

The Impact of Organizational Justice on Employee Loyalty: The Mediating Roles of Hygiene and Motivators

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ABSTRACT

This study investigates the influence of organizational justice on employee loyalty, with a specific focus on the mediating roles of hygiene and motivators within H Medicine Company, recognized for having the lowest employee turnover rate in China in 2023. Employing a quantitative methodology, the research collected data via a structured survey from 514 valid respondents out of 600 distributed questionnaires among the company's employees. This comprehensive analysis included testing multiple hypotheses related to procedural, distributive, interpersonal, and informational justice. The findings reveal significant positive correlations between all forms of organizational justice and employee loyalty. Specifically, procedural justice showed a strong association with both hygiene and motivators, with standardized path coefficients of 0.213 and 0.191, respectively, indicating that fairness in decisionmaking processes significantly enhances employee satisfaction with workplace conditions and intrinsic motivational factors. Distributive justice also had a noteworthy impact on both hygiene and motivators, with coefficients of 0.258 and 0.283, suggesting that equitable distribution of resources and rewards boosts employee perceptions of fairness and satisfaction. Moreover, interpersonal and informational justice were positively linked to satisfaction with both hygiene and motivators. The mediation analysis provided evidence that hygiene factors and motivators significantly mediate the relationship between organizational justice and employee loyalty. Hygiene factors had a notable mediating effect, particularly between procedural justice and employee loyalty, while motivators played a crucial role in enhancing the impact of all justice dimensions on loyalty. These results underscore the importance of a fair, transparent, and respectful workplace in fostering employee loyalty. The study highlights the critical role that both hygiene and motivational factors play in mediating the relationship between organizational justice and loyalty, offering valuable insights for organizations aiming to improve their managerial practices and overall workplace environment. The findings suggest that enhancing organizational justice not only directly impacts employee loyalty but also does so indirectly by improving satisfaction with workplace conditions and motivational aspects. This research contributes to a deeper understanding of how organizational justice frameworks can be strategically leveraged to enhance employee retention and organizational performance.

Keywords: Organizational Justice; Employee Loyalty; Hygiene; Motivators

1. Introduction

1.1 The Background of Employee Loyalty

Academic research on employee loyalty has spanned over a century. In 1908, Royce first described employee loyalty from three perspectives: loyalty to individuals, organizations, and values (Royce, 1995). Becker (1960) introduced the concept of "organizational loyalty," defining it as the strong sense of belonging employees feel towards an organization, leading them to actively participate in its development and stay as their contributions increase. The more an organization invests in training and rewarding its employees, the higher their loyalty. Meyer and Allen (1991) highlighted that employee loyalty reflects the psychological bond between employees and the organization, significantly influencing their decision to remain. Frederick (2001) emphasized that employee loyalty is a crucial capability that can bring substantial returns to a business. Richard (2005) described loyalty as a moral quality that compels employees to fulfill their duties voluntarily, driven by long-term moral sentiment. Aityan (2011) noted that employee engagement and concern for the company's success are clear indicators of loyalty. Wang (2020) pointed out that employee loyalty is vital for intellectual property management and innovation. Enhancing career planning, bonus schemes, and management methods can increase loyalty (Eskildsen, 2000). Research by Babcock and Strickland (2010) found that a leader's personal style and ethics directly impact employee loyalty. Wanda and John (2011) demonstrated that training enhances employees' skills and loyalty. Kumar and Shekhar (2012) empirically showed that incentive policies, humane benefits, and corporate culture significantly affect loyalty. Harrison (2015) found that managerial leadership skills directly influence employee loyalty. Tseng and Wu (2017) suggested a positive correlation between managerial ethics and employee loyalty, with ethical managers fostering employee initiative.

Tremblay and Pare (2007) concluded that employee involvement in management greatly affects loyalty, proposing a participative management model. This model emphasizes mutual recognition between employees and the company, equal pay for equal work, information sharing, and employee empowerment, encouraging employees to contribute to and share in the company's success. Chen (2015) argued that management should regularly communicate with employees, listen to their needs, and consider their living conditions. Lee (2010) stressed the importance of providing more promotion opportunities and maintaining a transparent promotion system to instill hope for future development. Swanson (2020) suggested enhancing managerial capabilities, promoting knowledge sharing, and improving performance management to boost loyalty. Rahimpour (2020) emphasized generous compensation as a material guarantee, arguing that improving workers' material and spiritual needs can foster unconditional loyalty. Sharma et al. (2020) found that higher satisfaction with compensation correlates with increased loyalty. Dhir, Dutta, and Ghosh (2020) argued that aligning company values and beliefs with those of many employees can motivate greater loyalty.

In China, the concept of employee loyalty has been extensively studied. Zheng (2002) asserted that loyalty is crucial for employees to fully contribute to a company, with higher employee loyalty enhancing customer satisfaction and overall company performance. Liu and Chen (2003) defined employee loyalty as a profound commitment to the company, a desire to grow with it, a sense of responsibility, and a dedication to achieving company goals. Zhao (2003) described it as an internal sense of belonging and external dedication to work, consistently respecting the company's overall interests. Qi (2017) highlighted that loyalty encompasses both genuine acceptance and adherence to the company, reflecting both superficial and deep-seated loyalty. Li (2021) emphasized that loyalty means employees recognize the company's values and culture, believe in the opportunities and rewards provided, and integrate their personal development with the company's future. Xu (2021) distinguished between active and passive loyalty. Ma, Liu, and Zhu (2014) categorized loyalty into affective, normative, and continuance loyalty, correlating these factors with employee values to determine their impact. Liu and Jiang (2018) used Meyer & Allen's threefactor model to analyze loyalty, dividing it into affective, continuance, and normative loyalty. Yu and Zhou (2003) emphasized the importance of addressing passive loyalty, noting that employees constrained by company rules and personal abilities might display unstable loyalty, often waiting for better opportunities. Qiao (2012) identified personal needs, work goals, and communication skills as individual factors influencing loyalty. Zhang (2013) found that age, personality, and marital status significantly impact loyalty, with older, introverted, married employees generally being more loyal. Wang (2016) noted that differences in workers' qualifications and social environments lead to varied work motivations and career values. Peng (2018) highlighted that family factors greatly influence employees' job stability, with those not being the primary breadwinners more likely to change jobs if dissatisfied.

Dong (2006) analyzed the decline in employee loyalty in human resources, attributing it to recruitment mechanisms, lack of task delegation, reward systems, and corporate culture. Zeng (2013) pointed out that compensation, work environment, and company culture significantly affect loyalty. Feng (2017) argued that employee loyalty is influenced by the company's development prospects regardless of its current stage or social standing. Peng (2018) found that fair and reasonable incentive policies could enhance loyalty. Shen (2019) demonstrated that opportunities for involvement in organizational development, recognition of work,

showcasing abilities, and fair compensation are positively related to loyalty, emphasizing the importance of internal governance. Tao (2019) suggested that rational job content, improved management skills, clear work objectives, and a good work environment are crucial for motivating employees to integrate and work actively within the company. Ou (2022) noted that management models significantly impact employee satisfaction and loyalty. Li and Xiong (2017) stated that market competition, industry position, state capital presence, and market share influence employee loyalty. Hu (2019) observed that the evolving societal demands and the emergence of new phenomena drive to seek better material living standards, often through job changes, leading to high turnover rates and low loyalty. Chen (2019) remarked that compared to previous generations, the younger generation, especially those born after the 1990s, are more inclined to pursue economic income and personal satisfaction, resulting in noticeably lower loyalty to companies. In summary, employee loyalty is a multifaceted concept influenced by various factors, including ethical leadership, effective communication, adequate compensation, career development opportunities, and organizational culture. Organizations that invest in these areas are more likely to cultivate a loyal, motivated, and high-performing workforce, which is essential for long-term success and competitiveness.

1.2 The Background of Hygiene and Motivators

In academia, motivation theory has been a significant topic, accumulating substantial research. This is especially true in the medical field, where its impact on societal health, public policy, and economic development is profound. Kenneth conducted a systematic analysis of the motivation mechanisms for medical workers (Kenneth, 1963), exploring the economic principles behind motivation and the issue of information asymmetry in healthcare (Kenneth, 2004). Pauly delved into the payment structures of medical services, revealing how payment methods directly influence service prices, quality, efficiency, and scope, providing insightful guidance for developing more scientific and reasonable payment policies (Pauly, 1968). Scott and others analyzed how economic incentives can enhance the enthusiasm and service levels of primary care physicians, finding that a well-designed incentive system can significantly boost overall healthcare efficiency and satisfaction (Scott, 2011).

Human resources are the most crucial asset in organizations and enterprises. Maintaining an efficient workforce is vital for the overall performance of an organization. Motivated employees can add value by achieving goals successfully (Aslam, 2021). However, most employees are unsure about what truly motivates them (Shdaifat, 2017). Work value plays a mediating role between non-material incentives and employee performance, while also moderating the relationship between nonmaterial incentives and organizational identification (Chen, 2018). The two-factor theory investigates which aspects of work increase job satisfaction and which cause dissatisfaction. Ann and colleagues, through empirical research, concluded that recognition and passion for work are the two most critical factors determining job satisfaction (Ann, 2019). Hur's study confirmed that Herzberg's two-factor theory is widely applicable in enterprises (Hur, 2017).

Many researchers have extensively studied and practically tested these talent motivation theories, applying the findings to management practices. Padraic found that the effectiveness of performance incentives depends on how well they align with employees' internal needs; the higher the alignment, the better the motivation effect (Padraic, 2015). Kendrick suggested that hospital HR managers should focus on medical staff's life needs and career development plans to enhance their enthusiasm (Kendrick, 2019). In summary, motivation theory, particularly in the healthcare sector, offers invaluable insights into designing effective incentive mechanisms that not only improve employee satisfaction and performance but also contribute to better healthcare delivery and organizational success. These findings underscore the importance of aligning incentive strategies with employee needs and the broader organizational goals.

1.3 The Background of Organizational Justice

Organizational justice refers to employees' subjective psychological perceptions of their work environment (James, 1993). Organizational justice can be divided into two levels: one is the objective existence of fairness, and the other is the subjective perception of fairness. In literature published before 1975, the fundamental element of organizational justice was distributive justice. Adams (1965) proposed the equity theory, which posits that people expect to receive equitable compensation for their contributions to the organization. Although some research results generally support distributive justice as a component of organizational justice, others have pointed out that distributive justice theory cannot address many process-based organizational justice issues, such as recruitment and performance appraisal (Greenberg & Folger, 1983; Folger & Greenberg, 1985; Greenberg & Tyler, 1987). Greenberg (1990) defined procedural justice as the fairness of the tools and procedures used in decision-making in the workplace. Thibaut & Walker (1975) were the first to propose the theory of procedural justice. Leventhal (1980) and others further developed this theory. Bies & Moag (1986) introduced the concept of interpersonal justice, which reflects people's sensitivity to the interpersonal treatment they receive during the execution of procedures. From the 1990s to the early 21st century, Colquitt further developed the theory of organizational justice, proposing the famous four-dimensional model, which

includes distributive justice, procedural justice, informational justice, and interpersonal justice, providing a more comprehensive framework for research.

The organizational justice model has evolved from focusing on distributive justice to emphasizing decision-making processes and interpersonal relationships. Scholars in this field have made significant contributions, collectively advancing and refining the theory. Understanding the complexity of organizational justice requires comprehensively considering employees' perceptions of its different dimensions. This not only includes whether they receive fair compensation but also involves their views on the fairness of decision-making processes, information transparency, and the interpersonal treatment they experience during these processes. The theory of organizational justice has profound implications for management practices. First, organizations should pay attention to fairness in resource distribution to enhance employee satisfaction and loyalty. Second, the transparency and fairness of decisionmaking processes are crucial, and managers should ensure that these procedures are open, fair, and transparent. Finally, informational and interpersonal justice should not be overlooked; managers need to respect and consider employees' feelings in their daily work, providing clear and accurate information while maintaining fairness and respect in interpersonal interactions. Through practical application, the theory of organizational justice not only helps companies improve their management levels but also promotes employee enthusiasm and organizational performance. When employees perceive fairness within the organization, they are more likely to develop trust, enhance their identification and sense of belonging to the organization, and engage more actively in their work. In conclusion, the study of organizational justice provides a rich theoretical framework for academia and offers valuable guidance for practical management.

2. Literature Review

2.1 Research Theory

Since the 1930s, sociologists, management theorists, and psychologists worldwide have studied the motivation of individuals and groups, developing various motivational theories. Robbins (2003) defined motivation as the methods organizations use to meet individual needs and stimulate work enthusiasm to achieve organizational goals (Shi, 2020). Maslow (1943) introduced the hierarchy of needs theory, categorizing human needs into five levels: physiological, safety, social, esteem, and self-actualization. Managers should enhance employees' work motivation and satisfaction by meeting these diverse needs (Cheng, 2003). Frederick Herzberg (1959) proposed the "hygiene-motivation theory," also known as the two-factor theory, which distinguishes between motivators and hygiene factors. Motivators include job itself, recognition, achievement, and responsibility, while hygiene factors involve company policies, management, supervision, salary, work conditions, and interpersonal relationships. Effective management should leverage both motivators and hygiene factors to boost employee motivation (Gao, 2015). David McClelland further suggested that after basic physiological needs are met, individuals pursue three critical needs: achievement, affiliation, and power. The intensity of these needs should be considered when implementing motivational strategies (Zhou, 2005). Vroom's expectancy theory (1964) posits that an individual's motivation is determined by the expected outcomes and their likelihood. The level of motivation is a product of expectancy and the perceived value of the reward (Victor, 1997).

These foundational theories have been extensively researched and practically applied to understand and enhance employee motivation. For instance, Frederick's twofactor theory emphasizes that while hygiene factors can prevent dissatisfaction, true motivation comes from the work itself and its related aspects. McClelland's theory highlights the importance of aligning motivational strategies with employees' personal needs for achievement, affiliation, and power. Moreover, Vroom's expectancy theory provides a nuanced understanding of how employees' beliefs about the likelihood of achieving desired outcomes influence their motivation. This theory is particularly useful for managers seeking to create a work environment that enhances both the perceived value of rewards, and the confidence employees have in attaining them. Incorporating these theories into management practices can significantly impact organizational effectiveness. By understanding and addressing the diverse motivational needs of employees, organizations can create a more engaging, satisfying, and productive work environment. This approach not only fosters individual growth and fulfillment but also drives organizational success through enhanced performance and employee commitment. In summary, the evolution of motivational theories from Maslow to Vroom highlights the complexity and multifaceted nature of human motivation. Effective management requires a deep understanding of these theories to create strategies that meet the varied needs of employees, ultimately leading to higher levels of satisfaction, motivation, and organizational performance.

2.2 Research Hypotheses

According to Li (2021), Wang (2023), Zhu & Qi (2020), in theoretical analysis, Procedural Justice exhibits a positive correlation with Hygiene, suggesting that when individuals perceive fairness in the procedural aspects of decision-making within an organization, they are more likely to experience higher satisfaction with basic workplace conditions and amenities. Procedural Justice is concerned with the fairness of the processes that

lead to outcomes, and when employees feel that these processes are transparent, consistent, and unbiased, they tend to be more satisfied with their work environment. This satisfaction with basic workplace conditions and amenities, encapsulated by hygiene factors, is crucial for creating a stable and positive work environment. Similarly, Procedural Justice positively correlates with Motivators, indicating that organizational members who perceive procedural fairness are more inclined to find satisfaction in motivators. Motivators are factors that drive intrinsic motivation, such as recognition, responsibility, and opportunities for growth. When employees perceive that the procedures within their organization are fair, they are more likely to feel valued and motivated to perform at their best. This highlights the interconnectedness of procedural justice and intrinsic motivation factors, showing how fair processes can enhance employee motivation and engagement. Distributive Justice is linked with Hygiene, demonstrating that perceived fairness in the distribution of resources and rewards leads to higher satisfaction with fundamental workplace conditions. Distributive Justice refers to the perceived fairness of outcomes or distributions, such as pay, promotions, and other rewards. When employees believe that these outcomes are distributed fairly, based on their contributions and performance, they are more satisfied with their basic workplace conditions. This satisfaction with hygiene factors is essential for maintaining a positive and productive work environment. Additionally, Distributive Justice correlates positively with Motivators, implying that fairness in resource distribution enhances satisfaction with motivational aspects. When employees perceive that their efforts and contributions are fairly rewarded, they are more likely to feel motivated and committed to their work. This correlation between distributive justice and motivators underscores the importance of fair reward systems in fostering employee motivation and engagement. Interpersonal Justice also shows a positive correlation with Hygiene, suggesting that fairness in interpersonal relationships within an organization leads to satisfaction with basic workplace conditions. Interpersonal Justice refers to the fairness of the treatment individuals receive from their supervisors and colleagues. When employees feel respected and valued in their interactions, they are more satisfied with their basic workplace conditions. This satisfaction is crucial for creating a supportive and collaborative work environment. The correlation between Interpersonal Justice and Motivators indicates that fairness in interpersonal relationships enhances satisfaction with motivators. When employees experience fair and respectful treatment, they are more likely to feel motivated and engaged in their work. This highlights the role of positive interpersonal relationships in fostering intrinsic motivation and job satisfaction. Informational Justice similarly correlates with both Hygiene and Motivators, demonstrating that fairness in communication and information sharing leads to higher satisfaction with both basic workplace conditions and motivational factors. Informational Justice refers to the fairness of the communication processes within an organization, including the accuracy, timeliness, and transparency of information shared. When employees perceive that they are kept well-informed and that information is shared fairly, they are more satisfied with their basic workplace conditions and motivators. This correlation emphasizes the importance of effective communication in enhancing employee satisfaction and motivation. Theoretical exploration establishes a positive correlation between Hygiene and Employee Loyalty, suggesting that higher satisfaction with hygiene factors contributes to increased loyalty among individuals. Hygiene factors, such as working conditions, salary, and company policies, are foundational elements that influence employee satisfaction. When these factors are perceived positively, employees are more likely to remain loyal to the organization. This highlights the foundational role of basic workplace conditions in fostering allegiance to the organization.

Hygiene theoretically acts as a mediator between Procedural Justice, Distributive Justice, Interpersonal Justice, Informational Justice, and Employee Loyalty, implying that the influence of justice dimensions on Employee Loyalty is partly explained by satisfaction with hygiene factors. This mediation effect suggests that fair processes, distributions, interpersonal treatment, and communication all contribute to employee loyalty by enhancing satisfaction with basic workplace conditions. Similarly, Motivators play a mediating role between these justice dimensions and Employee Loyalty, indicating that the impact of justice on loyalty is facilitated through the satisfaction of motivational factors. When employees perceive fairness in various aspects of their work environment, they are more likely to feel motivated and committed to the organization. This mediation effect underscores the importance of both hygiene and motivational factors in shaping employee perceptions and behaviors. This comprehensive theoretical framework emphasizes the interconnectedness of various forms of organizational justice with employee satisfaction and loyalty. It highlights the importance of both hygiene and motivational factors in shaping employee perceptions and behaviors within an organization. By understanding and addressing these factors, organizations can create a fair and supportive work environment that enhances employee satisfaction, motivation, and loyalty. This, in turn, can lead to improved organizational performance and success. Therefore, the researchers propose the following hypotheses:

H1 Procedural Justice has a positive correlation with Hygiene in the employees of H Medicine company

H2 Procedural Justice has a positive correlation with Motivators in the employees of H Medicine company

H3 Distributive Justice has a positive correlation with Hygiene in the employees of H Medicine company

H4 Distributive Justice has a positive correlation with Motivators in the employees of H Medicine company

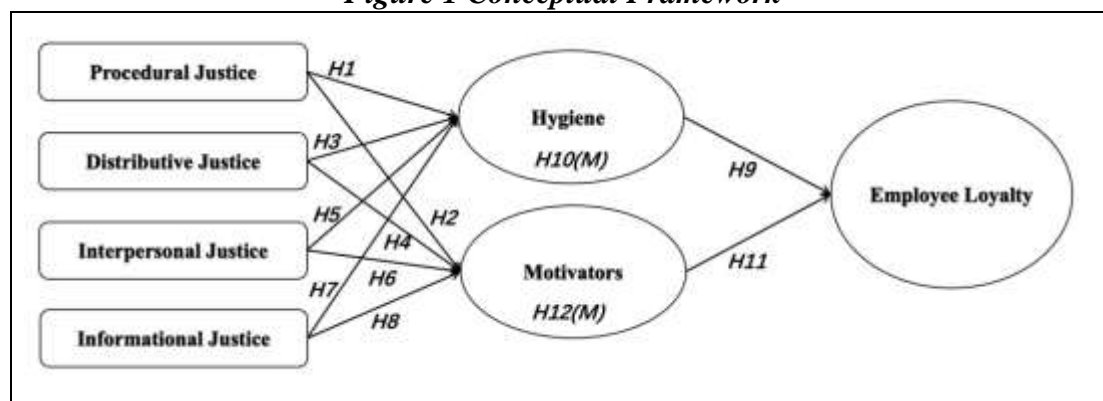
H5 Interpersonal Justice has a positive correlation with Hygiene in the employees of H Medicine company

H6 Interpersonal Justice has a positive correlation with Motivators in the employees of H Medicine company

H7 Informational Justice has a positive correlation with Hygiene in the employees of H Medicine company
 H8 Informational Justice has a positive correlation with Motivators in the employees of H Medicine company
 H9 Hygiene has a positive correlation with Employee Loyalty in the employees of H Medicine company
 H10 Hygiene has a mediating effect between Procedural Justice, Distributive Justice, Interpersonal Justice, Informational Justice, and Employee Loyalty in the employees of H Medicine company
 H11 Motivators has a positive correlation with Employee Loyalty in the employees of H Medicine company
 H12 Motivators has a mediating effect between Procedural Justice, Distributive Justice, Interpersonal Justice, Informational Justice, and Employee Loyalty in the employees of H Medicine company

2.3 Conceptual Framework

Figure 1 Conceptual Framework



Source: Design by the researcher (2024)

3. Research Methodology

3.1 Research Methods

By employing a quantitative research approach and a well-structured research design, this study aims to provide empirical evidence on the impact of organizational fairness on employee loyalty in the context of H Medicine company, offering insights that can inform managerial practices and enhance organizational effectiveness. This study adopts a quantitative research approach to examine the influence of organizational fairness on employee loyalty, with hygiene and motivators acting as mediating variables. Quantitative research methods are chosen for their ability to provide measurable and statistically analyzable data, ensuring the reliability and validity of the findings.

3.2 Research Design

To ensure a representative sample, Yamane's sampling formula is used to calculate the minimum required sample size, leading to the distribution of 600 questionnaires to employees. The survey instrument consists of validated scales for measuring organizational fairness, hygiene factors, motivators, and employee loyalty. The responses are then analyzed using statistical software to identify correlations and test the proposed hypotheses. The research design also includes procedures for ensuring data quality and integrity. This involves pre-testing the questionnaire for clarity and relevance, employing a rigorous data collection process, and implementing strategies to minimize response bias. The collected data is subjected to reliability and validity tests to confirm the consistency and accuracy of the measurement scales.

3.3 Research Sampling

This study focuses on the H Medicine company, which had the lowest employee turnover rate in China in 2023. It explores how organizational fairness influences employee loyalty, with hygiene and motivators as mediating variables. H Medicine Company is a privately-owned pharmaceutical company headquartered in Jiangsu Province, China. According to the company's official website, it had a total of 20,636 employees as of 2023. To determine the necessary sample size, the researcher used Yamane's sampling formula, concluding that a minimum of 392 samples would be required. To enhance the accuracy of the results, the researcher distributed 600 questionnaires at H Medicine Company. Out of these, 531 responses were collected, and 514 were deemed valid for the study. This comprehensive approach ensures a robust dataset for analyzing the impact of organizational fairness on employee loyalty, providing valuable insights into the role of hygiene and motivators in this dynamic.

4. Data Analysis

4.1 Descriptive analysis

4.1.1 Basic Information of the Sample

In summary, these demographic characteristics provide in-depth background information for the study, aiding in a better understanding of the complex mechanisms underlying Employee Loyalty formation and offering essential insights for interpreting and inferring research results.

Table 1 Basic Characteristics of the Sample

		n	%
Gender	Male	241	46.9
	Female	260	50.6
	Prefer not to say	13	2.5
Age	18-22 years old	196	38.1
	23-34 years old	226	44.0
	35-49 years old	61	11.9
	Over 50 years old	31	6.0
Marital Status	Single	176	34.2
	Married	326	63.4
	Widow or divorced	12	2.3
Educational Background	Diploma or under	254	49.4
	Bachelor's degree	118	23.0
	Master's degree	136	26.5
	Doctor's degree and over	6	1.2
Monthly Income	3000 yuan and under	84	16.3
	3001-5000 yuan	174	33.9
	5001-8000 yuan	152	29.6
	Over 8001 yuan	104	20.2
	Total	514	100.0

4.1.2 Descriptive Statistics

Table 2 Descriptive Statistics Results

Variables	Item	Mean	Std. Deviation	Skewness	Kurtosis
Procedural Justice	A1	3.535	0.770	0.320	-0.165
	A2	3.593	0.720	0.000	-0.105
	A3	3.656	0.809	0.108	-0.541
Distributive Justice	B1	3.772	0.815	0.027	-0.694
	B2	3.667	0.824	0.012	-0.431
	B3	3.786	0.843	-0.186	-0.540
Interpersonal Justice	C1	3.872	0.762	-0.311	0.080
	C2	3.984	0.765	-0.368	-0.141
	C3	3.930	0.725	-0.325	-0.056
Informational Justice	D1	3.708	0.812	0.054	-0.700
	D2	3.761	0.794	0.009	-0.686
	D3	3.726	0.807	-0.087	-0.558
Hygiene	E1	3.498	0.976	-0.159	-0.365
	E2	3.724	0.803	-0.072	-0.330
	E3	3.763	0.839	-0.345	0.086
Motivators	F1	3.833	0.853	-0.447	0.202
	F2	3.792	0.916	-0.293	-0.421
	F3	3.619	0.956	-0.207	-0.259
Employee Loyalty	G1	3.656	0.909	-0.156	-0.496
	G2	3.605	0.921	-0.131	-0.544
	G3	3.529	0.967	-0.200	-0.296

In summary, these descriptive statistical results lay the foundation for further analysing the relationships between variables, but it's essential to consider individual differences and the influence of background factors on perceptions. Additionally, skewness and kurtosis values for each measurement item meet the requirements of normal distribution. The absolute values of skewness and kurtosis are less than 3 and 10, respectively, indicating that the sample largely conforms to a normal distribution, ensuring high data quality.

4.2 Reliability Analysis

Table 3 Reliability Analysis Results

Variables	Item	Cronbach's α
Procedural Justice	3	0.808
Distributive Justice	3	0.804
Interpersonal Justice	3	0.812
Informational Justice	3	0.813
Hygiene	3	0.776
Motivators	3	0.809
Employee Loyalty	3	0.877

In summary, from the data, it can be observed that the Cronbach's α values for each variable range between 0.776 and 0.877. These reliability analysis results enhance the reliability of the study outcomes, indicating that the questionnaire used exhibits high reliability and validity, providing a robust foundation for subsequent data analysis.

4.3 Validity Analysis and Correlation Analysis

The results indicated a good fit ($\chi^2/df=2.041$, GFI=0.940, NFI=0.938, IFI=0.968, TLI=0.959, CFI=0.967, SRMR=0.026, RMSEA=0.045). These indices suggest a satisfactory fit between the model and the actual data. Subsequently, the researcher examined the convergent validity and discriminant validity of the variables in the scale. The specific testing process and results are outlined below:

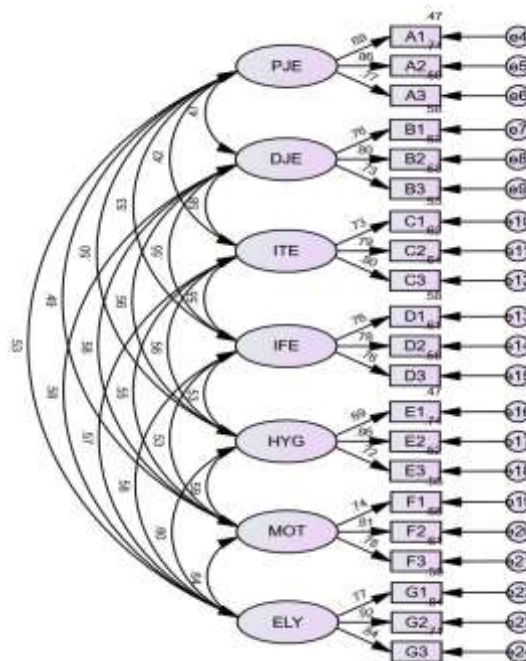


Figure 2 Measurement Model

4.3.1 Convergent Validity

In this study, the researcher conducted a convergent validity analysis by examining the factor loadings of potential variables. The results revealed that all factor loadings were above 0.5, indicating a strong correlation between the measurement items and their respective latent variables. Additionally, the composite reliability (CR) for all variables exceeded 0.7, and the average variance extracted (AVE) was also above 0.5 for each variable. This indicates strong convergent validity, implying that the measurement items effectively reflect the concepts of the latent variables.

Table 4 Convergent Validity Test Results

Variables	Item	Loading	CR	AVE
Procedural Justice	A1	0.686	0.818	0.602
	A2	0.861		
	A3	0.769		
Distributive Justice	B1	0.765	0.807	0.582
	B2	0.797		
	B3	0.726		
Interpersonal Justice	C1	0.725	0.815	0.595
	C2	0.791		
	C3	0.797		
Informational Justice	D1	0.763	0.813	0.592
	D2	0.782		
	D3	0.762		
Hygiene	E1	0.680	0.795	0.566
	E2	0.850		
	E3	0.715		
Motivators	F1	0.727	0.811	0.589
	F2	0.794		
	F3	0.779		
Employee Loyalty	G1	0.771	0.882	0.715
	G2	0.917		
	G3	0.841		

4.3.2 Correlation Analysis and Discriminant Validity

Table 5 Discriminant Validity Test Results

Variables	PJE	DJE	ITE	IFE	HYG	MOT	ELY
PJE	0.776						
DJE	0.469***	0.763					
ITE	0.419***	0.579***	0.772				
IFE	0.531***	0.553***	0.554***	0.769			
HYG	0.526***	0.580***	0.570***	0.548***	0.752		
MOT	0.485***	0.593***	0.562***	0.540***	0.701***	0.767	
ELY	0.535***	0.583***	0.576***	0.574***	0.626***	0.686***	0.845

Note: The bold values on the diagonal represent the square root of the Average Variance Extracted (AVE) for each variable.

In summary, based on the results of discriminant validity testing and correlation analysis, it can be concluded that there is significant correlation among the variables with good discriminant validity. This preliminary support for the research hypotheses strengthens the overall conclusions of the study.

4.4 Common Method Bias

Table 6 Common Method Bias Test Results

Variables	Initial Eigenvalues			Extracted Loadings Sum			Total Percentage of Variance		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.362	39.820	39.820	8.362	39.820	39.820	2.318	11.039	11.039
2	1.487	7.079	46.900	1.487	7.079	46.900	2.301	10.956	21.995
3	1.304	6.208	53.108	1.304	6.208	53.108	2.263	10.778	32.773
4	1.181	5.623	58.731	1.181	5.623	58.731	2.250	10.713	43.486
5	1.165	5.548	64.280	1.165	5.548	64.280	2.236	10.647	54.133
6	1.115	5.311	69.590	1.115	5.311	69.590	2.216	10.552	64.686
7	1.023	4.873	74.463	1.023	4.873	74.463	2.053	9.778	74.463

In this study, Advanced statistical software and the Harman single-factor test were employed to measure common method bias. Specifically, the variance explained by the first unrotated factor was 39.820%. This proportion is below the commonly required 40% standard, indicating the presence of some degree of common method bias in the sample data, although it is not severe.

4.5 Structural Equation Model (SEM)

In this study, based on the research hypotheses, an initial structural equation model was constructed, comprising a total of 7 latent variables and 21 observed variables. The specific structural equation model diagram is illustrated in Figure 3 below:

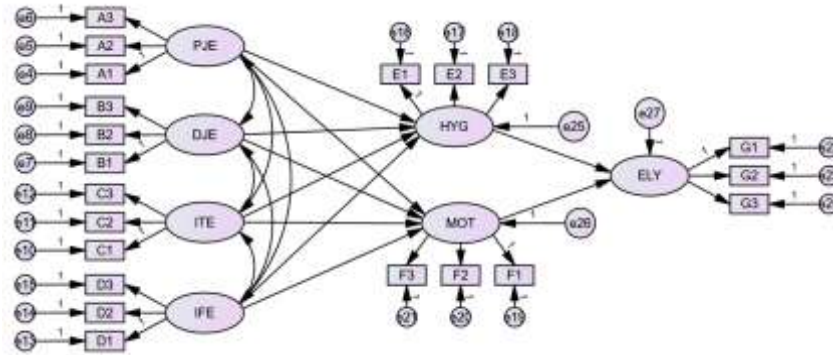


Figure 3 Structural Equation Model (SEM)

4.6 Structural Model Fit

Table 7 Structural Model Fit Indices

Fit Indices	χ^2/df	RMSEA	GFI	NFI	IFI	CFI	TLI	SRMR
Fit Results	2.271	0.050	0.931	0.929	0.959	0.959	0.950	0.033
Evaluation Criteria	$1 < \chi^2/df < 3$	< 0.08	> 0.9	> 0.9	> 0.9	> 0.9	> 0.9	< 0.08

In summary, based on the data, the structural model shows a good fit, and the various indicators suggest that the model's fit is acceptable. This indicates that the structural model in this study can effectively explain and predict the relationships among the variables, demonstrating a high level of reliability and accuracy.

4.7 Path Analysis Results

Table 8 presents the path analysis results, showing each hypothesis with its nonstandardized and standardized path coefficients, standard error (SE), T-value, and P-value. All standardized path coefficients are positive, indicating positive correlations among the variables, with P-values less than 0.05, confirming statistical significance for each hypothesis. H1 and H2 examine Procedural Justice's impact on Hygiene and Motivators, with standardized path coefficients of 0.213 and 0.191 ($p < 0.001$). H3 and H4 explore Distributive Justice's effect on Hygiene and Motivators, with coefficients of 0.258 and 0.283 ($p < 0.001$). H5 and H6 investigate Interpersonal Justice's influence on Hygiene and Motivators, with coefficients of 0.246 and 0.237 ($p < 0.001$). H7 and H8 analyze Informational Justice's impact on Hygiene and Motivators, with coefficients of 0.180 and 0.174 ($p < 0.01$). H9 and H11 examine Hygiene and Motivators' effects on Employee Loyalty, with coefficients of 0.383 and 0.464 ($p < 0.001$). This indicates that organizational attention to employees' well-being and motivational initiatives significantly strengthens employee loyalty.

Table 8 Path Test Results

Hypothesis	Path Relationship	Non-Standardized	Standardized	S.E.	C.R.	P
H1	PJE → HYG	0.271	0.213	0.072	3.767	***
H2	PJE → MOT	0.232	0.191	0.068	3.431	***
H3	DJE → HYG	0.279	0.258	0.070	3.986	***
H4	DJE → MOT	0.291	0.283	0.066	4.383	***
H5	ITE → HYG	0.301	0.246	0.077	3.895	***
H6	ITE → MOT	0.276	0.237	0.073	3.790	***
H7	IFE → HYG	0.195	0.180	0.070	2.782	0.005
H8	IFE → MOT	0.179	0.174	0.066	2.708	0.007
H9	HYG → ELY	0.396	0.383	0.056	7.080	***
H11	MOT → ELY	0.504	0.464	0.060	8.417	***

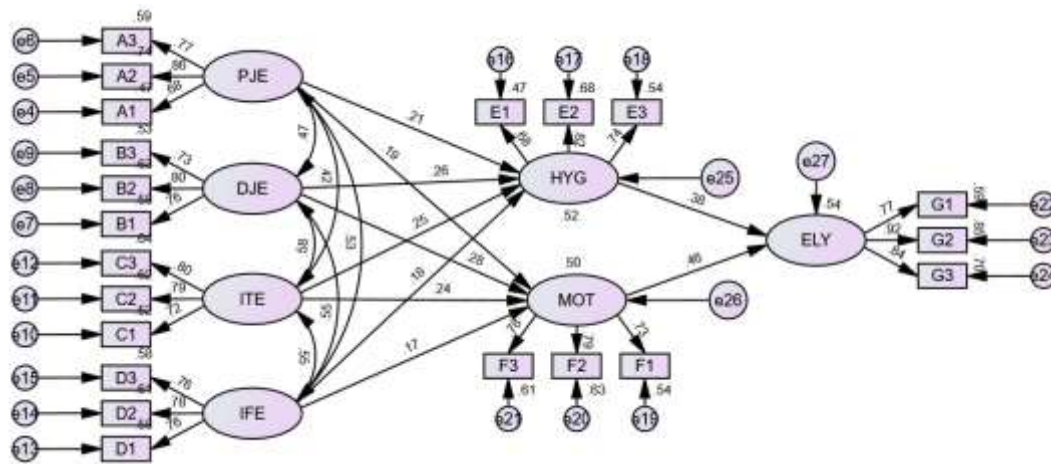


Figure 4 Adjust Model

4.8 Mediation Analysis

Table 9 presents the mediation analysis results using the Bootstrapping algorithm. Procedural Justice significantly influences Employee Loyalty through Hygiene as a mediator, with an effect value of 0.082 and a 95% confidence interval of 0.026 to 0.153 ($p = 0.003$). This indicates that Procedural Justice enhances employee perception of organizational hygiene factors, increasing loyalty. Similarly, Distributive Justice, Interpersonal Justice, and Informational Justice paths to Employee Loyalty also show significant mediation through Hygiene, with effect values of 0.099, 0.094, and 0.069, and confidence intervals of 0.040 to 0.177, 0.035 to 0.181, and 0.012 to 0.150, respectively ($p < 0.05$). Motivators also impact Employee Loyalty via Hygiene, with an effect value of 0.131 and a 95% confidence interval of 0.058 to 0.223 ($p = 0.000$). These findings highlight Hygiene's crucial mediating role in the impact of various justice types on Employee Loyalty, supporting strategies to enhance loyalty by fostering a healthier, fairer, more interactive, and transparent work environment.

Table 9 Mediation Effect Test Results

Path Relationship	β	LLCI	ULCI	P
PJE→HYG→ELY	0.082	0.026	0.153	0.003
DJE→HYG→ELY	0.099	0.040	0.177	0.001
ITE→HYG→ELY	0.094	0.035	0.181	0.001
IFE→HYG→ELY	0.069	0.012	0.150	0.018
PJE→MOT→ELY	0.131	0.058	0.223	0.000
DJE→MOT→ELY	0.131	0.058	0.223	0.000
ITE→MOT→ELY	0.110	0.044	0.197	0.001
IFE→MOT→ELY	0.081	0.017	0.165	0.013

5. Discussion and Conclusion

5.1 Discussion

The results of this study provide robust support for the proposed hypotheses, demonstrating the significant role of organizational justice in shaping employee perceptions and loyalty within H Medicine Company. The analysis confirms that Procedural Justice is positively correlated with both Hygiene and Motivators (H1 and H2), with standardized path coefficients of 0.213 and 0.191 respectively ($p < 0.001$).

This indicates that when employees perceive fairness in the decision-making processes, they are more satisfied with both the basic working conditions and the motivational factors provided by the organization. Similarly, Distributive Justice is also positively correlated with Hygiene and Motivators (H3 and H4), with coefficients of 0.258 and 0.283 respectively ($p < 0.001$). This underscores the importance of fair resource and reward distribution in enhancing employee satisfaction with workplace conditions and intrinsic motivators. Interpersonal Justice, reflecting the fairness in interpersonal treatment, shows significant positive correlations with both Hygiene and Motivators (H5 and H6), with coefficients of 0.246 and 0.237 respectively ($p < 0.001$). This suggests that respectful and fair interactions within the workplace contribute significantly to employee satisfaction on both fundamental and motivational levels. Informational Justice, concerning the fairness of information dissemination and transparency, also shows positive correlations with Hygiene and Motivators (H7 and H8), with coefficients of 0.180 and 0.174 respectively ($p < 0.01$). These findings highlight the importance of transparent communication in fostering a fair and motivating work environment. The direct positive correlations of Hygiene and Motivators with Employee Loyalty (H9 and H11) are notable, with coefficients of 0.383 and 0.464 respectively ($p < 0.001$). This indicates that employee satisfaction with basic workplace conditions and motivational factors significantly strengthens their loyalty to the organization. The

mediation analysis further reveals that Hygiene mediates the relationship between all types of organizational justice (Procedural, Distributive, Interpersonal, and Informational) and Employee Loyalty (H10). Specifically, the mediation effect of Hygiene between Procedural Justice and Employee Loyalty is significant, with an effect value of 0.082 ($p = 0.003$), while Motivators also mediate this relationship with an effect value of 0.131 ($p = 0.000$). These findings suggest that ensuring fairness in procedural, distributive, interpersonal, and informational aspects not only directly enhance employee loyalty but also does so indirectly by improving employee satisfaction with hygiene and motivational factors. This comprehensive framework underscores the multifaceted impact of organizational justice on employee behavior and highlights the critical role of workplace conditions and intrinsic motivators in fostering a loyal workforce.

5.2 Conclusion

This study provides empirical evidence on the significant impact of organizational justice on employee loyalty, mediated by hygiene and motivators, within H Medicine Company. The findings underscore the importance of maintaining fairness across various dimensions of organizational practices to enhance employee satisfaction and loyalty. Specifically, the study reveals that Procedural Justice, Distributive Justice, Interpersonal Justice, and Informational Justice all positively influence employee satisfaction with basic workplace conditions (Hygiene) and intrinsic motivational factors (Motivators). These aspects, in turn, significantly contribute to fostering Employee Loyalty. The positive correlations between Procedural Justice and both Hygiene and Motivators suggest that fair decision-making processes are crucial for ensuring employee satisfaction with their work environment and the motivational aspects of their roles. Similarly, the significant relationships between Distributive Justice and employee satisfaction with workplace conditions and motivators highlight the critical role of equitable resource and reward distribution in promoting a positive organizational climate. The study also demonstrates the importance of fair interpersonal treatment and transparent communication (Interpersonal and Informational Justice) in enhancing employee satisfaction. Employees who perceive fairness in these areas are more likely to report higher satisfaction with both the basic conditions of their workplace and the motivational factors provided by the organization. This indicates that fostering a respectful and transparent work environment is essential for promoting employee satisfaction and loyalty. Moreover, the mediation analysis reveals that Hygiene and Motivators significantly mediate the relationship between organizational justice and Employee Loyalty. This suggests that improving basic workplace conditions and providing intrinsic motivational factors are effective strategies for enhancing the impact of organizational justice on employee loyalty. By addressing these mediating factors, organizations can create a more supportive and engaging work environment that fosters employee commitment and loyalty. In conclusion, this study highlights the comprehensive role of organizational justice in shaping employee perceptions and behaviors. Ensuring fairness in procedural, distributive, interpersonal, and informational aspects, alongside fostering a healthy and motivating work environment, is crucial for enhancing employee loyalty. The insights gained from this study can inform managerial practices aimed at improving organizational fairness and, consequently, boosting employee satisfaction and loyalty. By implementing these strategies, organizations can cultivate a loyal and dedicated workforce, ultimately leading to improved organizational performance and success.

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