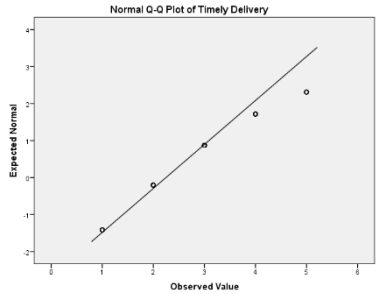
Table 6 Test of normality

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Quality Improvement | .485 | 765 | .000 | .532 | 765 | .000 |
| Cost Reduction | .425 | 765 | .000 | .577 | 765 | .000 |
| Productivity Improvement | .368 | 765 | .000 | .742 | 765 | .000 |
| Timely Delivery | .298 | 765 | .000 | .840 | 765 | .000 |
| Waste Reduction | .304 | 765 | .000 | .811 | 765 | .000 |
| a. Lilliefors Significance Correction | | | | | | |



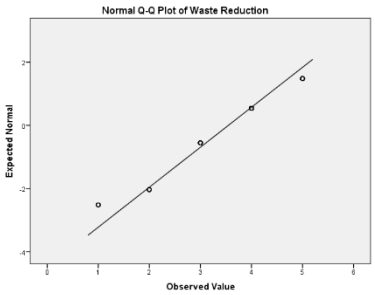



Fig 2 Quantile–Quantile Plots Questionnaire

### 4.5 Testing of Hypotheses

The general Hypothesis considered for the study are as:

(H01) There is no factor having significant impact on the employees of pharmaceutical companies in the implementation of operational excellence indicators.

(Ha1) There is a significant impact on the employees of pharmaceutical companies in the implementation of operational excellence indicators.

(H02) There is no significant impact of implementation of various tools of the Knowledge Management, Talent Management on employees' performance in the pharmaceutical industry.

(Ha2) There is a significant impact of implementation of various tools of the Knowledge Management, Talent Management on employees' performance in the pharmaceutical industry.

(H03) There is no significant impact of the pursuit of trust/ employees' engagement/ psychological wellbeing on field representation of the company before customers and performance enhancement.

(Ha3) There is a significant impact of the pursuit of trust/ employees' engagement/ psychological wellbeing on field representation of the company before customers and performance enhancement.

The Mann-Whitney U test is a nonparametric test that compares the variances of 2 distinct populations. It is frequently employed as a substitute for the t-test whenever the presumption of normality isn't satisfied. The table 7 shows the results of a Mann-Whitney U test, a non-parametric test used to compare two independent groups. The test statistic is -1.000, which is significant at the $p < 0.001$ level. This means that we can reject the null hypothesis that there is no difference in the distribution of the variable of interest between the two groups. The chi-square test is a form of statistical analysis that compares the actual and anticipated rates of categorical data. It is a non-parametric test, implying the test makes no presumptions regarding the statistical pattern of the data. The chi-square test is frequently used to test for individuality between two categorical variables. The chi-square test is a significance test, which shows how the findings from the research seem to have happened by coincidence. A significant chi-square test result does not necessarily mean that the two variables are causally related. However, it does suggest that there is some kind of relationship between the two variables. It is important to note that the chi-square test is sensitive to sample size. This means that a large sample size is more likely to produce a significant chi-square test result, even if there is only a weak relationship between the two variables. Table 7 also shows the results of a chi-square test comparing the effectiveness of two onboarding processes: a traditional onboarding process and a gamified onboarding process. The test statistic is 354.026, which is significant at the $p < 0.001$ level. This means that we can reject the null hypothesis that there is no difference in effectiveness between the two onboarding processes. Thus, after the hypothesis testing, following conclusions can be made:

- There is a significant impact of implementation of various tools of the Knowledge Management, Talent Management on employees' performance in the pharmaceutical industry.
- There is a significant impact of the pursuit of trust/ employees' engagement/ psychological wellbeing on field representation of the company before customers and performance enhancement.

- There is a significant impact on the employees of pharmaceutical companies in the implementation of operational excellence indicators.

Table 7 Non parametric Tests

| | **Mann-Whitney U** | **Wilcoxon W** | **Z** | **Asymp. Sig. (2-tailed)** | **Exact Sig. [2*(1-tailed Sig.)]** | **Chi-Square** | **df** | **Asymp. Sig.** |
|---|---|---|---|---|---|---|---|---|
| Company's HRM practices are effective in attracting and retaining top talent. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 423.673[b] | 4 | .000 |
| Company's HRM practices are aligned with the organization's strategic goals. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 557.869[b] | 4 | .000 |
| Company's HRM practices are consistent with industry best practices. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 354.026[b] | 4 | .000 |
| Organization prepares process of HR demand forecasting effectively | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 555.190[b] | 4 | .000 |
| Organization follows HR supply forecasting procedure effectively | .500 | 1.500 | 0.000 | 1.000 | 1.000[b] | 599.647[b] | 4 | .000 |
| The company's recruitment process is fair and transparent. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 417.895[b] | 4 | .000 |
| The company's onboarding process is effective in integrating new employees into | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 727.281[b] | 4 | .000 |

| | Mann-Whitney U | Wilcoxon W | Z | Asymp. Sig. (2-tailed) | Exact Sig. [2*(1-tailed Sig.)] | Chi-Square | df | Asymp. Sig. |
|---|---|---|---|---|---|---|---|---|
| the organization. | | | | | | | | |
| The company provides employees with opportunities for training and development. | .500 | 1.500 | 0.000 | 1.000 | 1.000[b] | 655.856[b] | 4 | .000 |
| The company's training programs are effective in improving employee skills and knowledge. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 1050.288[b] | 4 | .000 |
| The company encourages employees to take advantage of training and development opportunities. | .500 | 1.500 | 0.000 | 1.000 | 1.000[b] | 344.876[b] | 4 | .000 |
| The company sets clear performance expectations for employees. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 726.737[a] | 2 | .000 |
| The company provides employees with regular feedback on their performance. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 1217.259[b] | 3 | .000 |
| The company's performance management system is fair and equitable. | .500 | 1.500 | 0.000 | 1.000 | 1.000[b] | 1293.229[c] | 4 | .000 |
| Company values my contributions and recognizes | .500 | 1.500 | 0.000 | 1.000 | 1.000[b] | 641.987[c] | 4 | .000 |

| | Mann-Whitney U | Wilcoxon W | Z | Asymp. Sig. (2-tailed) | Exact Sig. [2*(1-tailed Sig.)] | Chi-Square | df | Asymp. Sig. |
|---|---|---|---|---|---|---|---|---|
| my achievements. | | | | | | | | |
| The company offers competitive compensation and benefits. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 713.503[c] | 4 | .000 |
| The company's compensation and benefits package are fair and equitable. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 835.830[c] | 4 | .000 |
| The company's compensation and benefits package are attractive to potential employees. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 112.209[c] | 4 | .000 |
| Employees are engaged in their work and feel valued by the company. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 215.059[c] | 4 | .000 |
| Employees feel that their work is meaningful and makes a difference. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 339.162[b] | 3 | .000 |
| Employees are proud to work for the company. | .500 | 1.500 | 0.000 | 1.000 | 1.000[b] | 611.037[b] | 3 | .000 |
| Company encourages open communication and feedback. | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 443.235[b] | 3 | .000 |
| Previous experience of employees is | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 883.725[c] | 4 | .000 |

| | Mann-Whitney U | Wilcoxon W | Z | Asymp. Sig. (2-tailed) | Exact Sig. [2*(1-tailed Sig.)] | Chi-Square | df | Asymp. Sig. |
|---|---|---|---|---|---|---|---|---|
| not very important to achieve organizational growth | | | | | | | | |
| Organization does not pay overtime to employees | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 647.987[c] | 4 | .000 |
| Job security provide encouragement to the employees for staying longer | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 529.895[c] | 4 | .000 |
| How would you rate the effectiveness of your company's leadership team? | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 298.357[b] | 3 | .000 |
| Quality Improvement | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 726.737[a] | 2 | .000 |
| Cost Reduction | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 1217.259[b] | 3 | .000 |
| Productivity Improvement | .500 | 1.500 | 0.000 | 1.000 | 1.000[b] | 1293.229[c] | 4 | .000 |
| Timely Delivery | .500 | 1.500 | 0.000 | 1.000 | 1.000[b] | 641.987[c] | 4 | .000 |
| Waste Reduction | 0.000 | 1.000 | -1.000 | .317 | 1.000[b] | 713.503[c] | 4 | .000 |

## 5. MANAGERIAL IMPLICATIONS AND FUTURE STUDIES

### 5.1 Managerial implications

Based on questions regarding the Employee Perceptions of HRM Practices, Recruitment and Selection and Training and Development the level of satisfaction was not good. For having better output more improvements are required. Companies are required to effectively employs HRM practices to attract and retain top talent, align with strategic goals, and follow industry best practices. They also effectively prepare HR demand forecasting processes and follow HR supply forecasting procedures. To attract and retain top talent, a strong Human Resource Management (HRM) strategy is essential. Key areas to focus on include building a strong employer brand, enhancing the candidate experience, providing adequate wages and perks, engaging in employee growth, and establishing an enjoyable place to work, and promoting work-life balance[20]–[22]. Utilizing social media, career sites, and networking with

universities can help create a positive image of the company. Employee referral programs can also be beneficial. Streamlining the recruitment process and providing clear job descriptions can enhance the candidate experience[23]. Competitive wages and perks such as medical coverage, retirement planning programmes, and compensated time vacation, should be offered. Employee development programs should be implemented, and a culture of learning should be fostered. A optimistic work setting can be achieved through adaptable working conditions, remote work, and time-off policies. Additionally, promoting from within, developing a strong employer value proposition, and regularly reviewing and updating HRM practices can help retain top talent [5], [12]. While discussing about the performance management section, the companies establish clear performance expectations, provides regular feedback, and operates a fair and equitable performance management system. While on values of contributions and reorganizations the employees' achievements, they are not good required more improvements. To effectively value contributions and recognize employee achievements during reorganizations, companies can improve communication and transparency by defining company values, communicating regularly, and encouraging open dialogue[24], [25]. Recognition programs and rewards can be formally and informally recognized, and tailored rewards can be offered, such as paid time off, training, or flexible work arrangements. Performance-based rewards can be linked to specific achievements and contributions made during reorganizations. Employee development opportunities should be provided, and mentorship programs can be paired with those affected by the reorganization. Investing in programs to help employees develop new skills is also essential. Employees should be involved in decision-making, and support services like counselling or stress management programs can be offered. Celebrating achievements and minimizing disruptions to work routines can also help. Open performance reviews should be conducted, acknowledging employee contributions, and refocusing goals for the future. Leaders should demonstrate the company's values through their actions and decision-making during the reorganization[7], [26]. Employees are satisfied as the company provides competitive, fair, and attractive compensation and benefits packages attractive to potential employees. While considering the employee engagement, company promotes open communication and feedback, focusing on employee growth rather than experience. It does pay overtime and offers job security to encourage longer work hours. Employees feel valued and engaged. Employees, rate the leadership team's much effective.

The table shows that there is some room for improvement in waste reduction. Only 52.08% of employees agree or strongly agree that the company is making a strong effort to reduce waste. This suggests that the company could focus more on waste reduction initiatives in the future. The results of the survey suggest that the company is making good progress on its operational excellence journey. Here remains space for development in multiple domains, including trash reduction. Some recommendations for how the company can improve its operational excellence efforts:

- Continue to focus on quality, cost reduction, productivity, and timely delivery. These are all important aspects of operational excellence, and the company is already making good progress in these areas.
- Focus more on waste reduction. Waste reduction is another important aspect of operational excellence, and the company could improve its performance in this area.
- Communicate with employees about operational excellence efforts. It is important to keep employees informed about the company's operational excellence efforts and to get their feedback. This will help to ensure that everyone is aligned with the company's goals and that everyone is working together to achieve them.

## 6. CONCLUSIONS

The findings reveal a significant correlation between Human Resource Management (HRM) practices and Operational Excellence (OE) in the pharmaceutical industry. Employee satisfaction with HRM practices, especially in recruitment, training, and performance management, remains moderate, indicating room for improvement. Effective implementation of operational excellence indicators, knowledge management, and talent management substantially enhances employee performance and organizational competitiveness. Trust, engagement, and psychological well-being play critical roles in

improving operational results. Moreover, while employees appreciate compensation packages and leadership effectiveness, only 52.08% acknowledge sufficient efforts in waste reduction, highlighting a need for targeted waste management initiatives. The results suggest that aligning HRM strategies with operational goals and fostering open communication can further drive the company's progress towards operational excellence.

**Future Studies**

For subsequent investigations, we recommend trying the present research's hypotheses, as stated in the pharmaceutical sector, across nations, both developed and developing, as just a few investigations on HRM practices and the effects on long-term achievement are being carried out in the industry. Numerous additional elements of the industry, such as the linkages between green management systems in human resources as well as supply chain operations as a result, future research can investigate this association in the pharmaceutical industry.

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## Appendix

### App. A1: Questionnaire

**Employee Perceptions of HRM Practices**

1) Company's HRM practices are effective in attracting and retaining top talent.
2) Company's HRM practices are aligned with the organization's strategic goals.
3) Company's HRM practices are consistent with industry best practices.
4) Organization prepares process of HR demand forecasting effectively

5) Organization follows HR supply forecasting procedure effectively

**Recruitment and Selection**

1) The company's recruitment process is fair and transparent.
2) The company's onboarding process is effective in integrating new employees into the organization.

**Training and Development**

1) The company provides employees with opportunities for training and development.
2) The company's training programs are effective in improving employee skills and knowledge.
3) The company encourages employees to take advantage of training and development opportunities.

**Performance Management**

1) The company sets clear performance expectations for employees.
2) The company provides employees with regular feedback on their performance.
3) The company's performance management system is fair and equitable.
4) Company values my contributions and recognizes my achievements.

**Compensation and Benefits**

1) The company offers competitive compensation and benefits.
2) The company's compensation and benefits package are fair and equitable.
3) The company's compensation and benefits package are attractive to potential employees.

**Employee Engagement**

1) Employees are engaged in their work and feel valued by the company.
2) Employees feel that their work is meaningful and makes a difference.
3) Employees are proud to work for the company.
4) Company encourages open communication and feedback.
5) Previous experience of employees is not very important to achieve organizational growth
6) Organization does not pay overtime to employees
7) Job security provide encouragement to the employees for staying longer

**Leadership**

1) How would you rate the effectiveness of your company's leadership team?

**Section 2: Operational Excellence**

Please rate the extent to which the following challenges hinder your company's ability to achieve operational excellence on a scale of 1 to 5, where 1 indicates "Not at all a challenge" and 5 indicates "A very significant challenge":

Mention the agreement level about operational excellence of your organization based on the following criteria

1. Quality Improvement
2. Cost Reduction
3. Productivity Improvement
4. Timely Delivery

5. Waste Reduction

**App. A2** Kendall's tau-b Correlation (Part 2: Section 1)

| | | | | Company's HRM practices are effective in attracting and retaining top talent. | Company's HRM practices are aligned with the organization's strategic goals. | Company's HRM practices are consistent with industry best practices. | Organization prepares process of HR demand forecasting effectively | Organization follows HR supply forecasting procedure effectively | The company's recruitment process is fair and transparent. | The company's onboarding process is effective in integrating new employees into the organization. | The company provides employees with opportunities for training and development. | The company's training programs are effective in improving employee skills and knowledge. | The company encourages employees to take advantage of training and development opportunities. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Company's HRM practices are effective in attracting and retaining top talent. | Correlation Coefficient | | | 1.000 | .223** | .607** | .438** | .194** | .569** | .248** | .195** | -.091** | .086** |
| | Sig. (2-tailed) | | | . | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .004 | .004 |
| | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| | Bootstrap[c] | Bias | | .000 | .000 | -.001 | -.001 | .002 | .000 | -.003 | -.002 | .000 | .001 |
| | | Std. Error | | .000 | .035 | .019 | .024 | .037 | .028 | .033 | .036 | .037 | .036 |
| | | 95% Confidence Interval | Lower | 1.000 | .153 | .569 | .388 | .124 | .513 | .184 | .125 | -.161 | .018 |
| | | | Upper | 1.000 | .288 | .643 | .483 | .266 | .622 | .314 | .265 | -.018 | .156 |
| Company's HRM practices are aligned with the organization's strategic goals. | Correlation Coefficient | | | .223** | 1.000 | .408** | .320** | .233** | .137** | .239** | .153** | .348** | .290** |
| | Sig. (2-tailed) | | | .000 | . | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| | Bootstrap[c] | Bias | | .000 | .000 | -.001 | .000 | .000 | .000 | .000 | .000 | .000 | -.001 |
| | | Std. Error | | .035 | .000 | .032 | .027 | .033 | .037 | .028 | .031 | .031 | .028 |
| | | 95% Confidence Interval | Lower | .153 | 1.000 | .344 | .266 | .164 | .059 | .180 | .092 | .285 | .232 |
| | | | Upper | .288 | 1.000 | .466 | .372 | .299 | .209 | .294 | .214 | .407 | .343 |
| Company's HRM | Correlation Coefficient | | | .607** | .408** | 1.000 | .514** | .111** | .577** | .309** | .347** | .055 | .118** |
| | Sig. (2-tailed) | | | .000 | .000 | . | .000 | .000 | .000 | .000 | .000 | .082 | .000 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| practices are consistent with industry best practices. | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| | Bootstrap[c] | Bias | | -.001 | -.001 | .000 | -.002 | .001 | .000 | -.001 | -.001 | .000 | .000 |
| | | Std. Error | | .019 | .032 | .000 | .028 | .027 | .024 | .028 | .023 | .035 | .033 |
| | | 95% Confidence Interval | Lower | .569 | .344 | 1.000 | .457 | .059 | .528 | .252 | .301 | -.015 | .057 |
| | | | Upper | .643 | .466 | 1.000 | .567 | .163 | .622 | .360 | .392 | .120 | .179 |
| Organization prepares process of HR demand forecasting effectively | Correlation Coefficient | | | .438** | .320** | .514** | 1.000 | .264** | .412** | .525** | .404** | .102** | .333** |
| | Sig. (2-tailed) | | | .000 | .000 | .000 | . | .000 | .000 | .000 | .000 | .001 | .000 |
| | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| | Bootstrap[c] | Bias | | -.001 | .000 | -.002 | .000 | .001 | -.001 | .000 | -.002 | .000 | .000 |
| | | Std. Error | | .024 | .027 | .028 | .000 | .031 | .027 | .027 | .025 | .040 | .032 |
| | | 95% Confidence Interval | Lower | .388 | .266 | .457 | 1.000 | .200 | .358 | .471 | .355 | .016 | .271 |
| | | | Upper | .483 | .372 | .567 | 1.000 | .325 | .463 | .575 | .450 | .183 | .396 |
| Organization follows HR supply forecasting procedure effectively | Correlation Coefficient | | | .194** | .233** | .111** | .264** | 1.000 | .171** | -.037 | -.107** | .389** | .588** |
| | Sig. (2-tailed) | | | .000 | .000 | .000 | .000 | . | .000 | .232 | .000 | .000 | .000 |
| | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| | Bootstrap[c] | Bias | | .002 | .000 | .001 | .001 | .000 | .001 | -.001 | -.001 | -.001 | .001 |
| | | Std. Error | | .037 | .033 | .027 | .031 | .000 | .033 | .042 | .042 | .035 | .023 |
| | | 95% Confidence Interval | Lower | .124 | .164 | .059 | .200 | 1.000 | .105 | -.119 | -.192 | .323 | .542 |
| | | | Upper | .266 | .299 | .163 | .325 | 1.000 | .233 | .042 | -.025 | .457 | .633 |
| The company's recruitment process is fair and transparent. | Correlation Coefficient | | | .569** | .137** | .577** | .412** | .171** | 1.000 | .331** | .402** | .045 | .082** |
| | Sig. (2-tailed) | | | .000 | .000 | .000 | .000 | .000 | . | .000 | .000 | .149 | .006 |
| | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| | Bootstrap[c] | Bias | | .000 | .000 | .000 | -.001 | .001 | .000 | -.002 | -.002 | .000 | .001 |
| | | Std. Error | | .028 | .037 | .024 | .027 | .033 | .000 | .030 | .031 | .039 | .035 |
| | | 95% Confidence Interval | Lower | .513 | .059 | .528 | .358 | .105 | 1.000 | .273 | .335 | -.029 | .016 |
| | | | Upper | .622 | .209 | .622 | .463 | .233 | 1.000 | .391 | .464 | .126 | .151 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| The company's onboarding process is effective in integrating new employees into the organization. | Correlation Coefficient | | | .248** | .239** | .309** | .525** | -.037 | .331** | 1.000 | .630** | .120** | -.081** |
| | Sig. (2-tailed) | | | .000 | .000 | .000 | .000 | .232 | .000 | . | .000 | .000 | .008 |
| | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| | Bootstrap[c] | Bias | | -.003 | .000 | -.001 | .000 | -.001 | -.002 | .000 | -.002 | -.001 | .000 |
| | | Std. Error | | .033 | .028 | .028 | .027 | .042 | .030 | .000 | .024 | .041 | .041 |
| | | 95% Confidence Interval | Lower | .184 | .180 | .252 | .471 | -.119 | .273 | 1.000 | .579 | .036 | -.163 |
| | | | Upper | .314 | .294 | .360 | .575 | .042 | .391 | 1.000 | .673 | .198 | -.003 |
| The company provides employees with opportunities for training and development. | Correlation Coefficient | | | .195** | .153** | .347** | .404** | -.107** | .402** | .630** | 1.000 | .130** | -.149** |
| | Sig. (2-tailed) | | | .000 | .000 | .000 | .000 | .000 | .000 | .000 | . | .000 | .000 |
| | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| | Bootstrap[c] | Bias | | -.002 | .000 | -.001 | -.002 | -.001 | -.002 | -.002 | .000 | .000 | -.001 |
| | | Std. Error | | .036 | .031 | .023 | .025 | .042 | .031 | .024 | .000 | .038 | .039 |
| | | 95% Confidence Interval | Lower | .125 | .092 | .301 | .355 | -.192 | .335 | .579 | 1.000 | .052 | -.228 |
| | | | Upper | .265 | .214 | .392 | .450 | -.025 | .464 | .673 | 1.000 | .206 | -.077 |
| The company's training programs are effective in improving employee skills and knowledge. | Correlation Coefficient | | | -.091** | .348** | .055 | .102** | .389** | .045 | .120** | .130** | 1.000 | .403** |
| | Sig. (2-tailed) | | | .004 | .000 | .082 | .001 | .000 | .149 | .000 | .000 | . | .000 |
| | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| | Bootstrap[c] | Bias | | .000 | .000 | .000 | .000 | -.001 | .000 | -.001 | .000 | .000 | -.002 |
| | | Std. Error | | .037 | .031 | .035 | .040 | .035 | .039 | .041 | .038 | .000 | .027 |
| | | 95% Confidence Interval | Lower | -.161 | .285 | -.015 | .016 | .323 | -.029 | .036 | .052 | 1.000 | .346 |
| | | | Upper | -.018 | .407 | .120 | .183 | .457 | .126 | .198 | .206 | 1.000 | .451 |
| The company encourages | Correlation Coefficient | | | .086** | .290** | .118** | .333** | .588** | .082** | -.081** | -.149** | .403** | 1.000 |
| | Sig. (2-tailed) | | | .004 | .000 | .000 | .000 | .000 | .006 | .008 | .000 | .000 | . |
| | N | | | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| employees to take advantage of training and development opportunities. | Bootstrap[c] | Bias | | .001 | -.001 | .000 | .000 | .001 | .001 | .000 | -.001 | -.002 | .000 |
| | | Std. Error | | .036 | .028 | .033 | .032 | .023 | .035 | .041 | .039 | .027 | .000 |
| | | 95% Confidence Interval | Lower | .018 | .232 | .057 | .271 | .542 | .016 | -.163 | -.228 | .346 | 1.000 |
| | | | Upper | .156 | .343 | .179 | .396 | .633 | .151 | -.003 | -.077 | .451 | 1.000 |

**p. A3** Kendall's tau-b Correlation (Part 2: Section 2)

| | | The company sets clear performance expectations for employees. | The company provides employees with regular feedback on their performance. | The company's performance management system is fair and equitable. | Company values my contributions and recognizes my achievements. | The company offers competitive compensation and benefits. | The company's compensation and benefits package are fair and equitable. | The company's compensation and benefits package are attractive to potential employees. | Employees are engaged in their work and feel valued by the company. | Employees feel that their work is meaningful and makes a difference. | Employees are proud to work for the company. | Company encourages open communication and feedback. | Previous experience of employees is not very important to achieve organizational growth | Organization does not pay overtime to employees | Job security provide encouragement to the employees for staying longer | How would you rate the effectiveness of your company's leadership team? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| The company sets clear performance expectations for employees. | Correlation Coefficient | 1.000 | .947** | .079* | .053 | .124** | .099** | .188** | -.015 | .270** | .139** | -.085** | .021 | .062 | .103** | .002 |
| | Sig. (2-tailed) | . | .000 | .017 | .101 | .000 | .003 | .000 | .630 | .000 | .000 | .009 | .515 | .054 | .001 | .946 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| The company provides employ | Correlation Coefficient | .947** | 1.000 | .091** | .067* | .140** | .115** | .192** | -.006 | .283** | .152** | -.070* | .050 | .074* | .119** | .033 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| yees with regular feedback on their performance. | Sig. (2-tailed) | .000 | . | .006 | .038 | .000 | .000 | .000 | .840 | .000 | .000 | .032 | .130 | .022 | .000 | .298 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| The company's performance managment system is fair and equitable. | Correlation Coefficient | .079* | .091** | 1.000 | .222** | .164** | .242** | .136** | .069* | .159* | -.086** | .273** | .280** | .182** | .180** | -.048 |
| | Sig. (2-tailed) | .017 | .006 | . | .000 | .000 | .000 | .000 | .024 | .000 | .009 | .000 | .000 | .000 | .000 | .126 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| Company values my contributions and recognizes my achievements. | Correlation Coefficient | .053 | .067* | .222** | 1.000 | .198** | -.059 | -.108** | .152** | .153** | .247** | .233** | -.088** | .063* | -.055 | .183** |
| | Sig. (2-tailed) | .101 | .038 | .000 | . | .000 | .060 | .000 | .000 | .000 | .000 | .000 | .005 | .044 | .077 | .000 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| The company offers competitive compensation and benefits. | Correlation Coefficient | .124** | .140** | .164** | .198** | 1.000 | .211** | -.040 | .204** | .049 | -.102** | .322** | .356** | .471** | .306** | .104** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | . | .000 | .181 | .000 | .114 | .002 | .000 | .000 | .000 | .000 | .001 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| The company's | Correlation | .099* | .115** | .242** | -.059 | .211** | 1.000 | .123** | .092** | -.008 | -.026 | -.064* | .223** | .056 | -.051 | -.165** |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| compensation and benefits package are fair and equitable. | Coefficient | | | | | | | | | | | | | | | |
| | Sig. (2-tailed) | .003 | .000 | .000 | .060 | .000 | . | .000 | .003 | .802 | .427 | .046 | .000 | .079 | .109 | .000 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| The company's compensation and benefits package are attractive to potential employees. | Correlation Coefficient | .188** | .192** | .136** | -.108** | -.040 | .123** | 1.000 | -.109** | .253** | .102** | -.027 | .031 | -.007 | .003 | .013 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .181 | .000 | . | .000 | .000 | .001 | .373 | .306 | .806 | .927 | .657 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| Employees are engaged in their work and feel valued by the company. | Correlation Coefficient | -.015 | -.006 | .069* | .152** | .204** | .092** | -.109** | 1.000 | .074* | .034 | .159** | .111** | .191** | .110** | .077* |
| | Sig. (2-tailed) | .630 | .840 | .024 | .000 | .000 | .003 | .000 | . | .014 | .276 | .000 | .000 | .000 | .000 | .011 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| Employees feel that their work is meaningful and | Correlation Coefficient | .270** | .283** | .159** | .153** | .049 | -.008 | .253** | .074* | 1.000 | .531** | -.059 | -.301** | -.145** | .010 | -.198** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .114 | .802 | .000 | .014 | . | .000 | .058 | .000 | .000 | .741 | .000 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| makes a difference. | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| Employees are proud to work for the company. | Correlation Coefficient | .139** | .152** | -.086** | .247** | -.102** | -.026 | .102** | .034 | .531** | 1.000 | -.069* | -.350** | -.283** | -.103** | -.063* |
| | Sig. (2-tailed) | .000 | .000 | .009 | .000 | .002 | .427 | .001 | .276 | .000 | . | .034 | .000 | .000 | .001 | .049 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| Company encourages open communication and feedback. | Correlation Coefficient | -.085** | -.070* | .273** | .233** | .322** | -.064* | -.027 | .159** | -.059 | -.069* | 1.000 | .385** | .445** | .534** | .493** |
| | Sig. (2-tailed) | .009 | .032 | .000 | .000 | .000 | .046 | .373 | .000 | .058 | .034 | . | .000 | .000 | .000 | .000 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| Previous experience of employees is not very important to achieve organizational growth | Correlation Coefficient | .021 | .050 | .280** | -.088** | .356** | .223** | .031 | .111** | -.301** | -.350** | .385** | 1.000 | .694** | .490** | .335** |
| | Sig. (2-tailed) | .515 | .130 | .000 | .005 | .000 | .000 | .306 | .000 | .000 | .000 | .000 | . | .000 | .000 | .000 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| Organization does not | Correlation Coef | .062 | .074* | .182** | .063* | .471** | .056 | -.007 | .191** | -.145** | -.283** | .445** | .694** | 1.000 | .521** | .443** |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pay overtime to employees | ficient | | | | | | | | | | | | | | | |
| | Sig. (2-tailed) | .054 | .022 | .000 | .044 | .000 | .079 | .806 | .000 | .000 | .000 | .000 | .000 | . | .000 | .000 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| Job security provide encouragement to the employees for staying longer | Correlation Coefficient | .103** | .119** | .180** | -.055 | .306** | -.051 | .003 | .110** | .010 | -.103** | .534** | .490** | .521** | 1.000 | .342** |
| | Sig. (2-tailed) | .001 | .000 | .000 | .077 | .000 | .109 | .927 | .000 | .741 | .001 | .000 | .000 | .000 | . | .000 |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |
| How would you rate the effectiveness of your company's leadership team? | Correlation Coefficient | .002 | .033 | -.048 | .183** | .104** | -.165** | .013 | .077** | -.198** | -.063** | .493** | .335** | .443** | .342** | 1.000 |
| | Sig. (2-tailed) | .946 | .298 | .126 | .000 | .001 | .000 | .657 | .011 | .000 | .049 | .000 | .000 | .000 | .000 | . |
| | N | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 | 765 |

**App. A4** Kendall's tau-b Correlation (Part 3)

| | | Quality Improvement | Cost Reduction | Productivity Improvement | Timely Delivery | Waste Reduction |
|---|---|---|---|---|---|---|
| Quality Improvement | Correlation Coefficient | 1.000 | .996** | -.005 | -.021 | .054 |
| | Sig. (2-tailed) | . | .000 | .880 | .526 | .106 |
| | N | 765 | 765 | 765 | 765 | 765 |
| Cost Reduction | Correlation Coefficient | .996** | 1.000 | -.005 | -.017 | .060 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Sig. (2-tailed) | .000 | . | .888 | .615 | .072 |
| | N | 765 | 765 | 765 | 765 | 765 |
| Productivity Improvement | Correlation Coefficient | -.005 | -.005 | 1.000 | .147** | .081* |
| | Sig. (2-tailed) | .880 | .888 | . | .000 | .015 |
| | N | 765 | 765 | 765 | 765 | 765 |
| Timely Delivery | Correlation Coefficient | -.021 | -.017 | .147** | 1.000 | .132** |
| | Sig. (2-tailed) | .526 | .615 | .000 | . | .000 |
| | N | 765 | 765 | 765 | 765 | 765 |
| Waste Reduction | Correlation Coefficient | .054 | .060 | .081* | .132** | 1.000 |
| | Sig. (2-tailed) | .106 | .072 | .015 | .000 | . |
| | N | 765 | 765 | 765 | 765 | 765 |