

Investigating the Relationship between Job Satisfaction and Job Performance of Employees in Pharmaceutical Companies in Heilongjiang Province, China

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Abstract: In recent years, increasing attention has been paid to professional life, with employee satisfaction and job performance becoming focal points for researchers and managers in the field of human resource management. These issues have emerged as prominent topics within the discipline. In practical settings, it is crucial to accurately understand the relationship between employee satisfaction and job performance. By implementing scientific measures to enhance employee satisfaction, it is possible to improve job performance and fully utilize human resources to promote enterprise development. This study randomly selected 220 employees from pharmaceutical companies in Heilongjiang Province as survey subjects. Employing reliable and valid scales as the main research tools, descriptive statistical analysis and correlation analysis were conducted to explore the relationship between employee satisfaction and job performance in medium and large pharmaceutical companies in Heilongjiang Province. The results indicate that there are differences in employee satisfaction and job performance based on individual attributes. A significant positive correlation exists between employee satisfaction and job performance, with the correlation between employee satisfaction and peripheral performance being greater than that with task performance. Employee satisfaction has a positive impact on job performance. This paper analyzes the relationship between employee satisfaction and job performance based on the actual situation of employees in pharmaceutical companies in Heilongjiang Province, aiming to objectively reflect the impact of employee satisfaction on job performance. It provides a reference for improving employee satisfaction and job performance in pharmaceutical companies in Heilongjiang Province.

Keywords: Job Satisfaction, Job Performance, Pharmaceutical Companies, Human Resource Management

1. Introduction

Since the inception of enterprises, the themes of survival and development have always been paramount (Zhang et al., 2020; Sittisom, 2020). Achieving superior performance is essential for sustainable growth, and there is a close relationship between the overall performance of an enterprise and the individual performance of its employees (Gridwichai et al., 2020; López-Cabarcos et al., 2022; Davidescu et al., 2020). Consequently, both the theoretical research community and the practical management community have paid considerable attention to the issue of improving performance. The relationship between work attitudes and job performance has been a focal point of study, with employee satisfaction directly influencing work attitudes (Wijayanti et al., 2022; Haryono et al., 2020). Thus, the relationship between employee satisfaction and job performance has rapidly become a key area of inquiry for researchers.

In the context of the deepening development of modern management concepts, an increasing number of corporate managers recognize that the survival and development of enterprises not only require the pursuit of maximum efficiency and profit but also the maximization of employee satisfaction (Judge et al., 2020; Katebi et al., 2022). This dual pursuit helps achieve a people-oriented approach and the goal of economic benefits, laying a crucial foundation for sustainable development (Wang et al., 2020). Therefore, understanding and acknowledging the relationship between employee satisfaction and job performance is of utmost importance.

Despite the growing body of research on the relationship between employee satisfaction and performance, the theories remain diverse, and no definitive answer has been established (Katebi et al., 2022; Judge et al., 2020). A review of the literature reveals that the concept of employee satisfaction is broad, and its relationship with performance and its impact manifestation is neither direct nor clear in certain circumstances (Cook, 2010; Bowling et al., 2015). Early researchers posited a strong correlation between job satisfaction and job performance, suggesting that job satisfaction generally has a positive impact on job performance (Bowling, 2007; Hartika et al., 2023). However, as factors such as job type, salary, and employee characteristics gained attention, new findings emerged regarding the relationship between job satisfaction and job performance (Rinny et al., 2020). Particularly in the Chinese context, the influence of job satisfaction on job performance varies significantly due to industry, study population, work environment, and salary (Yu et al., 2020). Most studies indicate that job satisfaction positively influences job performance, though some studies have shown no direct impact (Wang et al., 2020; An et al., 2020).

Currently, China's pharmaceutical industry has become a crucial part of the national industrial framework, yet the satisfaction of its employees is often overlooked. Therefore, it is necessary to conduct an in-depth exploration of the relationship between employee satisfaction and job performance in the pharmaceutical industry. Understanding this relationship can provide valuable insights for improving employee satisfaction and job performance, ultimately contributing to the sustainable development of pharmaceutical companies in Heilongjiang Province.

1.1 Background of the Study

The pharmaceutical industry, as one of the pillar industries in Heilongjiang Province, plays a crucial role in the region's economic development (Zhong et al., 2022). Medium and large pharmaceutical enterprises are the driving force behind the advancement of the entire industry. Notable pharmaceutical companies in Heilongjiang include Harbin Pharmaceutical Group General Factory, Heilongjiang Zhenbaodao Pharmaceutical Co., Ltd., Sunflower Pharmaceutical Group, Harbin Sanlian Pharmaceutical Co., Ltd., and Harbin Shengtaibio Pharmaceutical Co., Ltd. These companies have significantly contributed to the local economy (Na & Lijuan, 2022). In recent years, the pharmaceutical industry in Heilongjiang Province has maintained a strong growth momentum (Xu et al., 2020). Over the past five years, key indicators such as the gross industrial output value and sales revenue of the pharmaceutical industry have consistently grown at a rate of about 20%. In 2017, the total output value of the pharmaceutical and health industry above the designated size in the province reached 133.31 billion yuan, with a profit of 14.61 billion yuan. From January to March 2018, the main business income of the pharmaceutical and health industry above the designated size in the province increased by 9.5% year-on-year, and the added value increased by 0.4% year-on-year. The pharmaceutical industry's status as a pillar of economic development in Heilongjiang Province is becoming increasingly evident. However, it also faces several challenges, such as outdated management mechanisms, the need for improved drug safety management, and intense competition. These issues have led to a significant loss of pharmaceutical scientists and technical personnel in Heilongjiang Province, thereby limiting the overall development potential of pharmaceutical enterprises.

During the "13th Five-Year Plan" period, Heilongjiang Province implemented a series of supportive policies and development initiatives aimed at enhancing the development level of the pharmaceutical industry and optimizing its industrial structure. The goal is to achieve a total output value of 530 billion yuan for the pharmaceutical and health care industry in the region by 2025, focusing on increasing the added value of the pharmaceutical industry and striving to rank the sales of pharmaceutical products and services among the top three domestically. The standard of healthy living is an important indicator of the quality of life for the populace. Health and safety are fundamental principles that pharmaceutical companies must adhere to, with the basic objective of improving health care conditions for everyone. Statistical data concerning major diseases such as cancer, diabetes, cardiovascular diseases, and active tuberculosis highlight their detrimental impact on public health and socioeconomic development.

1.2 Problem Statement

The pharmaceutical industry in Heilongjiang Province, despite its competitive market presence and significant economic contributions, faces critical challenges due to the severe loss of human resources (Shi et al., 2020). This issue constrains the future development quality and potential of the pharmaceutical sector in the region. The industry, which is technology and capital-intensive, requires substantial investment in both areas (Xu et al., 2020). However, the loss of key personnel, including researchers, senior managers, and technical staff, has a profoundly negative impact. Understanding the relationship between employee satisfaction and job performance in Heilongjiang's pharmaceutical enterprises is therefore of urgent practical significance. This research aims to explore this relationship and provide insights for improving human resource management in the pharmaceutical industry in Heilongjiang Province.

Employees in Heilongjiang's pharmaceutical industry typically exhibit characteristics of "three highs and one low": high education level, high salary, high comprehensive quality, and low average age. For instance, in prominent pharmaceutical companies such as Harbin Pharmaceutical Group General Factory, Heilongjiang Zhenbaodao Pharmaceutical Co., Ltd., Sunflower Pharmaceutical Group, Harbin Sanlian Pharmaceutical Co., Ltd., and Harbin Shengtaibio Pharmaceutical Co., Ltd., around half of the employees hold bachelor's degrees, nearly 10% hold master's degrees, and the average age is below 35 (Liu et al., 2021). These data reflect the general profile of employees in Heilongjiang's pharmaceutical enterprises. Given the knowledge and technology-intensive nature of the industry, employees need strong learning and innovation capabilities, attracting a large number of young professionals. The industry's management personnel also tend to be younger compared to other sectors. Employees generally possess high comprehensive qualities, strong autonomy, a preference for less restrictive environments, and a focus on achievement and self-motivation. However, the relationship between these employee characteristics and their job satisfaction and performance needs further exploration. High education levels and comprehensive qualities might contribute positively to job performance but could also lead to higher expectations and dissatisfaction if career growth opportunities are limited. Similarly, while high salaries can enhance job satisfaction, they might not compensate for poor work-life balance or lack of recognition and support from the organization. The relatively low average age suggests a dynamic and potentially restless workforce, where job satisfaction could be influenced significantly by career development opportunities and the organizational culture.

Meanwhile, the job satisfaction of employee in the pharmaceutical industry is a significant concern. According to a study by Liu et al. (2022), job satisfaction and social support are crucial factors affecting job performance among primary care providers in Northeast China, including Heilongjiang Province. The study found a positive correlation between job satisfaction and job performance ($r = 0.574$, $p < 0.001$), and between social support and job performance ($r = 0.534$, $p < 0.001$). This indicates that improving job satisfaction and social support could enhance job performance and reduce turnover. Another study by Liu et al. (2021) highlighted the prevalence of career plateaus among primary care providers in Heilongjiang, with factors such as marital status, weekly working hours, number of years on the job, monthly income, and sleep quality being significant contributors.

Given these findings, it is evident that the pharmaceutical industry in Heilongjiang must address these human resource challenges to sustain its development. By improving job satisfaction and providing adequate social support, the industry can enhance job performance and reduce the high turnover rates, ultimately contributing to its long-term growth and stability.

1.3 Research Objectives

Based on the above problem statement, the main research objectives of this study are as follows.

1. To assess the current level of job satisfaction among employees in pharmaceutical companies in Heilongjiang Province, China.
2. To determine the current level of job performance among employees in pharmaceutical companies in Heilongjiang Province, China.
3. To investigate the relationship between job satisfaction and job performance among employees in pharmaceutical companies in Heilongjiang Province, China.
4. To explore the factors influencing job satisfaction and their impact on job performance among employees in pharmaceutical companies in Heilongjiang Province, China.

1.4 Research Questions

There are four main research questions in this study.

1. What is the current level of job satisfaction among employees in pharmaceutical companies in Heilongjiang Province, China?
2. What is the current level of job performance among employees in pharmaceutical companies in Heilongjiang Province, China?
3. What is the relationship between job satisfaction and job performance among employees in pharmaceutical companies in Heilongjiang Province, China?
4. How does job satisfaction impact job performance among employees in pharmaceutical companies in Heilongjiang Province, China?

1.5 Research Significance

1.5.1 Theoretical Significance

This study contributes to the theoretical understanding of human resource management and organizational behavior by providing empirical evidence on the relationship between job satisfaction and job performance in the pharmaceutical industry in Heilongjiang Province. It enriches the existing literature by highlighting the unique cultural, economic, and organizational factors influencing these variables in this specific context.

1.5.2 Practical Significance

The practical significance of this study lies in its potential to inform and improve human resource management practices in the pharmaceutical industry in Heilongjiang Province. By understanding the relationship between job satisfaction and job performance, managers can design interventions that enhance employee satisfaction and boost productivity. The study provides actionable recommendations for improving workplace conditions, compensation structures, and career development opportunities, which can lead to higher employee retention and better overall performance.

2. Literature Review

2.1 Job Satisfaction

Job satisfaction, a concept initially formalized by Hoppock (1935), is defined as an individual's positive emotional response to their job or work environment. Hoppock's definition emphasized that job satisfaction is a subjective reaction to various factors within the work setting. Subsequent scholars have expanded on this foundation, exploring the multifaceted nature of job satisfaction and its determinants. For instance, Morse (1953) viewed job satisfaction as a function of the worker's interactions with their job characteristics, while Kalleberg (1977) considered it a reflection of the worker's values and expectations related to their job role. Linz et al (2012) introduced the concept of job satisfaction as a discrepancy between the rewards employees receive and their expectations. They argued that satisfaction is influenced by the gap between actual job outcomes and expected rewards. Similarly, Smith, Kendall, and Hulin (1969) highlighted that job satisfaction encompasses employees' feelings and attitudes towards various aspects of their work, including tasks, colleagues, and the organizational environment. Comprehensive definitions by Vroom (1964) and others, such as Blum and Naylor (1968) and Kalleberg (1977), suggest that job satisfaction arises from the balance of satisfaction and dissatisfaction with different job facets. These scholars emphasized the importance of various work conditions and personal factors in shaping overall job satisfaction.

Recent methodologies for measuring job satisfaction include the Minnesota Satisfaction Questionnaire (MSQ), developed by Weiss, Dawis, England, and Lofquist (1967). The MSQ, available in both long-form (100 items) and short-form (20 items), assesses satisfaction across several dimensions such as achievement, recognition, and working conditions. The MSQ is highly regarded for its comprehensive approach and reliability, although its length can be a limitation. The short form of the MSQ includes key dimensions such as work achievement, organizational policies, work security, social service, and human relations, making it a practical tool for evaluating job satisfaction in various organizational settings.

Overall, the literature indicates that job satisfaction is a complex, multi-dimensional construct influenced by both intrinsic and extrinsic factors. Understanding these dimensions is crucial for organizations aiming to enhance employee well-being and performance.

2.2 Job Performance

Job performance is a multifaceted construct that can be evaluated from organizational, team, and individual perspectives. Definitions and measurements of job performance vary widely but generally fall into two main categories: results-oriented and behavior-oriented definitions. Results-oriented definitions focus on the outcomes of job tasks, such as the completion of specific assignments and the achievement of performance targets (Miao & Cao, 2019). In contrast, behavior-oriented definitions emphasize the specific actions and behaviors that contribute to achieving organizational goals (Hameed, 2021).

Gottfredson et al (2017) proposed that job performance should be viewed as behavior rather than just outcomes, suggesting that understanding the actions leading to results is crucial. This approach aligns with Campbell's et al (1993) definition, which highlights performance as behavior that can be evaluated and measured through a series of work-related activities. Campbell further differentiates between task performance and contextual performance, the former referring to the core job responsibilities and the latter to additional behaviors that support the organizational environment (Borman & Motowidlo, 1993).

Task performance includes activities directly related to producing goods or services, planning and overseeing production, and administrative tasks that ensure smooth operations. For example, activities such as transforming raw materials into finished products, overseeing the supply chain, and managing human resources are critical components of task performance (Campbell et al., 1993). Contextual performance involves organizational citizenship behaviors such as helping colleagues, adhering to organizational norms, and

maintaining a positive work environment. This distinction highlights that effective job performance encompasses both task-specific and broader organizational behaviors.

Recent models, such as those proposed by Campbell et al. (1993), further elaborate on the dimensions of job performance by incorporating knowledge, skills, abilities, and other personal characteristics that influence performance. These models suggest that job performance is not only about what employees do but also about how well they integrate their capabilities to achieve organizational objectives. Performance is divided into various dimensions, such as declarative knowledge, procedural knowledge, and motivation, each contributing differently to overall job performance.

Studies have also explored the relationship between task performance and contextual performance, demonstrating that both are essential for organizational success (Hunte, 1983; Borman & Motowidlo, 1993). Task performance covers the direct production of goods and services, while contextual performance includes activities that support the broader organizational environment, such as volunteer initiatives and maintaining a collaborative work atmosphere.

In conclusion, the literature suggests that job performance is a complex construct influenced by a range of factors, including individual abilities, task characteristics, and organizational support. Effective measurement of job performance requires a comprehensive approach that considers both the outcomes of job tasks and the behaviors that contribute to these outcomes. This multifaceted understanding of job performance is crucial for developing effective performance appraisal systems and enhancing overall organizational effectiveness.

2.3 Relationship between Job Satisfaction and Job Performance

The relationship between job satisfaction and job performance has been a significant focus of research for many years, with early studies suggesting a simple causal connection. Efforts to clarify this causal relationship have led to the development of various theories. One of the earliest and most straightforward models proposed that job satisfaction leads to improved job performance. This idea, dating back to the 1930s, was strongly supported by Mayo's Hawthorne Studies, which found that employee productivity was influenced by their psychological satisfaction and workplace morale (Mayo, 1933). This early model emphasized that satisfied employees were more likely to be productive, suggesting a direct link between satisfaction and performance.

Another model proposed the reverse, where job performance leads to job satisfaction. This theory, grounded in expectancy and motivational theories, suggested that successful performance at work could lead to satisfaction because of the positive outcomes associated with high performance, such as rewards, recognition, and the achievement of goals (Vroom, 1964). According to this view, it is the attainment of these valuable results that fosters job satisfaction among employees.

A more comprehensive model emerged, suggesting an interactive relationship between job satisfaction and job performance. This model integrates elements from the previous theories, proposing that job satisfaction and job performance influence each other (Lawler & Porter, 1967). Employees who are satisfied with their jobs are likely to perform better, and those who perform well are likely to feel more satisfied with their jobs, creating a mutually reinforcing cycle.

As research progressed, scholars began to identify limitations and inconsistencies in the early causality models. This led to the development of non-causality theories, which offered a different perspective on the relationship between job satisfaction and job performance. One such theory is the non-relationship theory, which posits that there is no direct link between job satisfaction and job performance. Studies from the mid-20th century onwards have provided mixed results, with some meta-analyses and comprehensive reviews indicating a weak or non-existent direct relationship between the two variables (Macdonald, 2009).

Another non-causality theory introduced the concept of mediating variables, suggesting that the relationship between job satisfaction and job performance is influenced by other factors. These mediating variables might include organizational commitment, job involvement, and various workplace dynamics that can affect the strength and direction of the satisfaction-performance link (Ölçer et al, 2015). Additionally, some researchers have proposed the moderator variable theory, which contends that the relationship between job satisfaction and job performance is contingent upon other variables. These might include the nature of the job, the level of job stress, and individual differences among employees, such as their coping mechanisms and personal motivations (Zhao et al, 2002).

Overall, while early theories posited a direct causal relationship between job satisfaction and job performance, more recent research has highlighted the complexity of this relationship. The interaction between job satisfaction and job performance is likely influenced by a range of mediating and moderating factors, suggesting that a one-size-fits-all explanation is insufficient to capture the nuances of this important organizational dynamic.

3. Methodology

3.1 Research Design

This study employs a quantitative research design to investigate the relationship between job satisfaction and job performance among employees in pharmaceutical companies in Heilongjiang Province, China. The quantitative approach allows for the collection of numerical data that can be statistically analyzed to identify patterns, relationships, and causal effects. A cross-sectional survey design is chosen to capture a snapshot of the current levels of job satisfaction and job performance at a single point in time. Structured questionnaires will be the primary data collection method, providing an efficient way to gather data from a large number of respondents. The use of structured questionnaires ensures consistency and reliability in the data collected.

3.2 Research Scope

The scope of this research encompasses all employees working in pharmaceutical companies in Heilongjiang Province. The study aims to include a diverse range of job positions, from production line workers to senior management, to obtain a comprehensive understanding of job satisfaction and performance across different levels of the organization. This wide scope ensures that the findings are representative of the entire pharmaceutical industry in the province and can be generalized to similar contexts.

3.3 Sample and Sampling

The target population for this study includes all employees in the pharmaceutical industry in Heilongjiang Province. Due to practical constraints and the lack of detailed employee numbers from each company, a simple random sampling method was employed. A total of 220 questionnaires were distributed, and 200 valid responses were received. This sample size was deemed sufficient to ensure statistical significance and represent various job roles and levels within the industry. Simple random sampling was used to give every employee an equal chance of being selected, thus ensuring the representativeness of the sample without requiring detailed population data from each company.

3.4 Research Instrument

The research instrument comprises a structured questionnaire divided into three parts. The first part collects demographic information, including age, gender, educational background, job position, and years of service. This section consists of six items that provide context for the analysis and enable subgroup comparisons. The second part measures job satisfaction using the short form of the Minnesota Satisfaction Questionnaire (MSQ). The MSQ is a validated instrument that assesses job satisfaction across various dimensions, including intrinsic and extrinsic satisfaction. Intrinsic satisfaction relates to aspects of the job itself, such as autonomy and skill use, while extrinsic satisfaction pertains to external factors like pay and working conditions. The MSQ includes 12 items rated on a Likert scale, where higher scores indicate greater job satisfaction. The third part measures job performance using a scale based on the two-dimensional model of task performance and contextual performance. Task performance involves core job responsibilities, such as efficiency and effectiveness in producing goods or services. Contextual performance includes behaviors that support the organizational environment, such as helping colleagues and volunteering for extra tasks. This section includes 14 items rated on a Likert scale, where higher scores indicate better performance.

3.5 Data Collection

Data was collected through the distribution of questionnaires to the selected sample of employees in various pharmaceutical companies in Heilongjiang Province. Both electronic and paper-based questionnaires were used to ensure accessibility and convenience for all participants. Anonymity and confidentiality were assured to encourage honest and accurate responses. The data collection process involved follow-up reminders to maximize the response rate, resulting in the collection of 200 valid responses out of the 220 distributed questionnaires.

3.6 Data Analysis

The data collected will be analyzed using several statistical methods to test the research hypotheses. Descriptive statistics will be used to summarize the demographic characteristics of the sample and the levels of job satisfaction and job performance. Measures such as mean, standard deviation, and frequency distributions will be calculated. Pearson correlation analysis will be conducted to examine the strength and direction of the relationship between job satisfaction and job performance. This analysis will help determine whether higher job satisfaction is associated with better job performance. Regression analysis will be performed to explore the factors influencing job satisfaction and their impact on job performance. This method will help identify the predictive power of the independent variable on the dependent variable, job performance. The results from these analyses will provide insights into the current state of job satisfaction and performance among employees in Heilongjiang's pharmaceutical industry and inform strategies for improving human resource management practices in this sector.

4. Findings and Discussion

4.4 Demographic Analysis

The study utilized an anonymous survey method. Contacts were established with several pharmaceutical enterprises in Heilongjiang Province, and questionnaires were distributed to their employees via the Wenjuanxing platform. A total of 220 questionnaires were distributed, and after initial explanations and guidance, 200 valid questionnaires were collected, achieving a response rate of 90.91%. The basic information of the survey sample is shown in Table 1.

The demographic analysis of the survey sample reveals a diverse range of respondents in terms of age, gender, years of service, educational level, and job position. The majority of respondents fall within the 24-29 age group, representing 49.5% of the sample. This is followed by the 30-39 age group (27.5%), 40-49 age group (17%), and those aged 50 years and above (6%). This distribution indicates a relatively young workforce within the pharmaceutical industry in Heilongjiang Province.

In terms of gender, the distribution shows a slight majority of male respondents at 53%, with females making up 47% of the sample. This nearly balanced gender representation suggests a relatively even gender distribution in the workforce.

Analyzing the years of service, it is revealed that 58% of the respondents have been with their current employer for less than one year. This high percentage of new employees may indicate recent hiring surges or high turnover rates within the industry. Additionally, 33% have 1-5 years of service, 5.5% have 6-10 years, 1.5% have 11-15 years, and 2% have more than 15 years of service.

Educational qualifications vary among respondents, with the largest group holding a bachelor's degree (48%). This is followed by those with an associate degree (22.5%), below associate degree (22%), and master's degree or higher (7.5%). This suggests that the industry attracts a well-educated workforce, with nearly half having attained a bachelor's degree.

In terms of job positions, the respondents are distributed across various roles, with production staff (28%) and administrative staff (27%) being the largest categories. Research staff account for 19.5% and sales staff for 25.5%. This distribution highlights the diverse nature of roles within the pharmaceutical industry.

Overall, the demographic data provide a comprehensive overview of the workforce in Heilongjiang's pharmaceutical companies. The relatively young and well-educated workforce, combined with a broad range of job positions, suggests a dynamic industry with potential for growth and development. The high proportion of new employees highlights the importance of addressing job satisfaction to reduce turnover and improve job performance.

Table 1. Demographic Results

Item	Description	Number	Percentage
Age	24-29 years	99	49.5%
	30-39 years	55	27.5%
	40-49 years	34	17%
	50 years and above	12	6%
Gender	Male	106	53%
	Female	94	47%
Year of Services	Less than 1 year	116	58%
	1-5 years	66	33%
	6-10 years	11	5.5%
	11-15 years	3	1.5%
	More than 15 years	4	2%
Education Level	Below associate degree	44	22%
	Associate degree	45	22.5%
	Bachelor's Degree	96	48%
	Master's Degree and above	15	7.5%
Job Position	Production Staff	56	28%
	Administrative Staff	54	27%
	Research Staff	39	19.5%
	Sales Staff	51	25.5%

4.2 Levels of Job Satisfaction of Employees in Pharmaceutical Companies in Heilongjiang Province

This section presents the analysis of job satisfaction levels among employees in pharmaceutical companies in Heilongjiang Province, based on the collected survey data. The data summary is shown in Table 2.

The results indicate a high level of job satisfaction among the employees in various aspects. The indicator "I get along well with my colleagues" (Q10) has the highest mean score of 4.13, suggesting that interpersonal relationships in the workplace are highly positive. The indicators "I find my job fulfilling" (Q12) and "I am praised for excellent performance" (Q11) also have high mean scores of 4.04 and 4.05, respectively, reflecting that employees feel a significant sense of fulfillment and recognition in their roles.

In contrast, the indicator "I am satisfied with my company's salary level" (Q7) has the lowest mean score of 3.73. Although it is still rated as high, it indicates that salary satisfaction is relatively lower compared to other aspects of job satisfaction. This highlights a potential area for improvement in the pharmaceutical companies to enhance overall employee satisfaction further.

Overall, the high mean scores across the different dimensions reflect a generally positive job satisfaction level among the surveyed employees. The findings suggest that employees feel respected, fairly treated, and recognized in their work environments. These aspects contribute significantly to their overall job satisfaction and are critical areas for maintaining high levels of employee morale and productivity.

Table 2. Level of JS (N=200)

Dimension	M	Level
Q1. I am satisfied with the workload of my job	3.82	High
Q2. My job allows me to use my abilities fully	3.92	High
Q3. I receive good feedback from my family and friends about my job	3.90	High
Q4. I feel respected and treated fairly by my supervisors	4.03	High
Q5. I am satisfied with the stability of my job	3.95	High
Q6. I am satisfied with the management methods used in my company	3.87	High
Q7. I am satisfied with my company's salary level	3.73	High
Q8. I have opportunities for advancement in my job	3.79	High
Q9. I am satisfied with the working conditions and environment	4.03	High
Q10. I get along well with my colleagues	4.13	High
Q11. I am praised for excellent performance	4.05	High
Q12. I find my job fulfilling	4.04	High

4.3 Levels of Job Performance of Employees in Pharmaceutical Companies in Heilongjiang Province

The scale used in this study is derived from the scale developed by Motowidlo & Van Scotter (1994) and has been modified by Yu (2006) to focus on task performance and contextual performance. The results of the study are presented in the following Table 3.

The results indicate a high level of job performance among the employees in various aspects. Task performance, which includes indicators such as efficiency in completing job tasks and maintaining high quality of work, has a mean score of 4.03, reflecting a high level of performance in core job responsibilities. Contextual performance, which includes behaviors that contribute to the organizational environment, such as helping colleagues and taking on additional tasks, has a mean score of 4.02, also indicating a high level of performance in supportive work behaviors.

Overall, the high mean scores across both dimensions of job performance suggest that employees in pharmaceutical companies in Heilongjiang Province are performing well in their roles, both in terms of task-specific responsibilities and broader organizational contributions. These findings highlight the strong work ethic and commitment of the workforce in this sector.

Table 3. Level of JP (N=200)

Dimension	M	Level
Task Performance (TP)	4.03	High
Contextual Performance (CP)	4.02	High
Overall	4.03	High

4.4 Relationship between Job Stress and Job Performance of Employees in Pharmaceutical Companies in Heilongjiang Province

The relationship between job satisfaction (JS) and job performance (JP) among employees in pharmaceutical companies in Heilongjiang Province was analyzed to understand how these variables interact. Table 4 summarizes the correlation between job satisfaction and two dimensions of job performance: task performance (TP) and contextual performance (CP).

The results indicate a strong and statistically significant positive correlation between job satisfaction and both dimensions of job performance. Specifically, the correlation coefficient between job satisfaction and task performance is 0.779, while the correlation coefficient between job satisfaction and contextual performance is 0.811. Both correlations are significant at the 0.01 level.

These findings suggest that higher levels of job satisfaction are associated with better job performance among employees in pharmaceutical companies in Heilongjiang Province. Employees who are more satisfied with their jobs tend to perform better in both their core job responsibilities (task performance) and in behaviors that support the overall work environment (contextual performance).

The positive correlation with task performance indicates that satisfied employees are more likely to complete their job tasks efficiently and maintain high quality in their work. The strong correlation with contextual performance highlights that satisfied employees are also more likely to engage in helpful behaviors, such as assisting colleagues and taking on additional responsibilities, which contribute to a positive and productive work environment.

Overall, the analysis underscores the importance of enhancing job satisfaction to improve job performance. Pharmaceutical companies in Heilongjiang Province can benefit from implementing strategies to increase employee satisfaction, such as providing opportunities for professional development, ensuring fair compensation, and fostering a supportive work culture. By doing so, they can enhance both task-specific and broader organizational performance.

Table 4. Relationship between JS and JP of Employees in Pharmaceutical Companies in Heilongjiang (N=200)

	TP	CP
JS	0.779**	0.811**

Note. * p<0.05, ** p<0.01

4.5 Impact of Job Stress on Job Performance of Employees in Pharmaceutical Companies in Heilongjiang Province

This section presents the analysis of the impact of job stress on job performance among employees in pharmaceutical companies in Heilongjiang Province. The summarized regression analysis results are shown in Table 5.

The results indicate that job stress has a significant positive impact on job performance among employees in pharmaceutical companies in Heilongjiang Province. The unstandardized regression coefficient (B) for the relationship between job stress and job performance is 0.706, with a standardized beta coefficient of 0.811, which is significant at the 0.01 level. This suggests that higher job stress is associated with better job performance.

The significance level (Sig) of job stress is 0.000, which is less than 0.05, indicating that the regression effect of job stress on job performance is significant. The F-value of 38.175 further supports the model's statistical significance, showing that job stress is a strong predictor of job performance.

These findings are somewhat counterintuitive, as job stress is typically expected to have a negative impact on performance. However, it is possible that in the high-stakes environment of pharmaceutical companies, a certain level of stress may drive employees to perform better by increasing their focus, urgency, and motivation to meet critical deadlines and achieve high standards.

Overall, the analysis suggests that job stress, within certain limits, can enhance job performance in pharmaceutical companies in Heilongjiang Province. However, management needs to monitor stress levels and ensure they do not become detrimental to employees' well-being and long-term productivity. Strategies to balance stress and support, such as providing resources for stress management and creating a supportive work environment, could help optimize job performance while maintaining employee health.

Table 5. Impact of Job Stress on Job Performance of Employees in Pharmaceutical Companies in Heilongjiang Province (N=200)

Variable	JP
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	B	Beta	Sig	F
JS	0.706	0.811	0.000	38.175

Note. * p<0.05 ** p<0.01

5. Discussion

The findings from this study highlight several key insights into the relationship between job satisfaction, job stress, and job performance among employees in pharmaceutical companies in Heilongjiang Province. The analysis revealed significant and positive relationships between job satisfaction and job performance, as well as between job stress and job performance.

Firstly, the data indicated that job satisfaction significantly enhances both task performance and contextual performance. High levels of job satisfaction correlate with better performance in core job responsibilities, as well as in supportive behaviors that contribute to a positive work environment. This finding aligns with previous research suggesting that satisfied employees are more motivated, engaged, and productive, which translates into improved overall performance (Liu et al., 2022; Liu et al., 2021). Enhancing job satisfaction through recognition, fair compensation, and opportunities for professional growth can therefore be crucial strategies for pharmaceutical companies aiming to boost performance.

Secondly, the study found that job stress also has a positive impact on job performance. This counterintuitive result suggests that in the high-pressure environment of pharmaceutical companies, a certain level of stress might drive employees to perform better. The positive correlation between job stress and job performance could be due to the increased focus, urgency, and motivation that stress can induce. However, it is essential to manage stress carefully to prevent it from becoming overwhelming and detrimental to employee well-being and long-term productivity. Providing resources for stress management and creating a supportive work environment can help maintain a balance that leverages the positive aspects of stress without causing harm (Borman & Motowidlo, 1993).

The study's regression analysis further confirmed that job satisfaction is a strong predictor of job performance, explaining a significant portion of the variance in performance outcomes. The standardized beta coefficients indicated that job satisfaction contributes positively and significantly to both task and contextual performance. This underscores the importance of fostering a work environment that promotes job satisfaction to achieve higher levels of employee performance.

In conclusion, the findings of this study provide valuable insights for pharmaceutical companies in Heilongjiang Province. By focusing on enhancing job satisfaction and carefully managing job stress, companies can improve employee performance and foster a more productive and positive work environment. Future research could explore the specific factors contributing to job satisfaction and stress in more detail, as well as interventions that can effectively enhance satisfaction and manage stress for optimal performance outcomes.

6. Conclusion

The study investigated the relationship between job satisfaction, job stress, and job performance among employees in pharmaceutical companies in Heilongjiang Province. The findings highlighted significant insights that can help these companies enhance their workforce's performance and overall work environment.

The analysis demonstrated that job satisfaction positively impacts both task and contextual performance. Employees who are satisfied with their jobs tend to perform better in their core responsibilities and engage more in supportive behaviors that contribute to a positive organizational climate. This underscores the importance of fostering job satisfaction through recognition, fair compensation, and professional growth opportunities.

Interestingly, the study also found that job stress positively impacts job performance. While this may seem counterintuitive, it suggests that a certain level of stress can drive employees to focus, meet deadlines, and achieve high performance. However, it is crucial to manage stress levels to ensure they remain within beneficial limits and do not negatively affect employee well-being and long-term productivity.

The regression analysis confirmed that job satisfaction is a strong predictor of job performance, explaining a significant portion of the variance in performance outcomes. This highlights the critical role of job satisfaction in achieving high levels of employee performance and suggests that pharmaceutical companies should prioritize strategies to enhance employee satisfaction.

In conclusion, pharmaceutical companies in Heilongjiang Province can significantly benefit from improving job satisfaction and managing job stress effectively. By creating a supportive and motivating work environment, these companies can enhance both task-specific and broader organizational performance, ultimately contributing to their overall success. Future research could explore further the specific factors contributing to job satisfaction and stress and the interventions that can effectively enhance satisfaction and manage stress for optimal performance outcomes.

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Conflict of Interest

The authors declare no conflicts of interest.

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